

Louvain School of Management

How to define risk appetite for qualitative risks : evidence from a comparison between the banking sector and a non-financial industry.

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Abstract

Purpose - The purpose of this thesis is to investigate how to design and implement the risk appetite for qualitative risks.

Design/methodology/Approach - This thesis uses four interviews that regroup people from different areas: banking sector, insurance organization and international thought leader in risk management. This allows different opinions and a global overview of the risk appetite horizon to formulate relevant recommendations.

Main findings - This thesis finds there are difficulties for organizations to design risk appetite for qualitative objectives impacted by non-financial risks. It also finds that the link between risk appetite and decision-making is not clear for organizations, as well as the way to cascade it down the lower levels. However, this thesis proposes four relevant recommendations on how to do so.

Research limitations/implications - One limitation to this thesis is the number of interviews conducted. The current pandemic has not helped in doing so. Another limitation concerns the different mechanisms and processes to design the risk appetite within the analysed organizations; this may be one strength but also limits comparability and findings.

Practical implications - The results have implications both for organizations that do not yet have a risk appetite framework in place, for those currently in the implementation stage but also for those that have implemented it and look for a more effective process. It also has implications for boards of directors and executive management teams, who are good candidates to implement and review a risk appetite, but also for regulators and supervisors, as they point out more and more the necessity of having a clear view of the risk environment (and its corresponding capacity and thresholds).

Originality/value - This thesis is one of the first to address the issue of risk appetite implementation with specific regards to qualitative risks.

Key words - Risk Appetite Implementation, Risk Appetite Framework, Risk Appetite Statements, Qualitative risks, Risk management, Organizational governance, Decision-making.

1 Introduction

People may sometimes have eyes bigger than their stomach, leading to an appetite that does not correctly represent their real hunger. The consequences could be more or less unpleasant, depending for instance on their ability and capacity to deal with this quite uncomfortable situation. Banks but also other non-financial organizations face the same issue regarding their appetite for risk. However, in this case, the consequences can be far more different from a simple indigestion. It can represent billions of euros of losses, but not-only. It impacts the whole economic and financial environment and leads to lots of undesirable collateral damage.

In 2008 occurred the GFC (Global Financial Crisis), where a lot of organizations from all around the globe were pre-empted by non-managed risks or under-reported risk exposures present in their activities. Moreover, in addition to the financial losses, the global impact was magnified via all the linkages between the entities and systems, leading to a snowballing effect. Following this cataclysm, governments, supervisors and regulators have revised their approach and promulgated much higher regulatory standards, such as capital requirements. The main consequence was experienced by boards of directors and executive management teams, whose focus was accelerated towards the management of risks. In particular, they realized the importance of setting up metrics, imposing thresholds, defining control mechanisms or reporting systems. All of this to ensure that the risks are under control and stay within the acceptable (and desired) level. Here came the notion of risk appetite, derived practically via risk appetite frameworks (RAF) and statements (RAS).

Moreover, the current COVID-19 actuality has reinforced the aforementioned idea. A huge majority of financial institutions have been satisfied by focusing on their market exposure, capital or liquidity. However, the COVID-19 pandemic shows (again) that it is time to take into account the other qualitative risks that could impact the organizations at different levels. Some 'big' companies have come up with various alternative methods, providing online support, focusing on homeworking best practices or reinforcing their control mechanisms. This is (again) a reactive approach. Can it become proactive? For instance, the point is to wonder if organizations could have suffered less from this pandemic with a well-designed risk appetite definition. Could organizations have made better decisions during this difficult time with a risk appetite implemented at all the levels? Could organizations have achieved more objectives with an effective translation of risk appetite into risk thresholds? This thesis suggests a positive answer to these interrogations.

The notion of risk appetite is defined by [COSO \(2020\)](#) as 'the types and amount of risk, on a broad level, an organization is willing to accept in pursuit of value'. Value creation for stakeholders is fulfilled by the definition of specific objectives. The thesis already stresses the fundamental importance of the word 'objective'. The risk appetite concept is quite recent and even if progress has been made in many areas, there is still room for improvement. Indeed, the risk appetite implementation has not yet fully proved its effectiveness, mainly due to the scepticism related to its utilization. People are not comfortable with the notion or even not aware of its existence and potential benefits. Some difficulties also arise when implementing risk appetite, for instance regarding the achievement of qualitative objectives that lead to non-financial risks (their assessment and quantification is complex).

The few statistics available linked to the risk appetite confirm this trend and the scepticism regarding it. According to a 2013-2014 survey from the National Association of Corporate Directors [NACD \(2014\)](#), 'only 26% of companies have a defined risk appetite statement' (National Association of Corporate Directors, 2014). In 2015, around 30% of banks' risk appetite frameworks were less than two years old. Another 12% were still being developed [Nouy \(2018\)](#).

This thesis contributes to the literature by being one of the first to provide initial insights about the design of an exhaustive risk appetite that embrace efficiently qualitative risks. Doing so will hopefully provide incentives to organizations looking forward to embedding a consistent risk appetite in their risk management process and using it as a pertinent governance tool. It aims at providing a solid basis for future research once the interest of risk appetite grows.

Four recommendations are formulated for organizations:

1. The first recommendation to organizations is to design and classify their risk appetite in terms of objectives before making the link with risks.
2. The second recommendation to organizations is to link risk appetite and decision-making.
3. The third recommendation to organizations is to cascade down effectively the risk appetite, combining a top-down and a bottom-up approach.
4. The fourth recommendation to organization is to make risk appetite a proactive tool, instead of a reactive one.

The rest of the thesis will be structured as follows: an exhaustive literature review will be provided and will point out the missing elements, giving birth to the problematic designing risk appetite for qualitative risks. The fifth section will detail the above findings and propose recommendations, while the last two sections conclude by highlighting this thesis's limitations and opportunities for future work.

2 Literature review

2.1 Why has risk appetite become an important notion in risk management?

2.1.1 The reasons for the risk appetite implementation

The risk appetite notion is relatively recent and was developed mainly in reaction to financial slippages and out-of-control situations due to poor risk management systems. Evidence from the credit crisis of 2008 is striking. According to the [SSG \(2010\)](#)¹, 'a key weakness was a disparity between the risks that their firms took and those that their board of directors perceived the firms to be taking. Supervisors saw insufficient evidence of active board involvement in setting the risk appetite for firms in a way that recognizes the implications of that risk-taking'.

In addition to the financial misadventures, an increasingly complex ecosystem surrounds chief risk officers' horizons. They encounter a continuously growing challenge in developing and promoting a holistic view of risk definition in general. Moreover, regulators keep on increasing their demands for risk organizations to evidence a clear awareness of how each risk impacts the institution, the degree of correlation between them and a consistent approach to understanding and measuring this exposure. Credit agencies act in the same way by analysing carefully the organization's risk appetite capability in their credit rating processes, encouraging the development of an exhaustive risk appetite.

The risk appetite as a result of both crisis and regulatory pressures, the risk appetite notion was developed, targeting the long-term viability of business activities by avoiding excessive risk taking. Banks are dictated by fear and pressure from regulators and shareholders. One of the objectives of this thesis is to make risk appetite a proactive tool instead of a reactive one. Recommendations will explain why this represents an asset, especially for non-financial organizations. It is also important to note that the concept is still used differently across organizations in terms of its impact on decision-making. Indeed, some will use it as a tool for controlling purposes where others will use it as a real leverage to drive their business and make decisions. This thesis promotes the second approach. The link between risk appetite and decision-making is fundamental. A brief insight is provided here. The recommendations part will complete it and provide an exhaustive analysis.

1. Risk appetite as a monitoring tool:

In this case, risk appetite should be seen as a monitoring tool to provide feedback on how the organization is performing, using a backward-looking approach. That leads to the fact that it can include a relatively large number of metrics, key performance measures, desired targets

¹The Senior Supervisors

and appetite boundaries. In short, it ensures the current risks are within the desired appetite and encourages discussions on when to revisit some decisions. However, following this controlling perspective, problems could arise from actions to correct them that are undertaken on an ex-post basis. It becomes then belated and ineffective.

2. Risk appetite as a support for decision-making:

Risk appetite could be used in a more effective manner to steer the business, following a forward-looking approach. Using appetite to this extent allows broadening the analysis. It challenges the organization capacity and ability to manage risks as well as its chosen strategy depending on the objectives. In essence, this second approach is more valuable and based on anticipation. Conversely, the monitoring approach is more reactionary. This thesis emphasizes the relevance of the decision-making approach and will formulate recommendations on how to do so. However, the process to cascade the risk appetite down the organization could be heavy. Again, recommendations will be formulated on how to tackle this issue.

Both manners may be associated with a step-by-step process where the monitoring aspect is used as a preparatory stage to allow a complete understanding of the metrics. It gives birth to an effective risk appetite definition as a support for decision-making.

Moreover, the risk appetite notion is more and more becoming a key component of an organization's risk management framework, mainly for banks so far. Even if an efficient risk management is crucial to ensure there is an adequate balance between risk and reward (to maximize shareholders' returns), risk appetite was not always considered as a useful tool to do so.

Nowadays, with the manifestly low interest rate environment, banks are under a constantly increasing pressure from their shareholders to provide earnings growth by guaranteeing new services and products and entering new emerging markets. All of this requires inevitably to take more risks.

Effective risk management policy does not rhyme with avoiding risk at all costs. On the opposite, effective risk management policy implies undertaking additional risk as long as the organization is realizing informed choices regarding the risks it wants to deal with in pursuit of its objectives. For instance, having measures in place to mitigate those risks is vitally important. 'Mismanagement of risk appetite will not only bring the ire of regulators, but it can also have serious ramifications for the bank. These include incurring losses due to an inappropriate management of concentrations in the portfolio, bad decisions on risk/reward trade-offs, and lack of awareness of hidden risks in the portfolio' [Kerma \(2016\)](#). Setting up a risk appetite process only to satisfy regulators will reveal inefficiency.

Then, developing a strong risk appetite and well-designed policies and procedures is fundamental. However, and lots of firms struggle at this stage, the implementation of this risk appetite is equally

important.

2.1.2 The risk appetite evolution and challenges

Compared to other risk management concepts and "tools", the risk appetite notion is relatively recent. Moreover, it is largely misunderstood and confused with other terms such as risk attitude or risk culture. Risk appetite is a broad concept and, as this thesis tries to show, there is some room in the literature for improvement. Therefore, this section approaches the recent evolution of the risk appetite. Ding (2016) note that some banks or organizations are still in the 'first generation' of risk appetite.

Evolution in this area has mainly come from the financial crisis and other corporate scandals but also from a desire to set up a clear structure for risk management within the firm. Some risk experts perceived a real need for improvement when they discovered the dangers of allowing a disconnection between who an organization is, what it purports to be, and what its employees actually do.

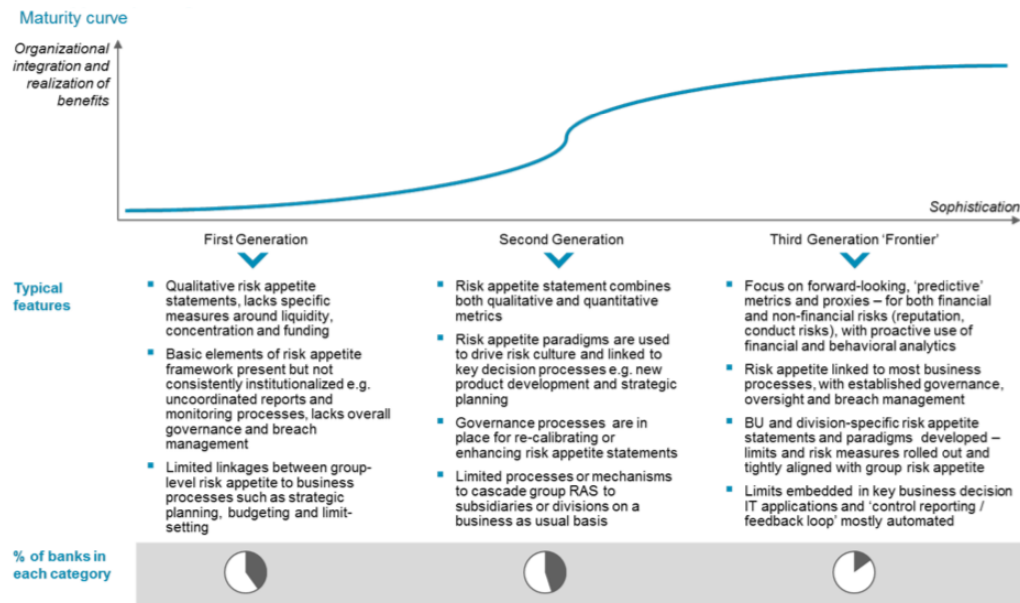


Figure 1: The risk appetite evolution, Ding (2016)

Given the graph above, the first generation clearly focus on a qualitative approach, with a lack of specific metrics to translate the risk appetite. Developed and evolved banks are far away from this first generation, which is more applicable for smaller entities with less need for a strong risk appetite

development. The second generation brings more specific measures and allow more linkages between different elements such as planning, budgeting or limit setting. Mechanisms for continuous improvement and enhancement of the process appear to operate recalibration if necessary. The problem that remains in this second phase concerns the lack of mechanisms to cascade the Risk Appetite Statement to lower levels or even subsidiaries. In other words, the risk appetite implementation stay on 'too high spheres' within the organization and has difficulties to impact the daily activities. Recommendations will be formulated to deal with this issue.

Then comes the third generation, that embraces a very important notion that was put away from both previous generations: the concept of qualitative risks, such as reputation risk, cybersecurity risk or even compliance risk. This will be at the heart of this thesis and far more detailed in the problematic part. However, it can already be said that this third generation approaches both financial and 'non-financial' (i.e. qualitative) risks and this is a first good step. In addition to this, this last generation links more and more risk appetite with other processes and allow interconnections that were not possible before. The notion has evolved over the recent years and starts to play an increasingly important role within banks. Yet, it remains many challenges in the risk appetite implementation, development and monitoring, such as the efficient inclusion and measurement of the qualitative risks.

Even if encouraging progress has been made, work remains in terms of risk appetite implementation and results. A lot of firms have a high level of sophistication regarding their risk appetite process within their structure but don't really see the influence of this notion on key decision-making processes. This thesis aims at tackling this interrogation. Indeed, when undergoing operations to develop, implement, and make their risk appetite efficient over the past few years, organizations faced a lot of barriers and difficulties, mainly to define and 'materialize' non-financial risks. Integrating risk appetite into decision processes and demonstrating tangible expressions of it in day-to-day realities are hard challenges. Again, this thesis aims at formulating recommendations on how to do so. The following figure from a survey conducted by [PWC \(2015\)](#) on 78 banks and insurance companies across the globe shows the most frequently cited challenges in implementing risk appetite:

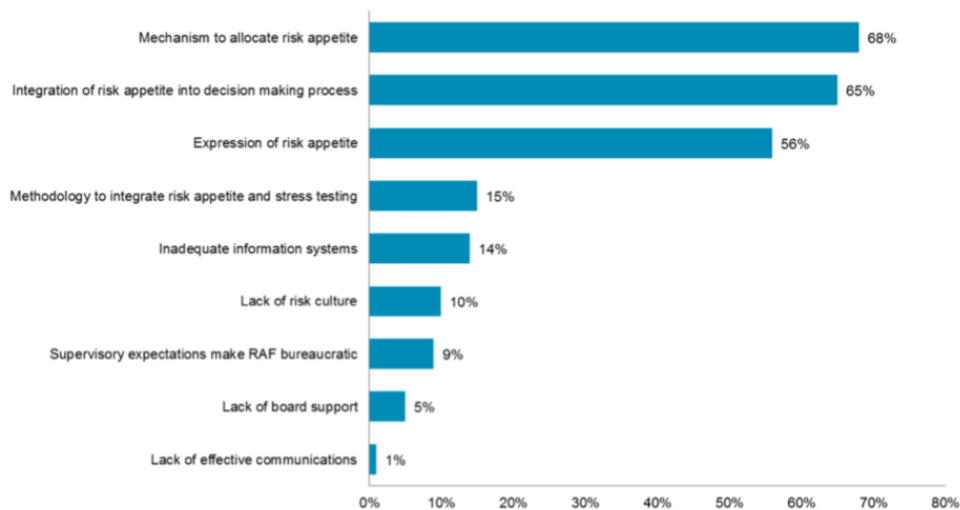


Figure 2: Frequently cited challenges in implementing risk appetite, PWC (2015)

The main challenge concerns 'mechanisms to allocate risk appetite', with 68 %. It is not very surprising since risk appetite remains quite a confusing concept for a lot of people and there are lots of difficulties to find the most efficient ways to implement it. The fact is that, theoretically speaking, many improvements have been realized but in practice, and as shown in the second 'biggest' challenge, integrating the concept into a relevant decision-making process is far away from being evident. Translating the risk appetite into metrics, such as risk thresholds, is often used in order to have a clear view of the firm's expectations. However, it is not always easy to express it when it relates to qualitative risks.

Also, a survey conducted by PWC (2015) shows that 'a small percentage of the surveyed institutions reported their RAF's as either "leading" or "highly developed" at the business line level'. Moreover, 40% of surveyed institutions recognize that their RAF's at the top-level business lines required further development.

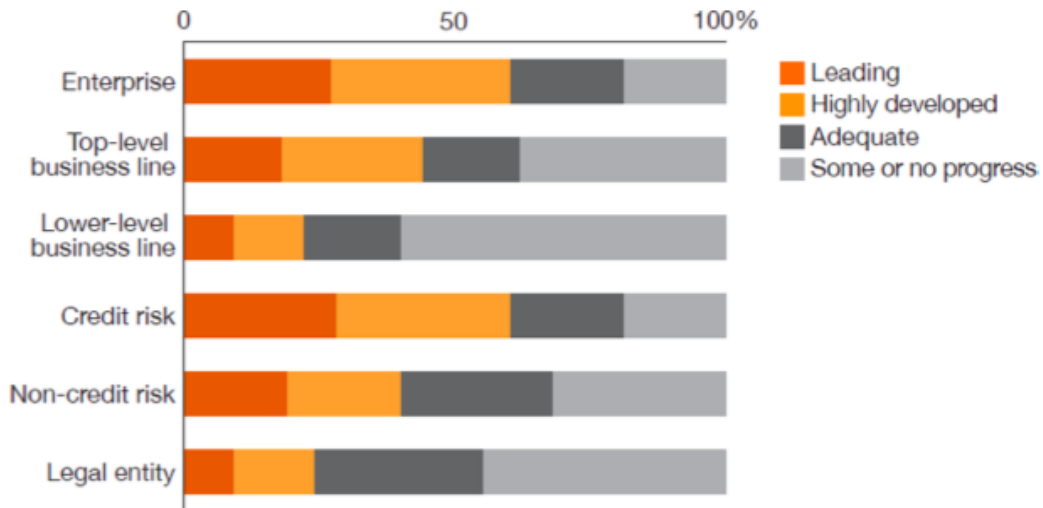


Figure 3: Degree of risk appetite development within organizations, PWC (2015)

Developing a strong risk appetite and well-designed policies and procedures is fundamental. However, a lot of firms struggle at this stage and the implementation of this risk appetite is equally important as the definition. The following enumeration summarizes the biggest challenges linked to the risk appetite:

1. Effectively allocating risk appetite across the organization
2. Translating risk appetite into metrics and thresholds, especially for qualitative risks
3. Linking risk appetite and decision-making
4. Making risk appetite practical at the lower levels of the organization on a day-to-day basis

Recommendations on how to tackle all these issues are presented in this thesis.

2.2 What is the risk appetite?

2.2.1 The risk appetite definitions

Some slightly different definitions of the risk appetite are presented in order to obtain a big picture of the concept. These definitions are relatively close in terms of content, but contrast in the way they define the notion. The objective is to discern some patterns in these definitions and make risk appetite available in a more familiar language.

'The types and amount of risk, on a broad level, an organization is willing to accept in pursuit of value' [COSO \(2020\)](#)².

[Cremonino \(2011\)](#) defines the risk appetite as 'how much risk an organization is willing to assume consistently with its strategy. Each business strategy implies some amount of risk, in terms of the uncertainty of the results will be achieved; therefore, risk appetite represents a fundamental element of enterprise risk management (ERM) as it sets the risk strategies and allows framing for the current risk profile'.

According to the [FSB \(2013\)](#)³, 'risk appetite is the aggregate level and types of risks a bank's board of director and management are willing to assume to achieve its strategic objectives and business plan'.

'Risk appetite is considerably more than a sophisticated key performance indicator (KPI's) system for risk management. It's the core instrument for better aligning overall corporate strategy, capital allocation and risk. [...] A comprehensive risk appetite framework is the cornerstone of the new risk management architecture' [PWC \(2009\)](#).

Some patterns in these definitions can be identified. First, all the definitions agree on the link between risk appetite and objectives and strategy, which will be demonstrated as a key point in this thesis. Second, risk appetite is an intangible notion and is not the same as KPI's. Third, some definitions suggest risk appetite has a positive impact on governance and risk management.

In fact, risk appetite is a development of the basic concept of appetite, translated in the risk management context. [Hillson \(2018a\)](#) provides an interesting comparison. Appetite is an internal feeling or driver. This is quite intangible and impossible to measure. 'How hungry are you?' Who can answer this question using precise units? Hunger cannot be seen. Therefore, people use an amount of food to

²The Committee of Sponsoring Organizations of the Treadway Commission (COSO) is a joint initiative of five private sector organizations and is dedicated to providing thought leadership via the development of frameworks and guidance on enterprise risk management (ERM), internal control and fraud deterrence.

³The Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system.

describe and materialize their appetite. The coffee and chocolate people eat to satisfy their appetite are not an amount of hunger, this an amount of food. It is the same approach with risks. 'Which appetite do you have for this specific risk?' Again, complex to answer. Like for food, it is possible to translate this risk appetite into measurable units (an amount of risk) that act as a proxy. This is called risk thresholds. There is no amount of risk appetite, but there are risk thresholds used to make this abstract notion of risk appetite more tangible.

2.2.2 Interconnection between RAS and RAF

The risk appetite concept is very often linked to what is called "Risk Appetite Statement" (RAS) and "Risk Appetite Framework" (RAF). Both notions are used all along this thesis. The [FSB \(2013\)](#) defines them as the following:

RAF : "The overall approach, including policies, processes, controls, and systems through which risk appetite is established, communicated, and monitored. It includes a risk appetite statement, risk limits, and an outline of the roles and responsibilities of those overseeing the implementation and monitoring of the RAF. The RAF should consider material risks to the financial institution, as well as to the institution's reputation vis-à-vis policyholders, depositors, investors and customers. The RAF aligns with the institution's strategy".

RAS : "The articulation in written form of the aggregate level and types of risk that a financial institution is willing to accept, or to avoid, in order to achieve its business objectives. It includes qualitative statements as well as quantitative measures expressed relative to earnings, capital, risk measures, liquidity and other relevant measures as appropriate. It should also address more difficult to quantify risks such as reputation and conduct risks as well as money laundering and unethical practices".

In fact, the term 'Risk Appetite Framework' designs the global approach that organization take when establishing their risk appetite. This includes policies, processes, thresholds, control mechanisms. It also includes systems set up by organizations to assess, communicate and control how much risk they are willing to take. The idea behind the framework is then to help the organization in defining its general hunger for risks. The point is that it needs to be articulated and put down in writing. Therefore, the different risk appetite statements (sometimes there is even a general risk appetite statement) will specify precisely how much risk, and of what kind, the organization is willing to take on in pursuit of its objectives. 'These statements are crucial to ensure consistent risk management throughout the bank. They also allow the board to have a holistic view of the risks that need to be managed' [Nouy \(2018\)](#).

The following figure makes it more visual. Risk appetite is already presented as a support for decision-making. Further recommendations are expressed in this thesis on how to make the link between risk appetite and decision-making.

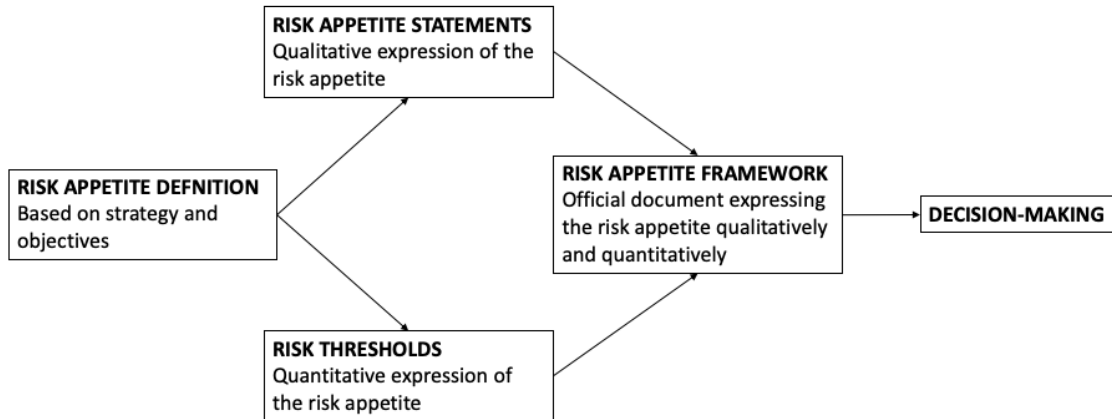


Figure 4: Visualization of the link between RAS and RAF

2.2.3 The risk appetite false friends and how they interconnect

Risk appetite is often misunderstood and the notion is generally confused with some other terms, that can be qualified as "false friends". The aim of this part is to distinguish the risk appetite clearly from these false friends but also to show the similarities and interconnections between them.

Risk Appetite vs Risk Attitude:

ISO (2018) mentions that 'an organization's risk attitude defines its general approach to risk. An organization's risk attitude (and its risk criteria) influence how risks are assessed and addressed. An organization's attitude towards risk influences whether or not risks are taken, tolerated, retained, shared, reduced, or avoided, and whether or not risk treatments are implemented or postponed'.

In fact, risk attitude characterizes a specific reaction or behaviour towards a given risky situation. It is about someone feels and perceives risk. Indeed, everyone has a specific approach when talking about risks. Some actively embrace them, some tend to simply avoid them. This will vary depending on one's risk attitude. Someone's risk attitude is driven by different factors like perceptions, but also by our individual biases.

Then, organizations and stakeholders would be willing to support various levels of risk depending on their risk attitude. In other words, the risk appetite definition and implementation of organization are influenced by the risk attitude of its components.

Risk Appetite vs Risk Culture:

The [FSB \(2014\)](#) provided a paper, 'Guidance on Supervisory Interaction with Financial Institutions on Risk Culture,' that defined risk culture as 'the norms, attitudes and behaviours related to risk awareness, risk taking and risk management'. The FSB considers risk culture effective when 'it promotes sound risk taking, addresses emerging risks (beyond risk appetite), and ensures employees conduct business in a legal and ethical manner.' In fact, 'a company's risk appetite should be aligned with, but is distinct from, its risk culture' [Ding \(2016\)](#). Risk culture is, practically speaking, more 'human-based' than risk appetite. Designing risk culture, in line with risk appetite, is not always trivial.

Indeed, in the context of organizations, a poor and inappropriate risk culture implementation often refers to superficial analysis of the potential challenges and gives rise to a too standardized and basic approach. It often results from this process a generic action plan that does not tackle or even understand the underlying reasons for the risk culture issues. In concrete terms, the main diagnosis tool used in this kind of approach is benchmarking. On the opposite, more effective risk culture perspectives use a more 'targeted' approach to focus on the issues before creating the appropriate risk culture for an organization. In many cases, however, 'the assessment of an organization's risk culture is challenging because culture is complex, non-uniform, and influenced by many factors. A mature risk culture is not necessarily a more risk-averse culture, because informed risk taking is an important and necessary element for financial services firms and the financial system as a whole' [Ding \(2016\)](#). The fact is that a strong risk culture does not appear by accident. There is a risk culture even if organization do nothing, but this risk culture impacts negatively on the management of risks. Organizations must intentionally invest in it. Culture may decline over time and requires a continuous focus. Organization may develop a good risk culture but must maintain it. They should not take their foot off the pedals when they achieve it. Indeed, people adopt different values, get new knowledge and understandings, employees leave the organization and other come. Therefore, risk culture will decline of organizations do not keep on investing in it.

Figure 5 shows that a good risk culture acts a strong basis in order to implement an efficient strategy. By using talent management or incentive programs, risk culture allows risk tolerance and risk appetite to function in a more effective way. Then, a fully mature risk culture consists of consistent behaviours among an organization. In short, where risk appetite is quite intangible and materialized via risk thresholds, risk culture is how people behave with regards to risk issues when no one is looking.

Hillson (2018b) reinforces the idea that a strong culture impacts positively the risk appetite implementation. First, it makes everyone in the organization aware of the importance of risk management in general. Second, it stresses the importance of stakeholders in the risk appetite definition by highlighting their expectations and taking the appropriate actions. Third, strong values and beliefs within an organization lead to better driving behaviours of the employees, improving their risk attitude. An adequate attitude towards risk allows a better understanding of the risk appetite. Fourth, a strong culture determines the way organization actually do things in practice in terms of thinking and acting. It will set the appropriate context to design a risk appetite that reflects the strategy and the objectives of the company.

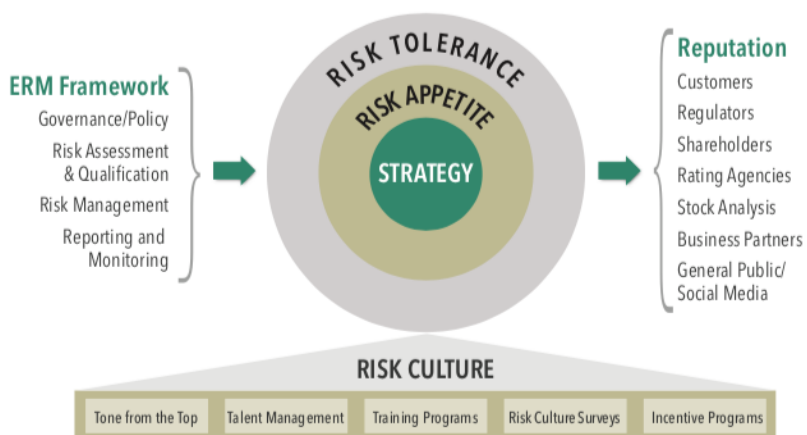


Figure 5: The key linkages between risk appetite, risk tolerance and risk culture, Lam (2015)

Risk Appetite vs Risk Capacity:

An organization's risk capacity is 'the maximum amount of risk that it can assume' Barfield (2008). However, where is the boundary? Where can it be concluded that an organization can't assume the given amount of risk? Noon (2016) says that 'if we suffer a hit of €X due to risk events occurring we will no longer be viable as a business after taking into account mitigation such as stopping dividend payments, taking up credit lines, selling assets, squeezing working capital, accessing debt markets' Deloitte (2016). The risk capacity is not necessarily a monetary unit but the organization limit in terms of infrastructure, IT capacity or employees.

This is another crucial concept regarding the risk appetite definition since it must be set at a degree within the organization's capacity limit. Even if it seems 'logical' at first sight, risk capacity needs

to be taken into account in order to design an effective risk appetite. Stakeholders' expectations and needs will obviously differ on the desired safety margin. Then, it is important to focus on this part when setting and designing appetite.

[Deloitte \(2016\)](#) expresses the following question: 'at what level does our exposure to risk exceed the business risk capacity (i.e. resources available to manage the risk and recover from negative impacts)?' This is one question, among a lot of others, to focus on when linking risk appetite and risk capacity.

This link is developed in the recommendations. In short, risk capacity determines the appropriateness of the risk appetite. A certain risk appetite may not lead to the right decision because it exceeds the capacity and puts the organization into troubles. The recommendation proposes a process to make risk appetite appropriate for the organization and moderate it.

Risk Appetite vs Risk Thresholds:

Where risk capacity, as detailed in the previous subsection, describe a global overview of the acceptable risk boundaries, risk thresholds are more a specific point or limit (expressed in volume, currency, quantity,...) that does not allow any risk to go higher. In fact, it gives a clear and accurate figure of the situation.

In Enterprise Risk Management (ERM), the threshold is generally (and logically) linked to the risk exposure, calculated depending on two factors: probability and impact. It is clear that thresholds are sometimes exceeded. A huge majority of companies are aware of this possibility when designing their Risk Appetite Framework. However, what will distinguish a company with poor risk considerations from another with a strong risk management policy, comes from the fact the latter is able to react quickly and efficiently to the situation. The ability to bring back the risk exposure (and its possible undesirable consequences) below the risk thresholds is one of the crucial points in managing risk since nobody within a firm can perfectly predict what will happen in a given situation.

Establishing risk thresholds is one of the major challenges in promoting an efficient, but this is nonetheless crucial to its achievement. There are a lot of different ways to determine risk tolerances. It is up to each organization to determine which ones work best. [Lam \(2015\)](#) provides some possibilities:

1. Board and management judgment
2. Percentage of earnings or equity capital
3. Regulatory requirements or industry benchmarks

4. Impact on the achievement of business objectives
5. Stakeholder requirements or expectations
6. Statistics-based (e.g., 95% confidence level based on historical data)
7. Model-driven (e.g., economic capital, scenario analysis, stress-testing)

Risk Appetite vs Risk Tolerance:

[Wason \(2006\)](#) defines risk tolerance as the acceptable level of variation around profit targets, aligned with the risk appetite. According to [Kamiya \(2007\)](#), risk tolerance is the acceptable variation relative to the achievement of objectives. In practice, risk appetite and risk tolerance play a different but linked role. While risk appetite is relatively broad, risk tolerance is 'operational and tactical' [McKay \(2013\)](#). Indeed, risk tolerance represents the set of thresholds that an organization uses to put in place the risk appetite regarding specific types of risks, products, business units or other strategic levels. Some of the risk tolerances could be seen as limits that should not be exceeded except under exceptional circumstances (limits also known as "hard limits"). On the opposite, it could serve as guideposts for reviewing potential risks and to mitigate them efficiently.

Whereas risk appetite is a strategic determination based on long-term goals, risk tolerance can be evaluated as a tactical keenness to confine a specific risk within established parameters. Risk appetite is thus, in other words, translated into specific tactical risk tolerances limits that force risk-acceptance activities at the business level. 'Risk tolerances are the parameters within which an organization (or business unit or function) must operate in order to achieve its risk appetite' [Lam \(2015\)](#). Once established, these parameters are conveyed downward via the organization to provide clear guidelines to managers. It can also act as a tool to give feedback when the parameters are exceeded.

[Hillson \(2018c\)](#) expresses his scepticism regarding the use of this notion. The idea behind this scepticism concerns the real meaning of the word 'tolerance'. Indeed, it can be perceived in two ways. First, an employee can arrive five minutes late, it will be tolerated. If he arrives one hour late, it will not be tolerated. Explained like this, tolerance represents an amount of something that someone is prepared to bear. How does this differ from the risk appetite? Second, an organization could tolerate plus or minus a certain degree regarding an objective. It sets lower and upper limits for a target in which the organization tolerate variation. Explained like this, tolerance represents a measurement. How does it differ from risk thresholds? Therefore, tolerance could mean appetite (how much an organization is prepared to bear) or thresholds (plus or minus a certain measurement). The term has two potential meanings and is ambiguous. Hillson simply recommends not to use this notion and this thesis tends to agree with the latter statement.

How to link all these elements?

Risk appetite was compared to and distinguished from risk attitude, risk tolerance, risk culture, risk capacity and risk thresholds, independently. The main idea in this summarizing part is to obtain a global view of the linkages and interconnections between all these false friends. This will be done by adapting the RARA (Risk Appetite-Risk Attitude) model developed by Hillson (2012).

The RARA adds two components there were not tackled before: inherent and residual risks. This thesis provides a short definition of these concepts to understand the linkages developed by Hillson in its RARA model.

1. Inherent Risk: 'the risk of the entity you're trying to measure, without mitigating controls' Herrera (2017).
2. Residual Risk: 'the amount of risk that remains after all efforts have been made to identify and moderate risk (i.e. mitigating controls)' Herrera (2017).



Figure 6: Inherent vs Residual Risk, MBN (2020)

There are interesting linkages between all the risk appetite false friends described previously. They work as whole in risk management, and not independently from each other.

One evident input to risk appetite is a situation that is being encountered. Risk appetite does not exist in a vacuum or in isolation. Risk appetite was defined previously as 'the types and amount of risk, on a broad level, an organization is willing to accept in pursuit of value' COSO (2020). Then, the situation the firm is facing is essential, but not only. In fact, it is not just the situation in general that

influences risk appetite, but the specific objectives that the company feels like achieving in or from that case. In addition to the situation and its associated objectives, there are two other factors that influence risk appetite, namely risk tolerance and risk culture.

Risk tolerance, defined as 'the acceptable level of variation around profit targets, aligned with the risk appetite' and risk culture, defined as 'the norms, attitudes and behaviours related to risk awareness, risk taking and risk management' are both inputs to the risk appetite implementation. Risk tolerance is not the same for each company, depending on its core business but also on the risk attraction of the leaders. Same for risk culture, which will vary a lot certainly depending on the firm activities, but also on the country, the internal policy or the size of the company.

Inputs being considered, having a look at outputs of risk appetite is also important. 'We describe our natural hunger for food or drink by translating the internal appetite into externally measurable terms, for example, a steak or a salad' Hillson (2012). In other words, objective measures (of achievement or not) need to be set up to translate the risk appetite, for instance, in accurate metrics. This role is fulfilled by risk thresholds, which are a kind of external expression of the risk appetite. Once defined, risk thresholds have to be compared to the global risk capacity of the company to bear risk. This step is non-negligible since it could be found that the appetite for risk (and the related thresholds established) are too high in order to comply with the risk capacity.

The inputs and outcomes for risk appetite are shown in the first part of Figure 7. However, it is not enough to link it with risk attitude. Indeed, the risk attitude notion is the second cornerstone of the model.

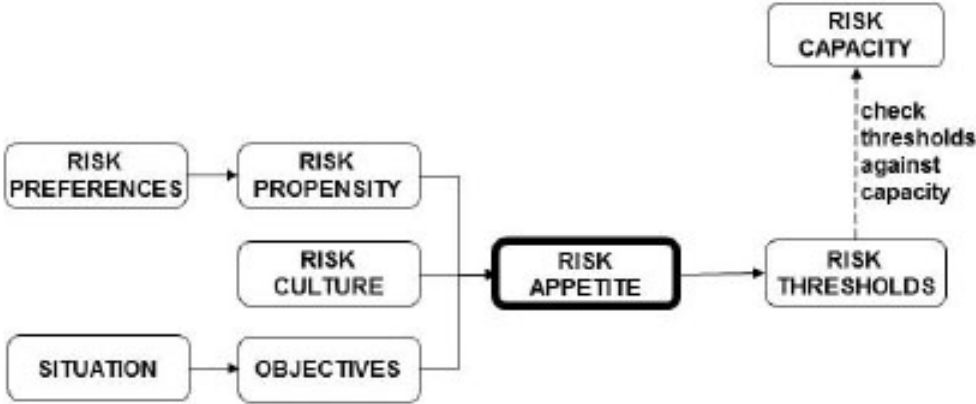


Figure 7: Risk appetite inputs and outcomes, Hillson (2012)

Following the same approach as for the risk appetite, the chosen risk attitude is influenced by different factors (inputs): the perceived and estimated risk exposure associated with a given situation, this perception being affected 'by a complex web of factors, referred to as the 'triple strand' of influences (conscious, subconscious, and affective factors). It is common to speak of only a few specific risk attitudes, such as risk-averse, risk-seeking, risk-tolerant, or risk-neutral. But in fact, risk attitude exists on a continuous spectrum with an infinite number of possible positions' Hillson (2012).

Regarding the outputs from risk attitude, two main elements have to be considered. As for the risk appetite, risk attitude will influence the definition of the risk thresholds. Indeed, the attitude (being comfortable with risk or not) will influence the way that thresholds are set up. Nevertheless, the impact of risk attitude is much wider than only affecting the chosen level of risk thresholds. Indeed, it also impacts the risk actions taken to mitigate the risk. Again, a manager being 'not comfortable' with risk will imagine more actions than another to control the potential risks. Also, risk actions will, normally, decrease the degree of risk exposure associated with the situation, leading to a new perception of risk. As a result, it may be strategic to adapt the risk attitude in light of the new considerations. Therefore, and as described in the following figure, the process linking risk attitude with its inputs and outputs should be seen as a cycle. Each change in an element will affect all the others.

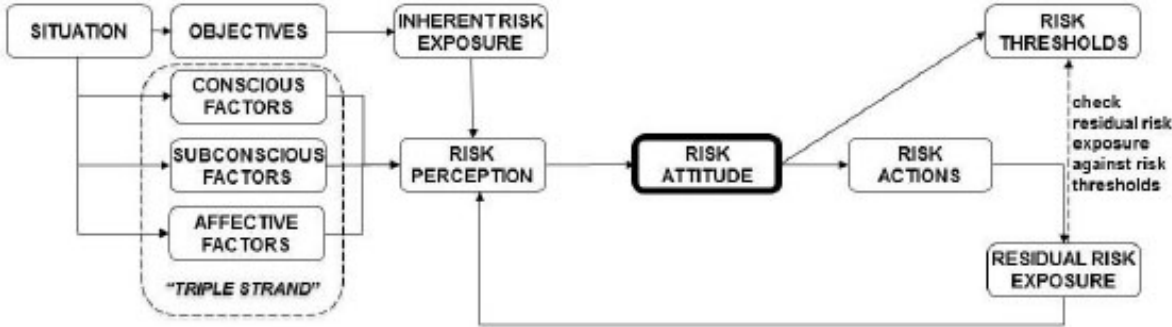


Figure 8: Risk attitude inputs and outcomes, Hillson (2012)

Comparing Figure 7 and 8 shows that risk attitude and risk appetite share common inputs (i.e. the situation and its related objectives) and a common outcome (the risk thresholds). Therefore, via the RARA model, it is possible to merge the two exhibits into a single model, showing the relationship between risk appetite, risk attitude, and all the other components (false friends) described before.

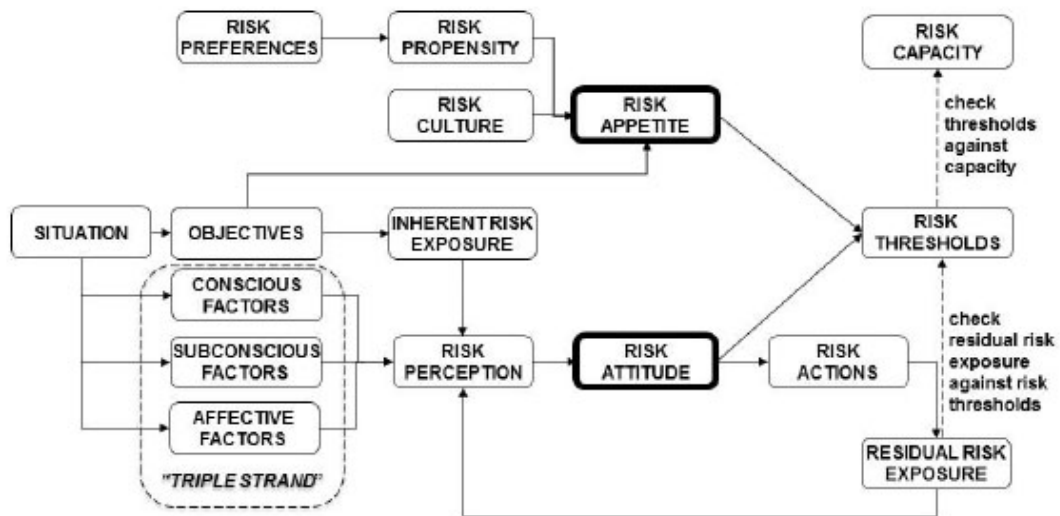


Figure 9: RARA model, Hillson (2012)

2.3 How to design an effective risk appetite?

The answer to the question 'how to design an effective risk appetite' is articulated in three phases. First, inputs that shape how appetite is applied are presented. Second, the process to design, communicate and review the risk appetite is explained, making the link with strategy and objectives. Third, outcomes are developed, making the link with other processes.

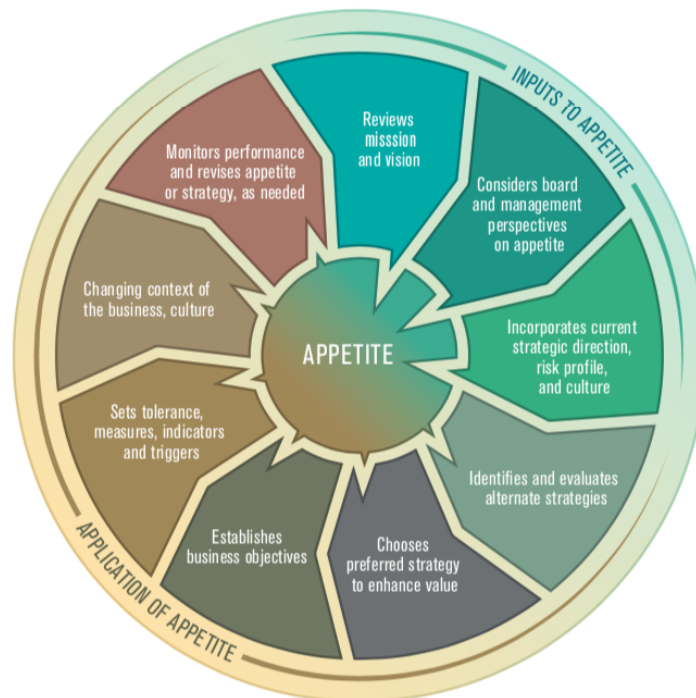


Figure 10: The continuing approach to design risk appetite, [COSO \(2020\)](#)

2.3.1 Inputs

According to [COSO \(2020\)](#), five inputs must be taken into account when designing risk appetite:

1. Mission and Vision:

Mission and vision have the ultimate goal to create value for the organization. Therefore, risk appetite needs to align with them to maintain consistency and confidence between appetite and the future horizon of the organization. The fact is that there is no appetite suitable for each situation, company or bank. It is not a linear process. Each appetite has to reflect the mission, the vision and the values of the organization.

2. Strategic direction:

It will be shown that risk appetite is a crucial part of setting strategy and objectives. This will then allow the organization to pursue a desired level of performance. Therefore, the current strategic vision of the organization offers linkages between risk and potential performance. For instance, a pharmaceutical company looking for a new vaccine will need a higher appetite for innovation as well as for research and development. Based on the same logic, organizations have to look at their available capabilities to go into the strategic direction, and to define their risk appetite.

3. Board and senior management perspectives:

Boards and senior management have to define the level of appetite that will be applied within their organization. First, their view on how to design the risk appetite is important.

Indeed, they have the choice between an objectives-focused approach or a risk-focused approach. The first one focuses on how to create value, based on entity levels goals and priorities. To do so, organizations need to understand their risk profile linked to objectives and their overall strategy. The second one focuses on risk categories, translated into risk statements that details the expected outcomes (or non-desired losses). This thesis will recommend a proactive approach in terms of risk appetite implementation and promotes the objectives-focused approach. Organization might combine both approaches. In addition to this choice, the board should not only focus on risks to avoid, but also a risk that could enhance value.

4. Stakeholders' considerations:

Shareholders and regulators are not the only stakeholders to take into consideration. This limited view restricts the interests of all stakeholders. Minority stakeholders should not be neglected. Even if major shareholders can easily shift their investments to other organizations, a simple customer can also exert pressure by questioning the quality of a product publicly. This impact is too often left behind. Stakeholders have a considerable impact on the organization's trust and reputation in addition to their financial contributions. The stakeholders can be divided into a non-exhaustive (given that non-financial organizations may include various stakeholders according to their activities) list of four classes:

(a) Shareholders :

They are theoretically the 'last ones to be paid', depending on what income remains after all

other actors involved have been paid. For this principal reason, they are mainly interested in the bank's returns and profitability. Their decision-making will be based on the balance between the risks they encounter and the expected related profits. Consequently, their concerns will be mainly represented by earning variability metrics.

(b) Debt holders :

They provide funding for a bank. Therefore, they focus on the ability of a bank to meet its long-term debts and financial obligations or, in other words, its solvency. Banks' debt holders can be made of other banks, depositors or even bondholders. All of the latter will also be interested in the risk appetite and, more precisely, in capital and liquidity. Indeed, capital is seen as a buffer to absorb losses. It is one of the primary focus rating agencies (and their evaluation mechanisms).

(c) Regulators (and supervisors) :

They have a strong impact and notoriety in the financial markets. Regarding risk appetite, they put in place various elements to encourage managing it in terms of tools and measures. For instance, the Basel Accord defines key metrics. These metrics have been reinforced in the Basel III regulatory framework, where compulsory ones are even introduced. Therefore, this will inevitably impact a bank's risk appetite. Moreover, regulators also check a bank's decision-making process (in a more 'qualitative' way) to ensure business sustainability in the medium and long term.

(d) Governments :

States interventions can play an important role in protecting and supporting a bank against large losses, via security repurchase agreements, massive bond-purchase programs or guarantees offer. Since banks in general undeniably need government's support, they adapt their risk appetite in order to fulfil and comply with the sovereign expectations.

Taking into account a various range of stakeholders does not mean designing a specific risk appetite for each of them. It means combining all their expectations when defining the organization's appetite for risk and translating them into objectives.

The following figure reinforces the idea that organizations have to manage various stakeholder's expectations to better balance strategy, risk and objectives:

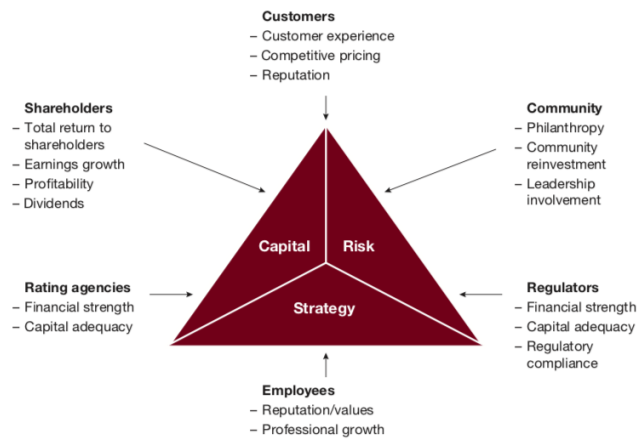


Figure 11: Managing stakeholders' objectives, PWC (2009)

5. Culture:

The risk appetite must be defined depending on strategy and objectives. Therefore, organizations logically need a culture that is aware of these objectives, but also the risks they represent. Culture needs to be consistent with the board and management perspectives and goals. A well-defined and embedded makes it clear for each employee on what is acceptable and what is not.

2.3.2 Process

The theoretical process to implement the risk appetite within an organization can be divided into four steps:

1. Developing risk appetite to support strategy and objectives:

The first step consists of the global risk appetite definition by considering the strategy and the objectives. Internally, it will be based both on quantitative (such as metrics, thresholds) and qualitative elements. Appetite statements will place the necessary boundaries to stay within the desired strategy and achieve the desired objectives. In fact, the risk appetite definition based on strategy and objectives allows for the development of a performance context. Metrics are a key component at this time, while keeping in mind that this could differ largely from one organization to another. An investment bank appetite for credit risk will differ significantly from the one of a savings bank. However, metrics are often difficult to set up, especially for qualitative risks. The evolution of technology, modelling and data treatment will allow this thesis to formulate some recommendations on how to do so. In addition to these tools, potential metrics to be used

depending on the organization's business could be:

(a) Capital adequacy metrics:

Even if capital adequacy is a relatively clear concept, it could be described under different angles that are represented below, with regulatory rules playing the lion's share.

First of all, there is the Pillar 1 which is a component of the Basel Framework and represents the minimum capital requirements banks have to hold. It avoids a bank not being compliant with the mandatory regulatory system. [Cremonino \(2011\)](#) summarizes the different metrics to be considered:

- i. Tier 1 ratio : defined as 'the ratio of Tier 1 to RWA⁴, where the former represents the high quality capital and the latter the standard regulatory measure of risks'.
- ii. Total capital ratio: defined as 'total capital, made by the sum of Tier 1 and Tier 2, divided by RWA'.
- iii. Core Tier 1 ratio : defined as 'the highest quality component of Tier 1 and expressed as a percentage of RWA'.

If both Tier 1 ratio and total capital ratio are regulatory, Core Tier 1 ratio is a more common market benchmark largely used above all by rating agencies. Financial disasters showed that these indicators are potentially not reliable enough and then, regulators introduced a simplified and more exhaustive metric: the leverage ratio (the ratio of total assets to equity). This is more a set of metrics than a specific metric in itself.

Metrics envisaged in Pillar 1 of Basel II are a useful tool to assess the capital adequacy among all financial institutions. Under Pillar 2, the vision and objective are different. Banks are more than encouraged to develop their own custom-made risk measures that tackle some of the potential limits of the regulatory ones. Unexpected loss is for instance captured by the economic or internal capital, which is a statistical measure estimating the maximum potential loss with a set confidence level.

It is relevant to include a range of capital adequacy variables in the risk appetite definition. One related to Pillar 1, the choice depending on the bank's strategic view. The Pillar 2

⁴Risk-weighted assets (RWA) are used 'to determine the minimum amount of capital that must be held by banks and other financial institutions in order to reduce the risk of insolvency. The capital requirement is based on a risk assessment for each type of bank asset' [Tuovila \(2020\)](#).

metrics provide a complementary view and can be useful for more 'sophisticated' institutions, since it encourages developing metrics internally. For instance, it is interesting for banks with a diversified portfolio or investment banks with large market exposures.

(b) Earning variability metrics:

Shareholders mainly focus on two elements: the bank's profits and its variability. While the former is out of the risk appetite scope, the latter is an important variable to take into account in the risk appetite definition. It influences the capital adequacy directly since retained profits compose the principal capital source. In order to quantify this variability, different possibilities can be envisaged.

The most evident (and certainly efficient) metric is the earning at risk (EaR), which characterizes the volatility of the profits. 'This is a statistical variable used as a proxy of the potential return variability. This metric could be assessed under a historical perspective or a forward-looking one, where the future volatility is expressed in the function of the forecast business portfolio' [Cremonino \(2011\)](#). EaR should not be seen as an individual tool but more like a set or a family of metrics. There are different degrees of freedom when defining EaR and this makes it complicated to use it as an individual instrument. [Cremonino \(2011\)](#) also describes statistical measures or time series lengths that could be selected:

- i. Net or tax gross profits
- ii. Profits or other profitability measures such as earnings before interest, taxes, depreciation and amortization (EBITDA)
- iii. Profits with/without extraordinary items

In addition to the EaR metric, the probability of loss computation can be used, even if it won't work better. In fact, the probability of loss is very complicated to compute and relatively unstable. Therefore, it is sometimes seen as an irrelevant tool not to be included in the risk appetite definition. However, this metric is interesting for banks with large trading operations. Also, to reduce the risk of losses, a meaningful indicator is the cost of risk. The [IRMI \(nd\)](#) defines it as 'the cost of managing risks and incurring losses. Total cost of risk is the sum of all aspects of an organization's operations that relate to risk, including retained (uninsured) losses and related loss adjustment expenses, risk control costs, transfer costs, and administrative costs'. Commercial banks could be the most interested in this metric. Indeed, credit risk is considered as one of the most important risk categories for them.

EaR is certainly the most relevant choice regarding earning variability metrics. It must be completed with other metrics, depending on the specific bank strategy and its related performance management. For example, net profits offer the simplest solution and the most direct tool to meet shareholders' expectations and capital adequacy. The disadvantage comes from the fact that it is affected by tax code or extraordinary events (hardly accountable). In fact, EBITDA is perhaps better to represent the recurrent profits faithfully.

(c) Liquidity metrics:

The financial crisis has shown that liquidity is one of the most fatal factors in risk management. Banks know that it cannot be underestimated. Regulators (both in Basel III and the Dodd-Frank Act ⁵) go in the same way and stress the importance of using liquidity metrics. Banks have then actively embraced the movement and use several metrics to manage liquidity risks.

In fact, it is interesting in the risk appetite definition to distinguish short-term from long-term (structural) liquidity metrics since the approach and the consequences are not similar.

The survival period is a good solution as a short-term metric: it corresponds to the first day in which the NLP ⁶ turns negative (i.e. when a bank has no further available liquidity to counter the simulated net outflows) [ECB \(2019\)](#).

Regarding medium or long-term liquidity, the cumulated liquidity gap, defined by [Kenton \(2018\)](#) as 'a term used in several types of financial situation to describe a discrepancy or mismatch in the supply or demand for a security or the maturity dates of securities'. Alternatively, the ratio of assets and liabilities could be considered. Metrics described in Basel III, such as liquidity coverage ratio and the net stable funding ratio, may be envisaged as well. The former for the short-term aspect, the latter for the long-term one.

Given that liquidity metrics have to cover two sides: short and long term, it is important to include at least two metrics in the risk appetite definition in order to cover both of them.

(d) Risk metrics:

[Aziroff \(2018\)](#) defines the concentration risk as 'the risk that an investor will suffer from lack of diversification, investing too heavily in one industry, one geographic area or one type

⁵The Dodd-Frank Wall Street Reform and Consumer Protection Act is 'a massive piece of financial reform legislation passed during the Obama administration in 2010 as a response to the financial crisis of 2008' [Hayes \(2020\)](#).

⁶The Net Liquidity Position (NLP) 'at a given point in time is equal to the difference of the bank's available liquidity (i.e. its counterbalancing capacity) and the expected net outflows since the reference date' [ECB \(2019\)](#).

of security. It is the risk of loss arising from a large position in a single asset or market exposure'. This specific risk is not really captured by the RWA. Therefore, the risk appetite is more accurate and complete if there is a focus on metrics able to translate this concentration risk. For example, using the maximum exposure of the five or 10 customers, called concentration 5 or 10 (C5, C10). These exposures could potentially directly provoke a bank collapse. It is also interesting to set a maximum exposure for each counter-party that comes from trading operations over the counter (OTC).

Above all in this risk metrics, the reputational risk has to be tackled. Reputational risk is really difficult to express and can be classified as a qualitative risk. Hence, translating it into measurements is complex. Non-financial or statistical metrics would prove to be very reliable for this type of risk. This problematic is at the heart of this thesis. However, some qualitative metrics can be introduced. Recommendations will complete the analysis:

- i. Negative news coverage
- ii. Customer satisfaction
- iii. Number of complaints

These potential metrics can explicitly explain (and help to anticipate) the reasons for a decrease in profitability. These metrics could be associated with more specific measurements. Again, the quantification is quite subjective. Indeed, a metric such as customer satisfaction is subject to a large amount of noise and biases because it varies depending on many factors that are out of the bank scope. For example, the economic conjuncture plays an important role in this case.

(e) Business specific metrics:

Stressing the importance of constraints in terms of cash flows is fundamental. In addition to that, a focus on business operations is interesting to include into the risk appetite. An example is the diversification of funding sources. Indeed, a bank may add some limits to avoid the sudden drying up of a liquidity source. [Cremonino \(2011\)](#) enumerates some limits:

- i. A maximum amount of a single product such as certificates of deposit or bonds on the overall number of liabilities
- ii. A maximum amount of liquidity provided by wholesale markets versus retail markets
- iii. A maximum amount of liquidity provided by a single counter-party

2. Validating the risk appetite:

Discussions between the board and senior management levels are not sufficient to define the risk appetite. Their view is based on what they think the organization should do in terms of risk appetite. COSO (2020) proposes an interesting approach to validate the risk appetite. It consists of applying the statements to a series of past decisions. In other words, back testing the statements and applying the boundaries to previous cases. It may reveal some decisions that were made outside the intended limits. Reviewing measures from other similar organizations can also offer guidance. It allows organizations to see if they have a risk appetite approach that varies widely from others. Some variations are logical, depending on the mission, vision and strategic direction of the organization. Too much variation should raise questions on the risk appetite validation.

3. Communicating the risk appetite:

This third phase mainly consists of cascading down the information through the bottom levels in order to obtain harmonization in the risk management process. The clarity of communicating the risk appetite improves if a commonly applied structure is designed. It remains relatively difficult and lots of organizations still struggle at this point (the risk appetite stays accessible only to higher levels). It is important that everyone within the organization has a clear understanding of the risk appetite. The analysis will confirm this problem of articulating and communicating the risk appetite. Recommendations will be formulated on how to tackle this key point.

4. Monitoring and reviewing the risk appetite:

Finally, the risk appetite has to be monitored with the adequate processes and the relevant infrastructures. A specific focus on the evolution of the most influencing and undesired risks must be tackled at this point. It is fundamental that the risk profile and capacity of the organization stays constantly aligned with the risk appetite. To do so, open-ended monitoring, in addition to the timely reporting of emerging risks and dangers to the adequate stakeholders, is a critical component of an effective risk appetite implementation. It allows consistency in the risk management and requires the board to monitor compliance with the organization's risk appetite. On the opposite, for a board to efficiently control risk taking and provide guidance to management, it should have access to clear, timely and pertinent risk appetite information. Again, finding the right trade-off and degree of detail to communicate to the board (so that the information remains purposeful) can be complex.

Annually (or more) and in light of the evolution of the organization (and its strategy and objectives), the changing economic environment or competitive conditions, the risk appetite must be reviewed and adapted. It is of high importance to identify domains where the risk profile might be approaching limits or key warning indicators. This helps to provide and discuss quickly about the adequate response.

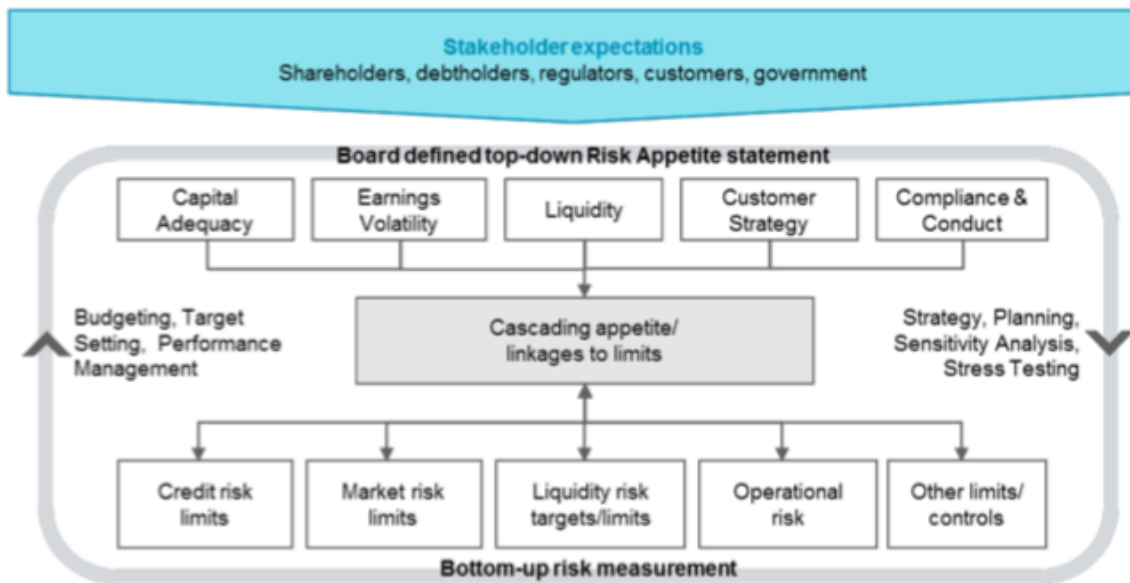


Figure 12: Summary of the risk appetite implementation process, [Ding \(2016\)](#)

2.3.3 Outcomes and benefits

Many challenges make it difficult to obtain a strong risk appetite implementation. However, outcomes can be a source of real motivations in doing so. The objective is to show that, even if the risk appetite notion is not yet fully understood, its outcomes can bring benefits to an organization. Organizations must understand this to progressively sweep their doubts about the risk appetite.

A survey published by [PWC \(2015\)](#) has identified some positive outcomes of the risk appetite implementation:

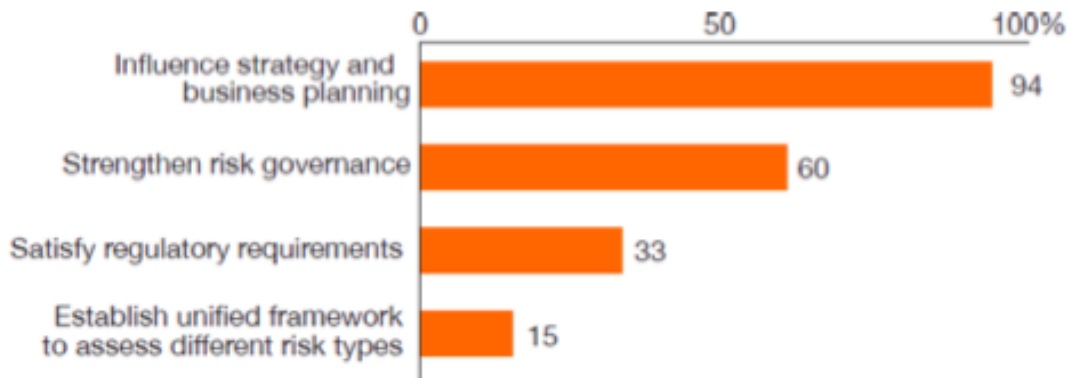


Figure 13: Positive outcomes of the risk appetite implementation, PWC (2015)

Moreover, the following table summarizes the outcomes linked to the risk appetite implementation and aims at increasing interest in doing so, mainly for non-financial organizations.

Support for strategic direction	<ul style="list-style-type: none"> - Improves strategic direction by highlighting risks to take (or to avoid) and when (appropriate timing) - Enhances performance by aligning strategy, objectives and appetite for risks. This could results in higher profits, growth or control costs reduction - Reduces useless exposures to free up capacity for the appropriate risks to take
Support for risk management	<ul style="list-style-type: none"> - Makes the allocation of risk management resources more effective by targeting areas under or over exposure - Supports an harmonized risk culture and risk language within the organization
Support for stakeholder's value maximization	<ul style="list-style-type: none"> - Helps to better align objectives and strategy with stakeholders expectations - Improves (potentially) perceptions and appreciations from rating agencies and regulators
Support for sound corporate governance and transparency	<ul style="list-style-type: none"> - Improves internal and external understanding between strategy and decisions by disclosing transparent and consistent information
Support for the risk taking boundaries definition	<ul style="list-style-type: none"> - Allows to align the desired outcomes with the risk capacity and profile of the organization

Figure 14: Motivations to design risk appetite within an organization (Adapted from Epetimehin (2013))

Another outcome of the risk appetite implementation to take into consideration is its interconnection with other processes within the organization. A non-exhaustive list of processes is presented. They have been selected for their direct link with the risk appetite and because they may reveal on the effectiveness of the risk appetite implementation. For instance, the remuneration process is presented. Is the organization using risk appetite within its reward and remuneration plans? Organizations with a well-defined risk appetite have employees that are encouraged to help deliver a strong risk appetite culture and to remain within agreed risk appetite thresholds. However, a poor risk appetite implementation could reveal that only some employees are encouraged to remain within specific risk thresholds and the thresholds in question have weak linkages to the organization's objectives.

1. Governance: The governance is impacted by the risk appetite implementation and its related risk thresholds. It furnishes the board and senior management with the information, the tools but especially the risk appetite language required to understand and communicate from the top of the firm to the bottom levels. Moreover, the risk appetite definition helps across all businesses, since it focuses on areas where the most influencing risks are and it aligns their management with the business and the risk strategy of the organization.
2. Performance evaluation: The performance evaluation of a new project or product launching has to cope and to be in line with the risk appetite definition. Indeed, it cannot be strongly expected from a project with strict metrics and high risk aversion that it brings back high returns. Conversely, a project for which the risk appetite was set up with more flexibility for the launchers, is expected to provide a higher level of satisfaction but is also more subject to very bad performance. The good balance between the performance evaluation resulting from a given project and the risk the organization is willing to take for this project is important to ensure stability within all the employees.
3. Strategy: It becomes more and more important to develop the organization's business and risk strategies (and their linked objectives) based on its risk appetite. Indeed, strategy allows a relevant description of the organization's risk profile within the broader context of its competitive position. In today's risky environment and constantly evolving markets, risk appetite has to be closely linked with strategy. The [PRA \(2013\)](#)⁷ expects an organization's risk appetite to be integral to its strategy and the foundation of its risk management framework, so that the whole organization operates within this appetite'.
4. Remuneration: [Matruglio \(2014\)](#) explains the importance of designing incentives plans to support the organization's risk appetite and the taking and controlling of risks in line with its objectives.
5. Risk reporting: Reporting risk is crucial but challenging, and depends more and more on the degree of implementation of the risk appetite within the organization. Cascading down the risk

⁷UK Prudential Regulation Authority

appetite statements and thresholds is not an easy task and many organizations suffer from this issue when implementing their risk appetite. Recommendations give insights to organizations to deal with the latter issue.

6. Communication: The risk appetite is more effective if it reinforces the organization's external communication to all the stakeholders involved and other market players. In fact, a clear communication about the risk appetite helps to ensure a positive evaluation from different key actors: shareholders, debt holders but also rating agencies. Regarding internal communication, risk appetite also plays an important and strategic role by harmonizing the risk profile, language and metrics used and promoted by the organization.
7. Disclosure: Communication and risk appetite are also closely linked. Moreover, internal communication (and its related risk appetite language) must be aligned and transparent with the external communication of the organization. However, there is a real reticence from organizations to publish their Risk Appetite Framework. This external disclosure is supposed to show how the risk appetite is concretely translated in the daily risk management process. The [BCBS \(2010\)](#) considers that 'banks should disclose key points concerning risk appetite with a description of the process for defining it and information concerning the board involvement in such process'. Should they go further since disclosing the risk appetite also means giving access to a strategic information to potential competitors? This is out of the scope of this thesis but this reticence has been confirmed when conducting interviews for the analysis part.

3 Problematic

3.1 The specific case of qualitative risks

The literature review has explored the notion of risk appetite, tackling different aspects of the concept. The fact is that even if this literature review has provided a big picture of the concept, entering the details in some subsections is relatively complex, if not impossible, given the lack of information on the subject as well as some confusion. This leads to an observation that gives to this thesis its value: the literature is far away from defining exhaustively the risk appetite, especially when it refers to qualitative risks.

3.2 Qualitative risks - Overview

3.2.1 Definition and distinction with quantitative risks

One crucial approach to risk management is the link between risk and objective. An organization focuses on risks that matter, meaning on risks that have a link with its objectives. A bank does not analyse the weather of tomorrow, an ice-cream vendor will do because this risk matters for its business. Risks are analysed according to a specific target. Therefore, it is also important to talk about qualitative objectives. Qualitative objectives give rise to a set of qualitative (or non-financial) risks, which is a broad term. In fact, it can be simply defined as risks that are not financial (market, liquidity, credit or interest rates). There are different types of non-financial risks: operational (inadequate or failed internal processes, people and systems), IT or cybersecurity (hackers, technology failure), legal and compliance (financial regulations, regulatory requirements), model (model performs inadequately and leads to adverse outcomes), reputational (threat to the good name of the organization) or third-party (outside parties that underperform a service). This list is non-exhaustive. Appendix A provides a complete and exhaustive view of the non-financial risks with relevant examples.

Then, the difference between qualitative and quantitative objectives lies in the difficulty to set the adequate risk thresholds. The achievement of quantitative objectives is easier to be translated into concrete numbers and units. Conversely, for instance, an organization wants to increase its presence in the media. One of the risks linked to this objective is that some articles could criticize the organization. What is the probability that an organization's reputation would be deteriorated due to these articles and how much would it lose in terms of money if this happens? This is complex to set up risk thresholds for this kind of qualitative objective.

For this reason, recommendations advice organizations to develop firstly risk appetite in terms of objectives and then in terms of risks. An extended interpretation of the title of this thesis may help the

reader to understand. The goal is to show how to define risk appetite for qualitative objectives that are impacted by non-financial risks. Since qualitative objectives are difficult to measure due to their link with non-financial risks, it is complex to design risk appetite for them. In short, objectives are the link between risk appetite and risk in itself. An organization does not directly design risk appetite for a certain risk. The step 'objectives' is necessary.

Deloitte (2018) explains that non-financial risks are generally not considered as directly associated to the primary business and revenue-generating activities reflected in the PL statement and the balance sheet. This is not the right approach and many organizations are understanding it by shifting their view towards an exhaustive non-financial risk management. They realize rightly that non-financial risks may have substantial negative strategic, business, economic, or reputational implications, but also that they may have huge financial consequences. Therefore, many organizations look forward to designing their risk appetite for these non-financial risks, realizing the impact they could have on the achievement of their objectives. The qualitative approach required for their assessment and its associated subjectivity makes it a very hard challenge, especially for non-financial organization with a huge variety of risks.

The following figure summarizes the different non-financial risks that were briefly approached. This taxonomy allows to see what is done currently to manage a given risk, what should be the future focus regarding this risk and what could be its impact on the organization. This allows prioritizing objectives based on the risks they represent. Recommendations will go further.

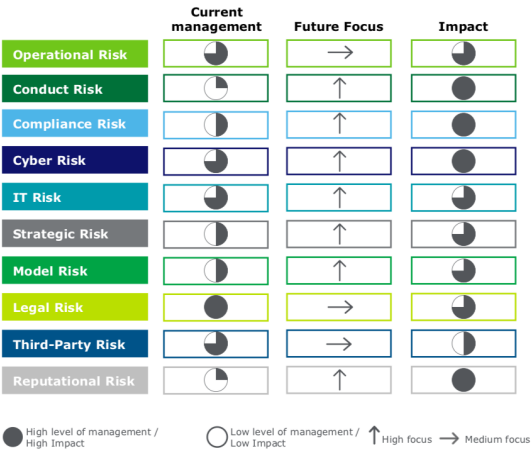


Figure 15: Theoretical example of a taxonomy for qualitative risks, Deloitte (2017)

3.3 Challenges linked to qualitative risks

The risk appetite implementation continues to be an embarrassing challenge, even for risk advisors or leaders in financial institutions where the notion is typically more developed and advanced. Moreover, those in non-financial organizations face even harder challenges. This can be firstly explained by evoking the management scepticism of the benefits linked to the use of the risk appetite. Progress is being realized, as explained in a survey published by the EY risk advisory department in cooperation with the Institute of International Finance (IIF) and based on a total of 51 firms of different types across 29 countries. The results show that 'the majority [of the organizations] indicate they have begun to create a risk appetite approach for non-financial risks, including conduct and compliance' [EY \(2015\)](#).

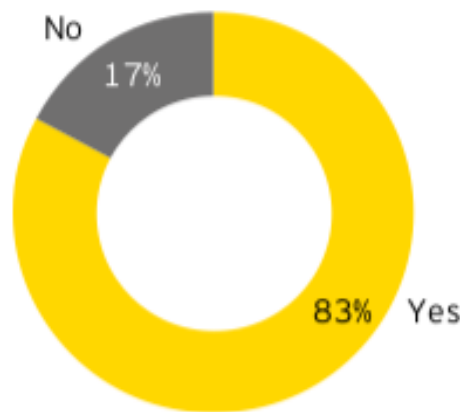


Figure 16: Percentage of organizations that created a risk appetite approach for qualitative risks, [EY \(2015\)](#)

The fact is that different organizations have different degrees of sophistication and quantification tools when assessing and measuring their risks. Each organization has different needs that are a function of factors, both external and internal, driving the requirements for risk quantification and assessment. However, and regardless of these factors, it is inconceivable that risks (especially non-financial ones) can be effectively managed without some good understanding of the impact of risk taking within the organization but also without implementing a minimum of risk appetite statements for them. Indeed, different costs and burdens coming from banks' non-financial risks have raised in a considerable way. This can be partly explained by potential losses related to misconduct, but it may also be linked to the costs of IT failures and cyber-attacks. Expected regulatory requirements not only impose additional compliance measures, but also strongly encourage organizations to adopt a more strategic view regarding their management of non-financial risks (i.e. identification, measurement and monitoring). Evidence is becoming too obvious and crucial for organizations to allow any laxity regarding non-

financial risk management.

Given the difficulties to quantify and assess these risks, effectively implementing and cascading down the risk appetite through the bottom levels of the organization remains one of the top challenges in risk management. For many organizations, this represents a long-term process of development and implementation. This thesis aims at providing some tools and good practices to make this long, challenging but meaningful journey something easier for organizations willing to do so.

To confirm the key point of managing these risks and according to a survey conducted by [KPMG \(2017\)](#) (covering 36 banks across Europe), 'nearly half of the respondents reported that such risks accounted for more than 10 percent of their banks' total losses, and that operational risk represented more than 10 percent of risk-weighted exposures'.

Therefore, it is important for organizations nowadays to embed qualitative risks into their risk appetite. First, and independently from the notion of risk appetite, qualitative risks are important and can't be left aside. Given this, it is obvious that almost all organizations are planning to include non-financial risks into their risk appetite. All of this makes it fundamental that risk appetite and qualitative risks must be reconciled in the most efficient way as possible.

Even if certain banks haven't specified a risk appetite for non-financial risks ('strategic and business risks remain out of focus in most banks' frameworks for non-financial risk' [KPMG \(2017\)](#)), many of them have understood the need to improve risk reporting, and to strengthen and harmonize their risk culture position. The next step is to make risk appetite at the heart of the process in order to link together all these elements.

Then, given all the elements provided, highlighting the importance of qualitative risks in the risk appetite definition is a bit like stressing the need for a vendor to make sure he receives his money. There are clear and strong difficulties in assessing these types of risks and the main concern of this thesis is to provide insights to design a risk appetite for them. Adding these issues to the pressures of financial regulators and supervisors makes it a key area of focus with a lot of potential value-added for organizations.

4 Analysis

4.1 Methodology

In order to provide recommendations and 'fill the gap' in the literature in the most efficient way, interviews have been conducted. Given the confidential character of the risk appetite inside organizations, especially banks, one of them was not recorded. For the others, the full transcript is available in the appendices as well as a summary and the presentation of the interviewee.

These interviews are the basis for the analysis and regroup people from different areas: banking sector, insurance organization and expert in risk management. This allows different opinions and a global overview of the risk appetite horizon. The analysis provides some findings in order to formulate adequate recommendations based on the interviews and additional research.

4.2 Interviews' summary - Comparative table

	INTERVIEW 1 – STÉPHANE JAUMAIN	INTERVIEW 2 – PHILIPPE COLPIN	INTERVIEW 3 – RAFFAELE BARBERA	INTERVIEW 4 – DAVID HILLSON
PURPOSE	<ol style="list-style-type: none"> Analyzing the level of risk appetite implementation within ING Belgium. Perceiving the main challenges and best practices. 	<ol style="list-style-type: none"> Analyzing the level of risk appetite implementation within AXA Europe. Perceiving the main challenges and best practices. 	<ol style="list-style-type: none"> Analyzing the level of risk appetite implementation within P&V Group. Perceiving the main challenges and best practices. 	<ol style="list-style-type: none"> Discussing challenges reported in the previous interviews. Obtaining insights to formulate recommendations.
RISK APPETITE MAIN CHALLENGES	<ol style="list-style-type: none"> Too basic risk appetite knowledge from employees (they apply rules without understanding the 'why'). Difficulties to develop risk thresholds for objectives linked to qualitative risks. 	<ol style="list-style-type: none"> Inangible character of risk appetite and difficulty to set thresholds for qualitative risks. Link between top and lower levels. Employees do not report enough on their day-to-day risks and mistakes. Poor definition of the roles in the risk appetite definition. No real risk appetite for some risks (ex: compliance). 	<ol style="list-style-type: none"> Dealing with the various stakeholders expectations to define the risk appetite. Aligning risk appetite and decision-making. How to develop a risk appetite that as a real impact on decisions? 'Gap' between the risk appetite definition at the top levels and how it is managed 'on the ground'. 	<ol style="list-style-type: none"> Risk appetite is too often used reactively. Hard challenges to cascade down the risk appetite to the lower levels. Organizations adopt a risk-focused instead of an objectives-focused approach.
RISK APPETITE GOOD PRACTICES	<ol style="list-style-type: none"> Importance for all employees to have a global view of the risk appetite and the strategic direction of the organization. Automation of processes to define thresholds and metrics via machine learning, AI or stress-testing is the future of the risk appetite implementation. 	<ol style="list-style-type: none"> Outsourcing risk thresholds establishment to consulting firms. E-learnings for employees. Stress-testing and simulation of different scenarios. 	<ol style="list-style-type: none"> Use of historical data to design a consistent risk appetite. Encouraging employees to bring their own contribution to the risk appetite definition. Annual discussions on the risk appetite (but not annual revision). 	<ol style="list-style-type: none"> Thresholds must be defined in the same unit as the objective achievement. Focus on objectives. Evaluating riskiness, appetite and thresholds before making decisions. Top-down and bottom-up.

Figure 17: Interviews' Summary - Comparative table

4.3 Insights and Findings

In light of the literature research and the interviews conducted, this thesis raises several observations. Based on interviewees suggestions and experience as well as on additional readings, this thesis aims at formulating recommendations for organizations to design a risk appetite for qualitative objectives linked to non-financial risks.

1. The analysis shows that AXA Europe, ING Belgium and P&V insurance have developed their risk appetite on a risk-focused approach. However, all of them reveal that there is a missing link between risk appetite and risk in itself. This thesis suggests the missing link is objective. Objectives may come from various stakeholders' expectations and include different types of risks. Recommendation 1 gives insights to organizations on how to develop a risk appetite on an objectives-focused approach.
2. The literature review has shown a certain scepticism regarding the use of the risk appetite. Interviewees have confirmed this trend by stressing the intangible character of the notion. Many organizations do not make the fundamental link between risk appetite and decision-making. Risk appetite do have an important role in making better decisions. Recommendation 2 gives insights to organizations on how to link risk appetite and decision-making.
3. All interviews have reported the issue to cascade down the risk appetite through the lower levels of the organization, especially when objectives refer to qualitative risks that are not easily quantifiable. There are difficulties to articulate the risk appetite everywhere in the organization and to translate it into adequate risk thresholds. Recommendation 3 gives insights to organizations on how to cascade down effectively the risk appetite, combining a top-down and a bottom-up approach.
4. The birth of the risk appetite notion is reactive, coming from an observation that a poor risk management and an inadequate appetite for risk have led to disastrous financial consequences. In addition, interviews show that there is a confusion in the use of the risk appetite and organizations may perceive it as a monitoring tool for an ex-post analysis. This thesis suggests it is not the appropriate approach. Recommendation 4 gives insights to organizations on how to make the risk appetite a proactive tool in their risk management process.

5 Recommendations

Based on interviewees' suggestions and experience as well as on additional research, this thesis formulates four recommendations.

5.1 Recommendation - 1

The first recommendation to organizations is to design and classify their risk appetite in terms of objectives before making the link with risks.

There is no risk without objectives. Risks are broadly known as uncertainties that matter. Why do these uncertainties matter? Because they are linked to the achievement of objectives. Therefore, organizations must adopt an objectives-focused view that allows the risk appetite to be used as a tool to manage risk in itself.

1. Organizations must take into account the drivers of the objectives coming from the various stakeholders' expectations (shareholders may value financial objectives, customers may value reputational objectives, regulators may value compliance objectives and the board may value a higher return on investment).
2. All these different objectives give rise to a range of specific risks. The mistake of many organizations is to articulate the risk appetite, both statements and frameworks, around risks. Organizations must not say 'we have a low appetite for IT and cybersecurity risks' or 'we have a moderate appetite for operational risks'.
3. Organizations must articulate the risk appetite in terms of the different objectives coming from stakeholders' expectations. This objectives-focused definition is based on two inputs:

(a) Quantitative thresholds:

They are essential to set the boundaries regarding the achievement of an objective. Some could argue that an objective of one hundred is one hundred. In practice, organizations must set up upper and/or lower thresholds regarding its objectives. For instance, an organization could have as objective to achieve an average customer satisfaction of 8 on a scale of 1 to 10. Even if 8 is not precisely reached, 7.9 makes the organization going the right way and this variation has a marginal impact on its strategic direction. However, the organization could say that below 7, the objective is not achieved but it also leads to tangible and direct issues for the strategic horizon. For this reason, translating appetite into thresholds is crucial. Advice for organizations in doing so is to be consistent in terms of units. It means

that thresholds must be measured in the same units as the achievement (or not) of the objective. If the objective is to increase market share by 10%, then the thresholds around this objective must be defined in percentages. Even qualitative objectives must have units. A reputational objective can be measured in terms of customer satisfaction, media coverage or analyst reports. Five tools are recommended to organizations to develop adequate thresholds for qualitative objectives. Some of them go out of the scope of this thesis:

- i. Error rates: This is especially relevant for the risks at the very bottom levels. It allows materializing and aggregating operational day-to-day mistakes. A bottom-up approach encouraging an accurate reporting of these error rates for each project is important. Error rates allow capturing the real exposure of a given objective 'on the ground' and to set up adequate response mechanisms to the risks this objective includes.
- ii. Balanced scorecards: This is a strategic management performance tool. It aims at identifying and improving different internal business functions and their external outcomes. Organization may use it to measure risks and assess the performance of an objective. Data collection is crucial to provide quantitative results. Again, it can strengthen the decision-making process by having accurate risk thresholds.
- iii. Use of historical data: A risk that has occurred in pursuit of a given objective is not a risk anymore. However, it can help organizations to set the risk thresholds for a future similar objective. Organizations must define a consistent risk appetite that translate their long-term vision. Reviewing it every three months would be very problematic. Organizations may organize an annual meeting to wonder if the risk appetite needs (slight) adaptations. This does not mean that the risk appetite must be reviewed annually. Again, historical data may help to see if the risk appetite and the strategic horizon are aligned and follow the same trend.
- iv. Stress-testing: Based on computer simulation techniques, this is mainly used to test the resilience of organizations against possible future risky situations. The interesting aspect, in comparison to historical data for instance, is the ex-ante and forward-looking approach it leads to. Moreover, computer techniques are able to simulate a huge number of situations including the impact of many different factors. Therefore, organizations may use this ex-ante computer analysis to have an accurate view of the adequate thresholds for a given objective.
- v. Machine learning and AI: These last tools are certainly the future of risk management in general, due to their ability to deal with an incredible amount of data and their very low error rates. Automation of processes holds great promise in terms of qualitative risks management.

(b) Qualitative statements:

In addition to quantitative thresholds, organizations must design qualitative statements to provide additional guidance to the risk appetite definition. These statements must give an overview of the risk appetite for a given objective. For instance: zero appetite, low, moderate or high. It shows directly the vision of an organization towards an objective without the need to look at the quantitative thresholds. These statements must also provide a global overview of the scope of the risk appetite, the linkages to the mission and the vision of the organization as well as a short description of the methodology to achieve and assess the performance of given objective.

This thesis summarizes the process via the following figure:

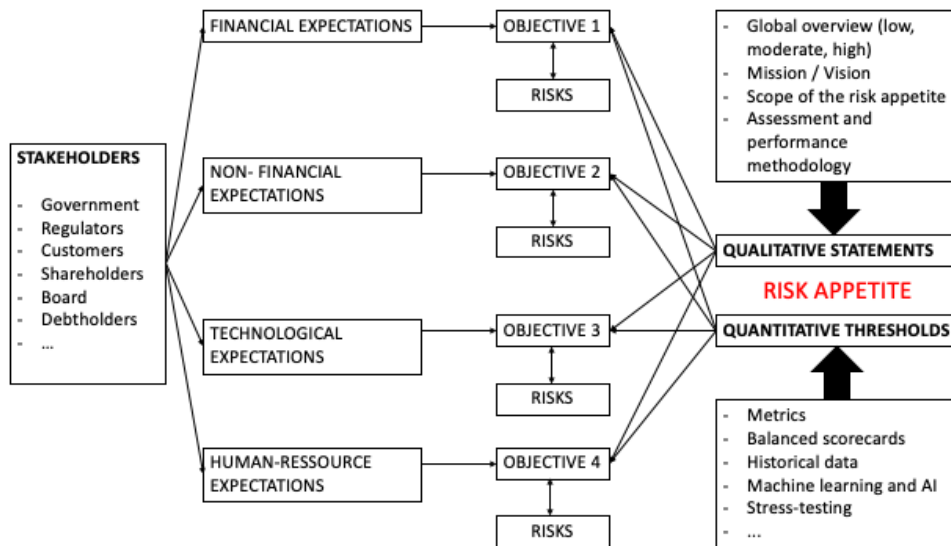


Figure 18: Example of a risk appetite definition and classification in terms of objectives

5.2 Recommendation - 2

The second recommendation to organizations is to link risk appetite and decision-making.

1. Organizations must understand that decision-making involves a choice between variable options. These variable options aim at achieving a given objective.
2. Organizations must assess how risky each option is. They may use the different tools and methods presented before.
3. Organizations need to establish how much risk is acceptable for each decision. This is where the risk appetite of the organization is important.
4. The risk appetite must be translated into risk thresholds that are relevant to measure the objective. These thresholds must set the boundaries of each option and are the final inputs in the decision-making process.
5. Organizations must choose the option (based on its riskiness, the appetite for the given risk and the established thresholds) that fits the best with the initial objective.

This thesis summarizes the process via the following figure, going from step 0 (i.e. having an objective) to step 5 (i.e. choosing the best option to achieve the objective).

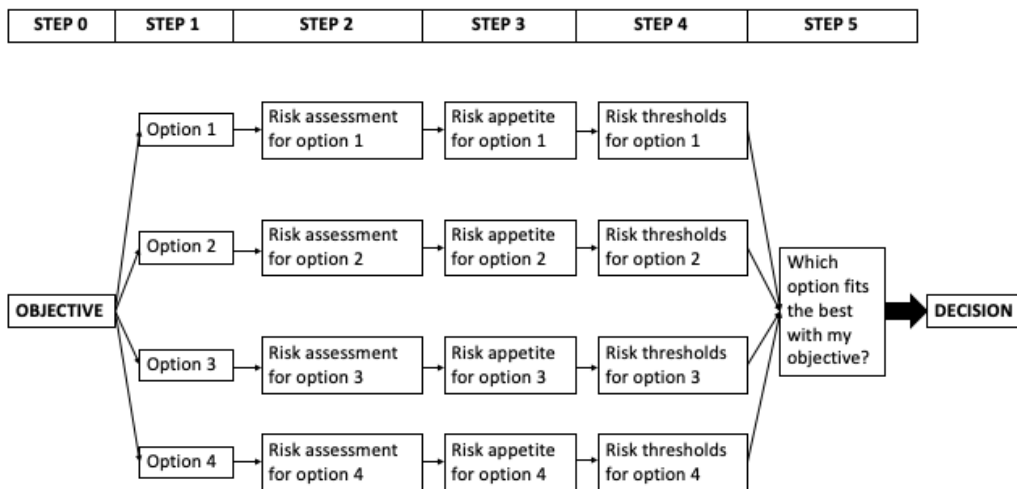


Figure 19: Linking risk appetite and decision-making

5.3 Recommendation - 3

The third recommendation to organizations is to cascade down effectively the risk appetite, combining a top-down and a bottom-up approach.

The pre-requirement step to this recommendation is to have a clear definition of the roles within the organization regarding the risk appetite implementation.

1. The Board of Directors and Executive (supported by the Audit Committee):
Their main role consists of approving the Risk Appetite Framework designed by the Senior Management team. In addition, they review and challenge it in order to obtain the most efficient version as possible. The Audit Committee helps in the role of overseeing the effectiveness of the RAF. Finally, it is important that the board keeps an independent and neutral view of the situation, based on strong risk governance practices.
2. The Senior Management team (supported by the risk department):
They establish the Risk Appetite Framework and are accountable for reporting any issues regarding the risk appetite implementation. They are in charge of continuously analysing the risk exposures and comparing them to the risk thresholds. Also, their objectives should be to align the risk appetite with the culture within the organization and to communicate (in a common language) the risk at all levels.
3. Middle Management and Business Units:
In fact, they are the risk owners. They have to 'apply' and make the risk appetite practical on a day-to-day basis by applying metrics and risk thresholds. Reporting exceptions is crucial and often problematic. If a threshold is exceeded, employees may perceive it as a mistake and will fear potential sanctions. Again, the impact of the risk culture is crucial to encourage employees reporting any problem they face.

When the roles are well defined, the recommendation is quite easy to put in place if organizations understand that the mechanism to cascade down risk appetite and make it practical on a day-to-day basis is the same as for objectives. Indeed, risk appetite and risk thresholds directly relate to objectives. Within organizations, there is a hierarchy of objectives, an objectives' breakdown structure. This structure depends on the organization type, size and vision. It is certainly not the same for each organization, but the process is the same. There is a top-down definition of objectives that is broken down the lower levels and there is a bottom-up achievement of these objectives. The process is the same to cascade down the risk appetite. Cascading down does not only mean top towards down in this case. It means a combination of a top-down and a bottom-up approach.

This thesis shows an example of a hierarchy of objectives.

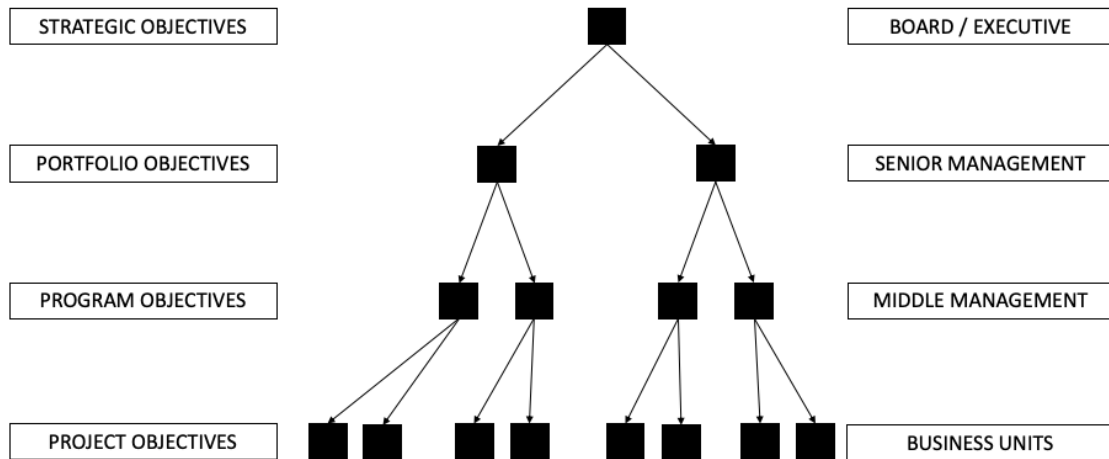


Figure 20: Example of an objectives' breakdown structure

1. Organizations must define risk appetite and materialize it via risk thresholds at the top.
2. These thresholds must be broken down the lower levels of objectives. It means that the combination of the lower levels thresholds gives the threshold of the upper level (this is the top-down approach that many organizations have understood).
3. Organizations must add a bottom-up approach. When the objectives' cascade reaches the very bottom level, business units conclude on a risk to be acceptable or not by comparing it to the thresholds established for that level. The approach is the same at each level: the risk is measured in function of the thresholds of the given level. Hence, if the thresholds at the project level are respected (meaning this level takes the appropriate amount of risk), thresholds at the program level will be respected as well and so on through all the organization.

In summary, organizations must define risk appetite via a top-down approach and manage it via a bottom-up approach. The process remains quite theoretical. Hence, organizations must develop tools to facilitate the implementation of this process.

1. Developing a common risk appetite language across the organization:

It is fundamental that everyone within the organization talks the same language in terms of risk management, more precisely in terms of risk appetite. It facilitates communication and the reporting of risks linked to the achievement of a given objective. Organizations may develop a short risk management dictionary specific to its business and accessible for all employees.

2. Empowering employees in bringing their contribution:

The global risk appetite definition must be set up at the top levels. However, organizations must encourage lower levels to report on their ideas in terms of risk appetite. They are the 'risk owners' and they deal directly with risks. Organizations may organize monthly or quarterly discussions with business units and middle management to hear their considerations and propositions to align concretely the risk appetite with the day-to-day activities.

3. Establishing short risk appetite guidelines specific to objectives:

Dealing with a financial, a technological or a human-resource objective is not the same. Organizations must establish specific guidance for specific objectives on how to manage the risks linked to them. This is even more true for qualitative objectives that are impacted by non-financial risks since their management is more complex.

5.4 Recommendation - 4

The fourth recommendation to organizations is to make risk appetite a proactive tool, instead of a reactive one.

1. Organizations must understand that risk appetite itself is not a sufficient driver to be proactive due to its intangibility.
2. Organizations must combine risk thresholds with intentionality. In other words, organizations must assess the appropriateness of their risk appetite by comparing it to their risk capacity.
3. If the risk thresholds expressing risk appetite are appropriate, then they follow the right way. However, due to stakeholders' expectations and various objectives, organizations may have an appetite that is not appropriate, meaning it could exceed the organization's risk capacity. For instance, the board can have a huge appetite for mergers and acquisitions. The fact is that this appetite can be higher than the risk capacity of the organization at that moment.
4. Organizations must be able to make a choice that is different from their risk appetite.
5. Organizations can operate this choice by using their risk attitude to go against their risk appetite and make the latter proactive.

This thesis proposes to organizations to rely on the ABC model (attitude-behaviour-culture) to complete this fifth step.

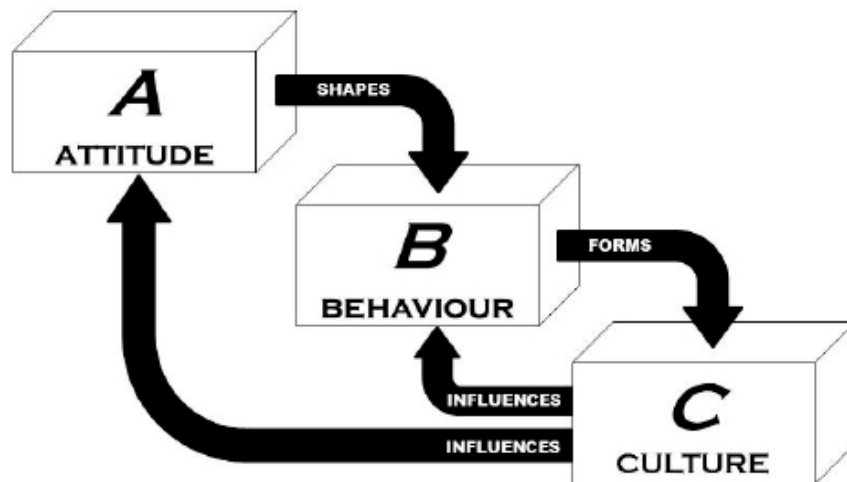


Figure 21: The ABC model, Hillson (2013)

1. Risk attitude is the first component of this model in which organizations must invest.
2. This risk attitude shapes more or less risky behaviours depending on the attitude adopted.
3. The repetition of these behaviours forms the risk culture. This is not the end of the process, which is cyclic.
4. Risk culture influences risk attitude. Organizations must focus on all of the ABC model components with the final goal to adapt their risk attitude and be able to moderate their risk appetite (and resulting risk thresholds) if it is necessary.

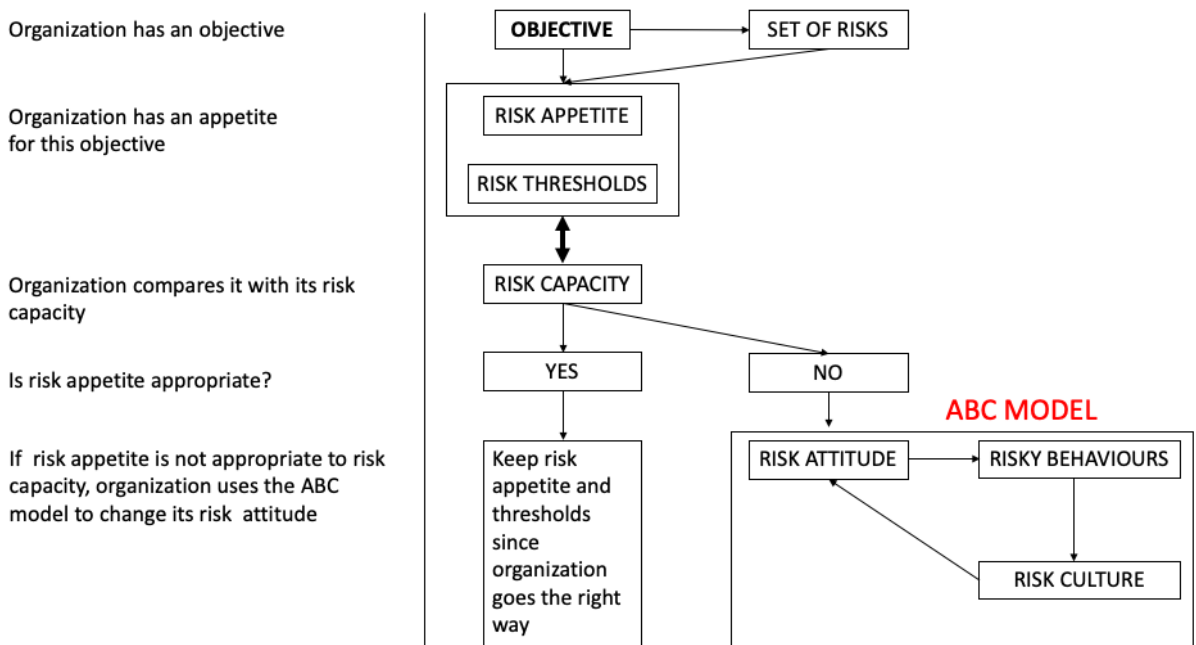


Figure 22: Making risk appetite proactive using the ABC model

This set of cyclic interconnections between attitudes, behaviours and culture allows the creation of feedback loops. Organizations must be aware that it can also create a vicious cycle, where poor attitudes lead to inadequate behaviours and build a negative culture, which in turn gives rise to bad attitudes and behaviours. The key step is to make the loop act as a virtuous cycle, with adequate attitudes producing appropriate behaviours and a strong culture. This strong risk culture helps organizations to change their attitude easier and adapt their risk appetite if necessary.

This process makes risk appetite a proactive tool since it asks organizations to change their attitude regarding an inappropriate appetite before setting the final thresholds for an objective. It simplifies

the performance assessment of objectives since thresholds have been designed proactively and based on an adequate risk appetite. Conversely, organizations must understand the risk appetite and thresholds are not a monitoring tool on an ex-post analysis. It does not make sense to wait for a warning alert or a risk to occur and then redefine reactively the risk appetite and thresholds.

6 Limits

This thesis has three main limitations. First, the number of interviews conducted may not be sufficient to generalize scientifically the findings. Even if all the interviewees have been selected for their knowledge and experience on the topic, the amount of data in itself does not allow reaching a 'saturation level'. The current COVID-19 pandemic has not helped in obtaining relevant interviews and many solicitations remained without answer.

Second, the risk appetite implementation mechanisms and processes within the analysed organizations differ; this may be one strength but also limits the comparability and the findings. Again, the number of interviews and a higher diversification could raise further findings and additional recommendations.

Finally, all the interviewees already have a certain knowledge about the notion of risk appetite and accepted sharing it. It could represent a kind of selection bias where only expert people have been interviewed. It may lead to findings that are appropriate for organizations having already an acceptable foundation in terms of risk appetite implementation. Additional interviews with people having a lower knowledge on the subject could broaden the findings and bring additional challenges to tackle. This would add value to the analysis.

7 Conclusion

Risk appetite matters. To prove it, this thesis has identified the key components in defining risk appetite for objectives linked to qualitative risks. The findings have led to the formulation of four fundamental recommendations.

First, organizations must understand the link between their risk appetite and their objectives before approaching the risk aspect in itself. Indeed, there is no risk without objectives and objectives may arise from various stakeholders' expectations. Organizations must adopt an objectives-focused view when defining their risk appetite and addressing the issues of (qualitative) risks in a second step when the objectives are well established. Organizations can develop this objectives-focused view using two components: quantitative thresholds and qualitative statements. The elaboration of quantitative thresholds for qualitative objectives is complex. Therefore, this thesis proposes different tools to tackle this issue, such as balanced scorecards, machine learning or stress-testing.

Second, organizations must understand the link between risk appetite and decision-making. Taking a decision means making a choice between variable risky options. Organizations must assess the riskiness, define risk appetite and translate it into the adequate risk thresholds for each option. It ends up by wondering which option, given its riskiness, appetite and thresholds, fits the best to the objective.

Third, organizations must cascade down effectively the risk appetite, combining a top-down and a bottom-up approach. A pre-requirement to this recommendation is to have a clear definition of the roles within the organization regarding the risk appetite definition and implementation. Then, organizations must follow the same process as the cascade they have for their objectives. Indeed, risk appetite and risk thresholds directly relate to objectives. Many organizations have understood the top-down approach by breaking down their thresholds through the lower levels. The missing element of many of them is the bottom-up approach. When the objectives' cascade reaches the very bottom level, business units conclude on a risk to be acceptable or not by comparing it to the thresholds established for that level. The approach is the same at each level: the risk is measured in function of the thresholds of the given level. Hence, if the thresholds at the project level are respected (meaning this level takes the appropriate amount of risk), thresholds at the program level will be respected as well, and so on through all the organization. The process remains quite theoretical and practical recommendations are formulated to facilitate it. Organizations must develop a common risk (appetite) language to facilitate the communication between the different levels. Organizations must empower employees from the lower levels to come with their own ideas and propositions since they are the risk owners on a day-to-day basis. Also, organizations may establish short guidelines for a given objective on how to manage the specific risks linked to it.

Fourth, organizations must make risk appetite a proactive tool. The risk appetite is born due to a financial fear and regulatory pressures. Its birth is reactive. This approach must change. Organizations need first to understand that the risk appetite in itself is not a sufficient driver to be proactive. They must understand where the risk appetite will bring them and if it is appropriate by comparing it (more precisely, comparing the risk thresholds) to the risk capacity. If it fits with the latter, the organization follows the right way. If not, the organization must change its risk attitude. The thesis proposes to rely on the ABC model (attitude-behaviour-culture) to establish this proactive process efficiently.

In addition to the aforementioned recommendations, this thesis offers several contributions. The focus on non-financial risk management is already at a relatively developed level. However, there is little research about the focus on qualitative objectives and their linked non-financial risks in terms of risk appetite implementation. First, this thesis contributes to the literature by being one of the first to address the issue of risk appetite implementation with specific regards to qualitative objectives and risks. Doing so will hopefully provide insights to organizations seeking to embrace risk appetite as a pertinent governance and decision-making tool. Second, it will hopefully provide a foundation for future research since the focus on risk appetite is growing. Third, because the risk appetite is still in its infancy in many organizations, especially regarding the qualitative aspect, there is much room for improving its relevance. Therefore, this thesis contribution is its timing, since it will be appreciated particularly highly by organizations struggling with this kind of specific implementation. The current COVID-19 actuality shows again that many organizations are looking for new standards and practices in order to improve their governance, risk management and decision-making process. This thesis promotes the risk appetite to be particularly useful for boards in exercising their decision-making role properly, as they face a constantly increasing number of risks linked to various objectives as well as stakeholders' expectations.

8 Future work

First, a future managerial contribution suggests that organizations test concretely the recommendations formulated on their risk appetite definition and implementation. To go further, it would be interesting to compare the impact of the recommendations on different types of organizations: banks, insurance companies, industries or NGO's.

Second, a future contribution to the literature suggests tackling the concept of 'unknown unknown'. A risk is considered as something known with an unknown timing, impact and probability. What about unexpected events which are totally unknown. For instance, pandemic, earthquake or the executive team that dies in a plane crash. The quantification process in these cases is highly complex, if not impossible and it goes out of the scope of the recommendations formulated. Then, does it make sense to define risk appetite in this specific case? If yes, how can organizations tackle this issue? A first approach is to say 'if this happens, whatever the probability and the impact, there is a back-up solution and the organization will react in this way'. This would mean risk appetite doesn't really matter. It supposes learning resilience and accept that some things could not be mastered. Conversely, some could argue that designing risk appetite for resilience is a hard but interesting challenge to work on.

Finally, it would also be interesting to focus on the emerging computer technologies in the risk appetite implementation and their contribution to the definition of thresholds for qualitative risks. Solutions such as machine learning, Artificial Intelligence and stress-testing have been briefly discussed and recommended to organizations. However, the highly technical aspect of these tools does not allow to go further in the recommendations. This represents an undeniable future area of focus and potential improvement for the risk appetite implementation within organizations.

9 Appendices

9.1 Appendix A - Non-financial risk summary

Risk Class			
Non-Financial Risk			
Category Operational Risk Sub-Category <ul style="list-style-type: none"> Internal Fraud External Fraud Employment Practices and Workplace Safety Clients, Products & Business Practices Damage to Physical Assets Business Disruption & System Failures Execution, Delivery & Process Management Risk type <ul style="list-style-type: none"> Unauthorized Activity Theft & Fraud Systems Security Risk Employee Relations Risk Safe Environment Risk Diversity & Discrimination Risk Suitability, Disclosure & Fiduciary Risk Product Flaws Risk Selection, Sponsorship & Exposure Risk Advisory Activities Risk Disasters & Other Events Business Disruption Systems Risk 	Category Compliance Risk Sub-Category <ul style="list-style-type: none"> Compliance Risk Risk type <ul style="list-style-type: none"> Consumer Protection BSA/AML/Sanctions/Bribery&Corruption Conflicts of Interest Information Security/Privacy Safety and Soundness & Prudential Regulation Tax Risk Market Integrity Accounting Legislation [...] 	Category Conduct Risk Sub-Category <ul style="list-style-type: none"> Inappropriate Product Risk Improper Business or Market Practices Risk After-Sales and Recovery inadequate management Risk type <ul style="list-style-type: none"> Abusive Pricing Product and Marketing Risk Selling/Misselling sales Risk Breach of contract conditions Sales and client Information absence/deficiency Inadequate resolution of claims and complaints Disclosure of client confidential data Intolerance in collection and recovery procedures [...] 	Category IT Risk Sub-Category <ul style="list-style-type: none"> IT Risk Risk type <ul style="list-style-type: none"> Improper IT architecture design Inappropriate User profiling/Access Weakness Inappropriate Software/Hardware maintenance [...]
	Category Cyber Risk Sub-Category <ul style="list-style-type: none"> Cyber Risk Risk type <ul style="list-style-type: none"> Privacy and data protection Risk Cyber attacks Risk [...] 	Category Model Risk Sub-Category <ul style="list-style-type: none"> Model Risk Risk type <ul style="list-style-type: none"> Deficiencies in the data Estimation uncertainty Risk Inappropriate use of the model 	Category Third Party Risk Sub-Category <ul style="list-style-type: none"> Third Party Risk Risk type <ul style="list-style-type: none"> Concentration SLA compliance Contract breaches [...]

Figure 23: Non-financial risk summary and examples, Deloitte (2017)

9.2 Appendix B - Interview's summary with Stéphane Jaumain

Presentation of the interviewee and purpose of the discussion:

Stéphane Jaumain is graduated in Economics from the 'Université Saint-Louis Bruxelles'. Account manager for Coca-Cola for one year, he then moved to ING in 1999. After fourteen years as a manager in savings and investments, he became agency director and has to deal with the risk appetite. He didn't participate in the risk appetite definition but was accountable for directly applying and cascading it down the agency.

The main purpose of this interview is to analyse the level of risk appetite implementation within ING Belgium and to perceive the main challenges and best practices to deal with them.

Summary of the interview:

First, Stéphane explains what is, according to him, the major issue in terms of risk appetite implementation. 'Many employees have a very basic knowledge of the concept or even don't know its existence. They limit their approach to applying the rules derived from the top. The main example I have in my mind is about credit applications from our customers. Many employees in charge of accepting or not the credit apply standards without knowing where it comes from'. He stresses the importance for everyone within the bank to have a global view of the strategic direction and the global risk appetite of the bank. This helps to understand better the meaning of the risk thresholds at each level. He adds that lots of research is dedicated to improve the risk appetite articulation at all levels of the organization.

Second, he points out the difficulty to develop adequate risk thresholds for objectives that are linked to qualitative risks. 'One of the recent main objectives (due to the pandemic) was to promote home-working and to develop additional processes in doing so. This gives rise to qualitative risks. How to control effectively the number of hours worked by our employees? If an employee falls down the stairs and ask for the bank insurance, how can we make sure it happens during its supposed working hours?' He explains that even if the bank has a quite high appetite in developing homeworking, it is complex to set the thresholds above which the bank does not want to go in this case.

Finally, Stéphane explains its high hope regarding the impact of computer technology in the risk appetite implementation. His opinion is that automation of processes could improve and facilitate, for instance, the definition of thresholds of qualitative risks. 'The disadvantage is that employees could be even less aware of the risk appetite definition and impact due to the automation of processes'.

9.3 Appendix C - Interview's transcript with Philippe Colpin

P.Colpin : Le premier point c'est qu'on utilise les risques qualitatifs quand on ne sait pas utiliser de risque quantitatif. Mais l'idée qu'on a toujours dans la tête, c'est d'essayer de trouver quelque part à un moment donné, un moyen de transformer le qualitatif et quantitatif. Tu parlais de risque de réputation, par exemple, maintenant, on a défini comment mesurer le risque de réputation par rapport à publication à qui est dans la presse. On a trouvé des indicateurs existants sur le marché qui permettent de traduire, par exemple, le risque de réputation en chiffres quantitatifs en fonction d'articles positifs et négatifs au niveau du risque de réputation. Et donc, l'idée, c'est que à ce moment-là, on assigne un score. À ce moment-là, on transforme le risque quantitatif en risque qualitatif.

Maxime : Quand vous parlez d'indicateurs dans la presse, comment est-ce que vous faites pour vous dire là, tel article va recevoir tel score?

P.Colpin : On a trouvé une boîte spécialisée qui suit ça pour nous.

Maxime : Ça, c'est en sous-traitance, c'est sous-traité.

P.Colpin : C'est totalement sous-traité par des mecs qui sont spécialisés là-dedans, en boîte de communication. Donc on essaye en permanence d'avoir cette même logique. Parce qu'en fin de compte, on part du principe que tu obtiens que ce que le fait de mesurer rend les choses objectives. Quand tu dis : je ne veux pas être exposé au risque de réputation ou être peu exposé. Ça veut dire quoi? Pas ? Peu ? Ça, c'est la difficulté du risque qualitatif : c'est que c'est très peu tangible. Donc, le fait de le rendre, d'arriver à le rendre quantitatif le rend tangible. Après, il y a des risques, jusqu'à présent, on n'est pas arrivé à traduire en quantitatif, par exemple pour la compliance. On y travaille, on y approche. Donc, au départ, on ne veut pas prendre de risques de compliance. On s'engage à former le personnel. Et maintenant, on arrive à force de tout doucement, je ne sais pas si on aura pour l'année prochaine ou si ce sera l'année d'après, mais donc tout compte fait, d'arriver à une logique de dire, mais on fait comment? Est-ce qu'on peut mesurer objectivement le fait qu'on on veut former le personnel, là de fait c'est assez facile à mesurer. Si tu mets des formations compliance en ligne, tu peux mesurer quel pourcentage de la population a suivi la formation. C'est assez simple. Après, comment tu gères les plaintes compliance, etc. Maintenant, on commence à essayer de travailler, à définir ce que c'est un vrai incident compliance pour pouvoir après, arriver à dire OK, on accepte un nombre de X incidents compliance, qui peut être 0 . Après toute la difficulté, c'est que si tu mets 0, c'est toujours la difficulté de dire oui, OK, mais si jamais c'est un chouia tu vois, c'est un peu quelle est la limite et la tolérance que tu as tant par rapport à un incident. C'est clair que tout le monde, intuitivement, on va dire qu'il faut zéro incident compliance parce que sinon, on n'est pas en ligne avec la loi. C'est quoi un incident compliance? Comment on définit un incident compliance? Qu'est-ce que ça veut dire? Est-ce

que c'est là-dessus, ça, c'est un point. Mais l'idée qu'on a quand on utilise du qualitatif, c'est toujours dans un but d'introduire un focus sur un risque qui n'est pas aussi facile que de mesurer qu'il faut un buffer sur le capital pour faire ça. C'est un truc simple. Ou il faut un buffer sur la liquidité et donc on essaye. Et puis alors, au fur et à mesure du temps, d'abord ça met un focus sur le risque. Ça oblige à suivre malgré tout le risque puisque le Framework, qu'on a nous autres, nous oblige à remonter au niveau du conseil d'administration les mesures au niveau de tout ce qui est Risk Appetite Framework suivant les filiales, c'est de 4 à 1 fois par an, quand c'est une filiale une fois par an. Mais du coup, ça met quand même un focus. Ça veut dire que les gens savent aussi que les incidents et les problèmes vont être remontés au niveau du Conseil d'Administration qui fait que tu crées aussi quelque part tout le travail. En fin de compte, la plus grosse difficulté d'un Framework du Risk Management, c'est intégrer la culture, de faire en sorte que ça fonctionne, que ce n'est pas juste deux mecs dans un coin qui mesurent et qui font oh, oh on est en dépassement ou en zone orange. Donc, il faut que ça arrive à vivre dans l'intégralité.

Maxime : Le fait de toucher tout le monde et ce genre de choses. Et pour ça, il y a des formations liées au risk appetite ? Les gens sont un peu initiés à la notion ?

P.Colpin : On ne vise pas à initier tous les employés, mais au moins tous les managers, etc. Donc, il y a eu en effet, tout un travail sur la culture. Comment introduire, faire en sorte que les gens soient sensibles à ça, leur expliquer pourquoi cela a été fait et donc c'est tout le boulot derrière et tout le Framework. Et donc nous on a un Framework qui est, je pense, assez classique par rapport à ce que tu trouves dans la littérature. Je dirais la limite légale quand c'est chiffré, ce qu'on appelle notre risk appetite Framework, c'est le minimum. Donc ça crée un buffer par rapport aux obligations légales. Puis on rentre dans une zone d'alerte et à chaque fois, en fin de compte, après un certain seuil dans la zone verte, il ne se passe rien. Mais dès que tu rentres dans la zone d'alerte, tu as tout un processus qui est en place ou avec les managers concernés, tu dis: 'OK, qu'est-ce qui se passe? Qu'est-ce qui s'est passé? Est-ce que c'est un problème ponctuel? Est-ce que c'est un problème récurrent? Comment est-ce qu'on peut le corriger? Et comment on peut vivre avec pour pouvoir gérer?' Et donc tout ça crée, à un moment donné un cycle, ça ne vient pas du jour au lendemain. Ça prend 4, 5, 6 ans pour y arriver progressivement. Donc les gens se mettent dans le truc puis commencent à réagir. Là où on a encore très difficile, c'est par exemple au niveau risque opérationnel. C'est de faire en sorte que les gens remontent les incidents opérationnels à un point où on sait que, par définition, tu n'aimes pas de dire: 'j'ai eu un problème dans un process'. Donc les gens vont essayer de le cacher ou de le taper en-dessous du tapis. Et donc, toute la culture et toute la difficulté de la culture là-dedans, c'est de dire: 'OK, on n'est pas là pour juger si vous avez fait une connerie. On est là pour essayer de comprendre et voir un peu ce que ça pourrait entraîner pour la boîte si l'évènement se reproduisait et essayer de le chiffrer parce que c'est ce qu'on a perdu, du chiffre d'affaires? Est-ce qu'on a perdu du temps? Est-ce qu'on a une vraie perte financière ?

Maxime : L'objectif, c'est quand même de montrer aux employés 'des plus bas niveaux' qu'ils ont un intérêt à reporter l'incident. Que ce n'est pas punitif. C'est plus dans leur intérêt?

P.Colpin : Oui voilà, on ne juge pas, mais c'est vrai que c'est difficile. J'ai fait une connerie. Est-ce que c'est une connerie grave? Ou est-ce que c'est une connerie qu'on fait tous? On s'en fout. C'est un incident qui, en fin de compte, tu peux nous demander pourquoi ce sera un incident. Et puis après, quand c'est un incident moyen, qu'est-ce qu'on peut mettre en place pour que l'incident ne se reproduise plus et donc progressivement, rentrer dans une chaîne de plus en plus qualitative au niveau délivrable, puisque le but du jeu quand tu es sur l'opérationnel, c'est vraiment d'essayer d'avoir le zéro défaut, même si on est conscient qu'on n'aura jamais le zéro défaut. Mais c'est tendre vers cela.

Maxime : Au niveau un peu des metrics que vous utilisez, on va dire tout ce qui est déjà établi pour les risques quantitatifs. Vous utilisez quoi exactement? Pour tout ce qui est, vous disiez les buffers des trucs comme ça?

P.Colpin : Par exemple, si tu prends tout ce qui est Solvency. C'est assez simple : voilà ce que le régulateur demande. Souvent, on utilise ce que le régulateur nous demande dans le pilier 2, pas du tout par rapport à Bâle. Mais en fin de compte, on trouve la notion qui est la notion de stress-testing. Qu'est ce qui se passe si on a un incident qui arrive une fois tous les 20 ans, une fois tous les 200 ans, puisque c'est les deux metrics qu'on utilise habituellement. Et donc ça, c'est d'abord tout l'impact en disant: 'bah si ça arrive, voilà ce que ça va avoir comme conséquences sur le capital, les liquidités'. C'est de là qu'on part pour dire OK, est-ce qu'on veut résister à ce genre de chocs auquel cas tu as des buffers kilométriques, ou on dit qu'on veut résister à des chocs plus fréquents, plus petits. Et c'est là où on établit les minimums, les alertes. Donc, je pense que ça y a rien de très différent par rapport à ce que tu as dû lire dans la littérature, généralement on est dans un Framework qui est comme un classique, de ce qu'on lit dans la littérature.

Maxime : Ici, j'ai essayé de définir pas mal de metrics qui sont déjà utilisées. Maintenant, je peux vous dire un peu ce que j'ai fait. J'ai fait capital adequacy metrics, j'ai fait earnings variability metrics, liquidity metrics, risk metrics et business specific metrics.

P.Colpin : Qu'est-ce que tu mets dans risk et business?

Maxime : Maximum exposure, par exemple, on prend les dix clients les plus influents. C5 ou C10, si on prends les cinq ou les dix plus les plus influents. Alors, on fait une échelle avec leur portfolio, ce genre de choses et on regarde un petit peu si ils sont à risque.

P.Colpin : Ça ne marche que si tu gères un portefeuille corporate avec de grosses expositions. Par contre quand tu gères une banque ça ne marche pas du tout ce genre de concept.

Maxime : C'est même inutile, au final, en effet.

P.Colpin : Tu as une diversification de risques. Mais par contre, à ce moment-là, ce que nous on fait, c'est dire, par exemple sur la production de crédit, c'est que sur la première année de vie du crédit, on veut maximum autant de défauts. Donc, à ce moment-là, en fin de compte, c'est une manière à orienter la politique crédit, c'est de dire : sur le portefeuille d'origine, maintenant, je veux cette perte maximum. Donc, à toi, business de mettre en place les politiques crédits qui vont faire en sorte que tu vas rester dans ce Framework. Et on le traduit, d'abord dans un premier niveau qu'on appelle stratégique, c'est le taux de défaut moyen. Et puis après, on dit OK, mais bon pour que tu sois dans la borne, dans ces bornes-là, tu peux avoir un maximum 5% de clients qui sont en classe de risque Y. Ta LTV, tu ne peux pas avoir plus d' $X\%$ de clients qui ont un long taux value supérieur à autant. Donc, on a vraiment un niveau très opérationnel qui permet au business de suivre. Parce que quand tu dis 'ben oui, ton taux de défaut, on ne peut pas être supérieur à 0,5 après un an'. C'est très intangible pour les gens. Toi, pendant ton niveau risque, tu sais très bien que les variables qui vont influencer ce taux de défaut, c'est la classe de risque du client à l'acquisition. C'est les garanties que tu as pris sur le portefeuille et donc tu peux traduire sur base de ces éléments-là : comment ce metrics global de taux de défaut après un an peut être influencé par des sous-metrics et en fin de compte, à ce moment-là, c'est vraiment des trucs qui sont opérationnalisés et donc ils ont des rapports tous les mois qui disent si vous êtes dans la norme/vous êtes au-dessus de la norme. Et donc, du coup, qu'est-ce que vous prenez comme actionS si vous n'êtes pas dans la norme, pour revenir dans la norme? Bon, après, ça peut simplement être des incidents de parcours parce qu'E sur un produit où la production n'est pas gigantesque, tu peux avoir quelques clients atypiques qui vont influencer le machin. A ce moment-là, c'est une analyse et on en conclut qu'il n'y a rien à faire. Mais si on voit que c'est une tendance de fond, c'est dire OK, comment vous adaptez vos politiques de crédit pour pouvoir accepter que les clients rentrent dans nos risk appetite Framework qu'on utilise. La même chose sur les contreparties risques, par exemple quand on fait tout ce qui est risque de marché, on a défini quel est le rating minimum d'une contrepartie avec lequel on peut avoir du business à ce moment-là? On mesure plus le C5 ou C10 par type, par contrepartie, mais essentiellement d'abord par rating global. Et on dit qu'il y a plus de $x\%$ qui est en dessous BBB, tu peux avoir non seulement des politiques au moment où tu souscris le deal, mais tu as aussi besoin d'une politique si jamais le marché vient à se dégrader. Quelles sont les mesures qu'il faut prendre pour éviter que toi tu ne te retrouves à risque. Les deux sont donc définis systématiquement et après bien sûr, il y a des limites aussi, par contrepartie pour éviter que l'exposition sur une contrepartie soit beaucoup trop élevée. Donc, il y a chaque fois différents niveaux de mesures qui permettent de juguler vraiment les différents risques par catégorie, par exposition individuelle, au moment où on souscrit le deal et en cours de vie du deal. Et donc,

ça nous amène par moments à vendre des positions. Parce que la conséquence, c'est qu'à un moment donné, tu peux être amené en disant, cette position-là n'est plus dans notre politique de risques donc la conséquence c'est de vendre la position et de la liquider, même si à ce moment-là, tu vas prendre une perte financière. Mais on estime que, en effet, à partir d'un certain stade, il vaut mieux prendre la perte financière qui est là que de risquer d'en avoir une plus élevée après. Tout, ça est très dépendant vraiment d'une culture d'entreprise, du niveau de risque que tu veux avoir.

Maxime : Mais ça, c'est fort spécifique.

P.Colpin : Tout dépend si en tant qu'entreprise tu veux une politique de risque agressive ou plutôt soft. Tu sais que si tu es agressif, tu risques de gagner plus. Mais quand ça tournera mal, tu sais que tu perdras plus aussi. Est-ce que tu veux plutôt un résultat qui est dans un certain sens et qui ne va pas sortir d'un certain range? Ou tu te dis, je m'en fous.

Maxime : Et ça, ça se décide à quel niveau ? C'est fort harmonisé ou je veux dire AXA dans un autre pays peut avoir une approche fort différente. C'est vraiment hyper global comme truc ?

P.Colpin : Au départ, ça commence hyper global. Et puis après, tu dois vraiment le décliner, pays par pays, business line par business line, et à chaque business line risque par risque.

Maxime : Donc c'est vraiment la politique globale qui est quand même la même partout.

P.Colpin : Pour AXA, oui, globalement, oui. Avec des nuances suivant les pays, puisqu'en fin de compte, surtout l'objectif, c'est que tu sais qu'AXA veut un revenu lissé, stable au niveau mondial. AXA ne va jamais sur certains risques, par exemple descendre au niveau du pays. Le groupe ne va jamais descendre au niveau du pays. Par contre, en disant moi, je ne veux pas que mon business fasse plus que ça comme ça, il considère que c'est vraiment une responsabilité locale. Par contre, quand tu as des expositions sur les pays, surtout dans le monde de l'assurance où tout le monde achète des obligations, c'est là où tout le framework risque appetite joue son plein sens. En fin de compte, tu ne peux pas dire, en Belgique, je vais prendre uniquement des risques sur les marchés français. Parce que Paris va dire non, si tout le monde ne prend que du risque sur le marché français, ça fonctionne peut être bien, très bien chez toi localement, mais je n'ai pas de diversification. Et donc, je vais me casser la gueule si le marché français se casse la gueule, ce qui est assez logique. Par exemple, sur les contreparties type, les entreprises type banques, assurances ou réassureurs. Au niveau global, sur d'autres positions, tu ne peux pas faire le deal que tu as envie de faire avec BNP pour prendre quelqu'un d'autre. Même si c'est très intéressant pour ton business. Désolé. Tu ne peux pas. Tu dois vraiment aller chercher une autre contrepartie sur le marché pour couvrir ton risque local qui ne soit pas en contradiction avec le risk appetite Framework global du truc. Mais c'est surtout

ce risque-là, tu vois au niveau risque de réputation, ils ne veulent pas être exposés non plus. Ils ne savent pas non plus intervenir dans tous les marchés où on est. Sur 100, 120 ou 140 marchés différents. Ça veut dire qu'à ce moment-là, tu contrôles tout. C'est de nouveau une culture qui peut peut-être fonctionner. C'est une culture d'hyper-centralisation puisque tout est concentré dans votre maison-mère et tout compte fait, tu n'as plus de latitude sur les marchés locaux. Puisque tout est défini en faisant comme ils font en fin de compte, ils contrôlent un certain nombre de choses qu'ils veulent vraiment contrôler au niveau du groupe. Et puis après, par la latitude sur le restant. Parce que sinon, c'est facile de dire le groupe ne veut pas que je fasse ça. Je suis désolé, mais dans mon pays, je suis incapable de faire de la rentabilité. Je suis incapable de changer. De quelle culture tu veux au niveau mondial après, bon, il n'y a pas beaucoup de boîtes qui sont mondiales. Mais nous autres, en fin de compte, on joue dans le framework mondial. On se focalise surtout sur le framework belge de la banque.

Maxime : Au niveau pratico-pratique, je veux dire ça fonctionne comment? C'est un document global qui définit le risk appetite, qui est transmis à toutes les agences ?

P.Colpin : ça dépend, les agences ne connaissent pas le risk appetite global et ne connaissent que les politiques de crédit, évidemment.

Maxime : Moi, j'essaie de contacter d'autres personnes dans des agences, mais dès que je parle du risk appetite, eux, sont hyper focus sur le risque de crédit et j'ai l'impression que la notion globale de définir le framework n'est pas connue.

P.Colpin : C'est la racine du machin. Donc, à chaque niveau, c'est comme quand je dis on ne peut pas avoir plus de X% de classe de risque X, Y, Z. L'agence ne sait même pas parce que ce n'est pas par agence qu'on gère ça, c'est au niveau de l'ensemble des agences, donc ce que les agences connaissent, en effet, c'est ce que les autres ont décrit. C'est dire on accepte les mecs qui ont telle caractéristique, telle caractéristique, les garanties, on veut tel niveau de garantie. Ils ne connaissent pas vraiment la politique de risques. Mais tout ça n'est jamais qu'une ramification où on leur dit tout ce qu'il y a en dehors de ça, vous ne pouvez pas accepter. Ou si c'est exception, c'est traité par le siège.

Maxime : C'est somme toute assez logique qu'au niveau des agences, je n'ai pas de réponse concrète?

P.Colpin : Si tu leur parles de risque de réputation, il y a beaucoup de chance qu'ils ne savent même pas qu'il y a un framework de risque de réputation. C'est vraiment toute une déclinaison de plus en plus bas et si tu vas dans la business line A, il y a eu beaucoup de chance qu'ils ne connaissent pas le framework de la business line B.

Maxime : Ca c'est logique qu'ils n'y aient pas accès, ça n'a pas d'intérêt pour eux.

P.Colpin : C'est tellement éloigné de leurs préoccupations. Tu leurs dirais pour le risque de liquidité, on veut un buffer de 350 millions en permanence, mais qui ne t'aide pas pour gérer la liquidité. Par contre, tu ne peux pas faire tel business. Parce que comme eux sont calculés sur des volumes de marges, plus tu es laxiste sur la politique crédit plus c'est facile pour eux de faire les volumes, plus c'est restrictif, plus c'est difficile, et leurs incentives, généralement, sont sur des volumes et des marges, quel que soit le business. Donc, la politique indirectement influence leur rémunération. Or, c'est comme tout être humain tant que tu ne tapes pas au niveau de la rémunération, etc, c'est intéressant. Mais une fois que tu dis que la politique de risque qui est là, 50% de ta production crédit, on la veut plus, mais par contre, le volume de l'année prochaine reste le même. C'est ça, la politique qui fonctionne chez nous aujourd'hui, mais qui n'est pas celle que j'apprécie, moi, personnellement, parce que j'estime que le rôle du risk management de c'est de dire OK, mais regarde là à côté, tu peux aussi aller chercher du volume là-bas. Mais bon, après, ça dépend un peu de la culture aussi du risk management. Est-ce que tu dois te dire 'est-ce que le risk management est un contrôleur vu sa position dans les lignes de défense?' Ou est-ce que c'est aussi une force de proposition pour aider le business à avancer ?

Maxime : Je regarde un peu ici, je regarde dans la définition de ma problématique, j'ai parlé de pas mal de risques qualitatifs que j'ai essayé de définir. Bon, il y a une grosse partie quand même, c'est tout ce qui est IT et cyber sécurité. Là, je n'ai pas de nouveau, je n'ai pas de retours au niveau des contacts pratiques, c'était fort au niveau des agences, etc. Et ça, même au niveau de la littérature. Et là, il y a un fameux trou là-dedans au niveau de la définition du risk appetite pour ces risques-là.

P.Colpin : Aujourd'hui nous, en termes de cyber sécurité, on y travaille, mais on n'est pas encore là. Donc ça, c'est un point. L'IT on considère qu'en fin de compte, les incidents IT font partie du risk opérationnel. Mais après, tu as des trucs qui, comme la cyber sécurité, etc. Qui sont des risques plus diffus parce qu'en fin de compte, un des problèmes de ces risques-là. C'est que généralement, on n'en a pas eu beaucoup.

Maxime : On ne sait pas avoir une certaine expérience de ce risque.

P.Colpin : C'est difficile à quantifier. Après, indirectement sur la cyber sécurité, on a des boites où on a un training, tous les trois mois sur la cyber sécurité. Ce n'est pas des trainings de trois heures. Mais c'est vraiment en permanence des piqûres de rappel, qui dure 20 minutes, une demi-heure tous les 3 mois, avec obligation, à chaque fois, un test, un petit questionnaire, avec obligation de réaliser autant de trucs. Quand on parle de sécurité, globalement, vous voyez un visiteur dans le couloir qui se balade. Il n'a pas de badge chaque semaine. Qu'est-ce que vous faites, donc? Ça concerne plus que juste la cyber sécurité, c'est vraiment de la sécurité et donc ça tous les trois mois un nouvel e-learning, on est obligé de le faire. Ce n'est pas: 'on se contente de 80% qui ont participé à la chose. Non, c'est

100% mecs ont participé à leur formation et ont tous réussi avec minimum 80%. Après, ce n'est pas vraiment traduit dans un risk appetite framework.

Maxime : Il n'y a pas, au niveau IT et cyber sécurité, quelque chose de précis dans le risk appetite ?

P.Colpin : Non, mais par contre, on en tient compte, on le gère indirectement et ce qu'on voudrait bien arriver à faire, c'est arrivé à le mettre vraiment dans le risk appetite Framework en lui mettant un statement pur et dur.

Maxime : Et vous pensez que c'est spécifique à AXA ou au aussi à d'autres banques? Vous n'êtes peut-être pas au courant.

P.Colpin : Je ne connais aucune boîte, aucune banque dans mes contacts qui ont déjà quelque chose de très concret. Franchement, maintenant, je n'ai plus vraiment de contact là-dessus non plus. Mais globalement, quand j'avais des contacts réguliers là-dessus avec les autres, tout le monde était un peu en train de chercher. Et je crois que les derniers événements des 2/3 dernières années où il y a eu de gros incidents de cyber sécurité au niveau d'une banque ou l'autre, font que à un moment donné, le focus se met là-dessus. Quand tu vois Bpost et Argenta qui ont des activités sur leur réseau de distributeurs de billets, c'est purement de la cyber sécurité. Ils se sont rendu compte qu'il y avait des failles et qu'il y avait des risques et ils en arrivent à désactiver les distributeurs de billets. Je pense qu'il y a eu suffisamment d'exemples dans la littérature et la presse de banques qui ont été hackées. Intuitivement, on dit oui, on ne veut pas de risque de cyber sécurité.

Maxime : Vous essayez déjà de mettre des chiffres sur un potentiel risque de cyber sécurité ?

P.Colpin : D'abord, tu sais qu'il y a eu des problèmes de cyber sécurité chez les autres et personne n'a jamais reporté vraiment les pertes qui ont été observées.

Maxime : Les boites cachent en somme? On n'en est pas fier, au final.

P.Colpin : Exactement. Nous on en a eu un, mais vraiment très, très mineur. Pour la même connerie. C'est le truc classique de fishing. Et c'est pour ça que depuis lors, on a vraiment intégré cette culture. Le mec qui arrive encore chez nous à se faire hacker à titre personnel, c'est qu'il veut vraiment. Quand je vois les gens qui crient, qui pleurent dans le journal, je me suis fait hacker 10000 euros ou 5000 euros. Tous les jours, on en entend parler à peu près dans la presse, à la radio, à la télé, il y a même à ce niveau-là aussi, je vais dire une politique d'alerter les gens. Quand tu vois ici, pendant le confinement, le nombre de fois qu'on a parlé de cyber sécurité, de hacking... C'est pour ça que je pense que la politique que nous on a, c'est de sensibiliser à la question. Mais je trouve que c'est une très bonne

politique parce que tous les trois mois, avec des piqûres de rappel, avec des petits exercices, des petits tests, on progresse. Je ne vais pas dire que je ne me ferai jamais hacker, parce qu'il a peut-être un hacker plus malin que tous les trucs, mais toutes les formes basiques de hacking, ça ne passera pas.

Maxime : Donc OK, donc, il n'y a pas vraiment de mesures prédéfinies pour quantifier tout ce qui est cyber sécurité, IT?

P.Colpin : Il faut que le système soit opérationnel autant de temps à sa place opérationnelle.

Maxime : Au niveau du risque légal, globalement, on va dire les évolutions de législation, ce genre de choses, des changements de régulations ? Vous mettez quoi en place?

P.Colpin : Alors ça se trouve pas dans le risk appetite Framework, mais on a mis en place des suivis, donc on paye par exemple Deloitte en Belgique qui nous fait tous les mois un rapport de toutes les nouvelles publications qu'il y a eu et qui les classifie en fonction de notre business pour la compliance. Ils ont une matrice qui est basée sur ce qui est immédiat ou futur. C'est vraiment sur la dimension temporelle et sur leurs applications pour AXA et donc tous les mois, on a un comité qui fonctionne et, ou Deloitte vient de dire OK, ce mois-ci, il y a eu 40 consultations, nouveaux documents. Et la politique, c'est d'assigner chaque fois où AXA est concerné, le texte a quelqu'un pour l'analyser puisque Deloitte ne va pas dire allez voir à l'article 253. Donc ça s'est fait et on a la même chose sur tout ce qui est risque légal avec un cabinet externe. C'est vraiment sous-traité, suivi, rapporté, tous les deux fonctionnent un peu la même manière.

Maxime : Et au niveau des coûts, ça n'a jamais été imaginé ou pensé de faire ça en interne ?

P.Colpin : L'avantage, c'est que Deloitte offre le même service à différentes boîtes, donc il y a quand même une synergie très nette avec un seul endroit qui scanne tous les textes, en ensuite qui dit 'pour mon client, ça a un impact, pour le client là-bas, ça n'en a pas'. Parce que si tu dois le faire toi-même, c'est relativement lourd. Et donc, après les deux, on les a sous-traités.

Maxime : Au niveau des coups, ce n'est pas plus intéressant de le faire en interne ?

P.Colpin : Absolument pas, ce n'était pas du tout intéressant. Parce que pour pouvoir comprendre, je vais dire pour Deloitte, il y a des trucs qui sont faciles dans le titre de l'article du site à classifier. Mais il y a quand même des articles où ils doivent quand même un peu gratter et voir si ton business est impliqué ou pas. Donc, du coup, quand ils le font pour 4 ou 5 ou 6 clients différents, ça leur coûte beaucoup moins cher que nous de le faire rien que pour nous. Donc après, tant mieux pour eux, ils se font une marge là-dessus. On gagne notre vie aussi parce qu'on a mutualisé le coût par rapport

à d'autres. Parce que ça, c'est quand même le truc vers lequel les banques vont aller, je pense que tu sens dans l'évolution du monde bancaire que de plus en plus on réfléchit à des synergies à devoir dire OK, s'il n'y a pas ce service-là, on ne sait pas le mutualiser avec d'autres banques parce que c'est typiquement un truc qui n'est pas stratégique et donc on a intérêt à mutualiser. Bel exemple pour moi, dans la dernière année, c'est de voir le fait que bientôt, tu n'auras plus que deux réseaux de distributeurs de billets en Belgique.

Maxime : Ok. J'ai fait aussi un petit focus sur le conduct risk lié notamment au comportement des employés et aux erreurs, je suppose que ça vous le mettez sans doute dans le risque opérationnel. Il n'y a pas un truc spécifique là-dessus?

P.Colpin : C'est-à-dire que oui, je vais dire nous autres, tout d'abord du côté du groupe, clairement, tout ce qui est pour pots de vin, etc, on a des politiques très, très strictes. Ce n'est pas mis dans le risk appetite Framework, mais par exemple, si moi je vais bouffer avec un fournisseur et que le prix du menu vins compris est supérieur à 50 euros, je dois le déclarer. Tout ce qui est tentative de corruption, tout ça est aussi encadré, mais sans pour autant se retrouver dans un dans un framework de risque appetite.

Maxime : Ça, il n'y a pas de mesures pour quantifier, etc ?

P. Colpin : Non, tu es obligé tous les ans de remplir un rapport en disant: 'j'ai été mangé avec le fournisseur X à telle date. Prix des menus estimés, vins compris. Autant si c'est inférieur à 50 euros ou j'ai reçu une boîte de chocolats, c'était des Léonidas, ça va, je m'en fous, j'en ai eu pour 20 euros. Maintenant, si c'est des Marcolini et que j'ai reçu un kilo, ça vaut plus que 50 euros.

Maxime : Je suppose qu'il y a aussi des formations e-learning par rapport à ça

P.Colpin : C'est moins intensif que la cyber sécurité ou tout ce qui est règlements sur la protection de la vie privée. Les deux focus actuels, c'est RGPD et cyber sécurité. Après, quand ils mettent une barrière à 50 euros, c'est perçu par beaucoup de gens comme étant ridicule. Qui va bouffer au resto pour moins de 50 euros? Tu connais un resto, tu peux faire 50 euros par personne, tout compris, ça devient compliqué. La friterie du coin, ce n'est pas là que tu traites les affaires.

Maxime : C'est vraiment à chaque fois qu'il faut reporter ?

P.Colpin : J'ai eu des cas où il y a eu un cas, ce n'était pas en Belgique, mais où un mec dans la direction crédit a reçu d'un client une Rolex.

Maxime : Ok je vois. Bon, réputation, j'ai parlé. Risque stratégique, on a quand même pas mal parlé aussi. Par rapport au RGPD spécifiquement, il y a de nouvelles choses qui ont été mises dans le risk

appetite, spécifiquement par rapport à ça ?

P.Colpin : Non, de ce que je disais, formations, il y a toute une série de mesures qui ont été mises en place. C'est surtout des formations, car c'est des risques qui sont aussi très, très compliqués à mesurer. Combien de fois j'ai eu une fuite d'informations. J'ai utilisé l'information que je n'aurais pas du utiliser. C'est vraiment très compliqué à mesurer. Là, ce n'est plus de la sensibilisation du truc.

Maxime : Et pour avoir votre avis personnel, vous pensez que le fait d'intégrer tous les risques qualitatifs dont on vient de parler, du style le légal, ce n'est pas encore vraiment dans le framework, conduct risk même chose, ce genre de choses. Vous pensez que ce serait utile à terme que tous les risques soient centralisés et qu'il y ait une sorte d'harmonie par rapport à ça? Ou vous vous dites au final, le risque appetite doit plus être focus sur les gros risques les plus importants?

P. Colpin : Non, je pense que c'est le premier point de la méthodologie qu'on a, dans la méthodologie, on classe tous nos risques. On essaie de les classifier tous, je préfère le dire comme ça et une fois qu'ils sont classifiés, on a le niveau d'impact du risque. Et donc, là, on a trois ou quatre niveaux, je ne sais plus, donc en fin de compte, on voit certains risques même si on sait qu'ils sont diffus, qu'ils sont là et donc ceux-là on ne va pas essayer de les intégrer dans le risk appetite. Par contre, les risques, les deux premières catégories de risques, on essaie de les intégrer dans le risk appetite. Donc, on n'essaie pas d'avoir tout dans le risk appetite, on a vraiment une méthodologie. On part d'une cartographie des risques pour essayer de quantifier le mieux qu'on peut. Certains sont faciles, d'autres plus difficiles pour savoir si c'est un risque important, moyen ou haut, bas ou truc. Et donc, à ce moment-là, tu ne gardes que certains risques dans le framework.

Maxime : Pour vous, l'approche, c'est plus d'abord de faire assessment de tous les risques, de les quantifier, etc. Et puis seulement de dire ce risque-là en fonction de ce qu'il a comme impact, comme probabilité, on va la mettre dans le risk appetite ou non. Ce n'est pas dire on prend le risk appetite comme un pot, on met tous les risques dedans. Vous pensez que c'est la meilleure approche?

P. Colpin : Chez nous, c'est ce qu'on applique et je pense que c'est sensé parce que sinon, tu risques d'avoir un machin qui devient imbuvable, incontrôlable. Et puis après, tu vas avoir des statements sur des trucs qui, même si ça arrive, cela va impacter tellement de manière marginale ton business que ça n'a pas de sens. Je pense que ça fait partie aussi chez nous, de la culture de dire ouais, ça ne sert à rien de vouloir tout contrôler. Les gens ont besoin d'une autonomie, si tu contrôles tout, tu arrives à une boîte qui est hyper centralisée, hyper rigide. Et donc, c'est pour ça qu'il y a toute une série de choses qui ne sont pas dans le risk appetite.

Maxime : C'est intéressant, ça, très intéressant. Je pense qu'on a bien fait le tour de la question. Je

vous remercie pour votre temps. Si j'ai d'autres petites questions, je vous recontacterai par mail. Mais merci, c'est vraiment enrichissant.

P. Colpin : Avec plaisir, n'hésite pas !

9.4 Appendix D - Interview's summary with Philippe Colpin

Presentation of the interviewee and purpose of the discussion:

Philippe Colpin is graduated in Mathematics from the 'Université Catholique de Louvain' and holds an additional Master's degree in financial management from the 'Université Libre de Bruxelles'. After eight years as a Head of reporting, accounting and policies of retail activities at AXA Bank Europe, he became retail risk senior manager in 2010. He deals every day with the notion of risk appetite and reports the best practices as well as the main challenges he faces.

The main purpose of this interview is to analyse the level of risk appetite implementation within AXA Europe and to perceive the main challenges and best practices to deal with them.

Summary of the interview:

First, different approaches to the quantitative assessment of qualitative risks are discussed. Mr. Colpin explains that for a reputational risk, different criteria are taken into account, such as press publications or the positive (or negative) impact of articles on stakeholders. He stresses the intangible character of this kind of assessment and the difficulty to deal with it.

Second, Mr. Colpin tackles the issues of the link between top and lower levels. His observation is that part of employees does not understand the aim of the risk appetite (and the impact of risk culture on it). He adds his concern about a reporting problem: 'employees do not report enough on day-to-day operational problems'. It adds difficulties for the board and executive to have an accurate view of the objectives and their related risks. Then, the risk appetite definition becomes more difficult. He also talks about the roles in the risk appetite definition: should agencies design their own risk appetite or should it be entirely designed by the group? AXA Europe proceeds mainly by using the latter option ('centralization' of the risk appetite definition).

Third, he explains they adopt a risk-focused approach but there is no specific risk appetite for compliance, legal or cybersecurity risks. Moreover, the bank does not include risks judged to have 'a marginal impact' on business. For instance, the legal risk is outsourced via a consulting firm. 'The firm we work with provides us all the new regulations and how they could impact our activities' he says. He finds it relevant since this process is not possible internally and the consulting firm brings an expertise approach. His suggestion is that banks understand that the outsourcing of certain risks (and their linked risk appetite) could allow a synergy between different banks.

Finally, Mr. Colpin expresses the way AXA Europe deals with the risk appetite and their good

practices. 'A very important practice is the use of e-learning' he explains. For instance, there is a large current focus on the cybersecurity risk. Then, employees must fulfil e-learning every three months on this topic. Also, he stresses the importance of having a clear black on white document describing the risk appetite of the organization (i.e. RAF). "It helps employees to talk the same language in terms of risk appetite and a deeper understanding of it". Moreover, he recommends a practical process: stress-testing. 'The bank makes various tests and simulations on different risks and their impacts' he says. His final thought is that SME's should understand more the positive impact of designing risk appetite. 'It would help them manage their structure on the long-term and avoid liquidity problems on the short-term'.

9.5 Appendix E - Interview's transcript with Raffaele Baerba

Maxime : Bonjour, Maxime Toussaint à l'appareil.

R.Barbera : Vous allez bien ?

Maxime : Oui, oui, je vais bien merci.

[...]

Maxime : En 2 mots, l'objectif de mon mémoire donc ça porte en gros sur la notion de risk appetite et l'objectif est de voir comment définir ce risk appetite pour des risques qu'on va qualifier de qualitatifs ou de non-financiers donc par exemple un risque de réputation, un risque IT, cyber sécurité, risque opérationnel où tout ce qui est compliance, risques légaux, ce genre de choses. J'essaie de voir ce qui se fait dans le milieu bancaire et ce qui se fait dans les organisations, on va dire, hors secteur bancaire ou secteur non-financier, j'essaie de comparer un peu les deux et voir ce qui se fait un peu comme bonnes pratiques et quels sont les challenges qui sont rencontrés par les organisations dans l'élaboration d'un risk appetite Framework au sein de l'entreprise.

R.Barbera : C'est un beau sujet en tout cas et c'est un sujet d'actualité.

Maxime : En revoyant un petit peu la littérature pour ce mémoire je me suis rendu compte que le sujet était quand même assez récent, qu'il avait pas mal de trous au final dans cette littérature dans le sens où il y a beaucoup de confusion autour de la notion, les gens ne connaissent pas encore ça très bien et je me rends compte que pas mal d'entreprises n'utilisent pas du tout voire pas très bien cette notion de risk appetite.

R.Barbera : Alors nous, chez PV, bien entendu, on est pas une banque, on est une compagnie d'assurance. Il y a quand même beaucoup d'exigences au niveau réglementaire par rapport au fait de fixer un cadre d'appétence au risque notamment qui est fixé par la loi Solvabilité 2, c'est ce qui gère tout ce qui est gestion des risques et solvabilité des compagnies d'assurance et il y a des exigences assez importantes en termes de fixation d'un cadre d'appétence au risque. Mon rôle chez PV, je suis directeur responsable de la gestion des risques dans le sens fonction de gestion des risques définie par la réglementation donc je suis une fonction du contrôle. Et donc je dois veiller à ce qu'au sein des différents départements opérationnels, les risques soient bien identifiés, suivis, atténués et c'est moi qui aide l'entreprise à fixer le cadre général de la gestion des risques cohérents pour tout PV. Notamment c'est moi qui travaille sur les formulations de propositions d'appétences au risque pour le conseil d'administration. Il y a deux ans d'ici, on a revu complètement notre appétence au risque. Ça a

demandé d'élaborer des questionnaires à destination de nos administrateurs puisque, bien entendu, au vu de l'appétence au risque, ils doivent définir leurs grosses responsabilités, le niveau de risque qu'ils sont prêts à prendre pour atteindre leurs objectifs, ça demande un travail important de discussion avec les administrateurs pour bien dégager le niveau de risque que vous voulez avoir. Quelque part c'est trouver un équilibre entre rentabilité et risque. Donc il y a un équilibre à trouver en rentabilité et solvabilité et donc ça demande beaucoup d'interactions et alors lorsqu'on a revu ça il y a 2 ans, nous avons mis en avant beaucoup de sujets relatifs à des risques non-financiers qui ne faisaient pas vraiment partie du cadre d'appétence au risque qui avait été formulé il y a quelques années d'ici. Donc on leur a posé des questions par rapport à des niveaux de risque opérationnel pour essayer d'avoir une idée de quel est le montant de perte qu'on accepte d'avoir sur une année en raison de risques opérationnels et en général pour les risques opérationnels, il y a une très grosse réticence à accepter trop de risques opérationnels. Du coup, c'est un équilibre à trouver entre l'argent qu'on est prêt à dépenser pour améliorer les contrôles et pour que les contrôles soient plus performants et le risque qu'on prend. Donc on est toujours dans une discussion 'risque/rentabilité', et les administrateurs ont montré une très grande aversion au risque financier et donc il y a des moyens importants. D'abord en termes de suivi, on fait un suivi régulier de tous les incidents importants de l'entreprise et on essaye de quantifier en euros les impacts que cela a eu.

Maxime : Et vous utilisez quels moyens pour quantifier en euros les impacts que ça a eu ? Des outils spécifiques ?

R.Barbera : On a un cadre de gestion des risques financiers, on a une politique de gestion des risques non-financiers, qui demande aux différents départements de mettre en place un suivi de tout ce qui concerne le non-financier, notamment des incidents majeurs. Et donc on a un processus de déclaration des incidents majeurs et dans ce processus il est demandé d'essayer d'estimer l'impact d'un incident et il y a un certain nombre de critères pour qualifier cet incident de majeur, mais par exemple, dès que la réputation de l'entreprise pourrait être mise en défaut, tout de suite ça rentre dans la définition d'incident majeur. Donc on a une définition de ce qu'on entend par incident majeur et pour ces incidents-là, les départements concernés doivent faire un certain nombre de choses, notamment, estimer l'impact en euros de l'incident, tirer des conclusions et les améliorations qu'on peut faire pour le futur pour limiter ces risques. Bien entendu, la somme des montants des incidents, tous les trimestres, c'est quelque chose qui est rapporté régulièrement au conseil d'administration. On n'a pas vraiment fait un montant maximum en euros. On n'est pas encore là. Peut-être qu'on y viendra. Ce qui est compliqué quand on évolue dans l'appétence au risque c'est qu'on ait besoin chaque fois d'avoir une expérience, un historique, une meilleure compréhension des impacts pour pouvoir fixer des normes qui ont du sens. Parce que si on se précipite trop, on va fixer une barre qui est trop basse, et donc qui nécessiterait des interactions permanentes avec le CA, puisque le but est que si on ne respecte pas les limites d'appétence au risque, il y a des alertes et des signaux qui se déclenchent. C'est clair que

fixer les limites d'appétence au risque requiert un travail important : des analyses, des considérations pour pouvoir avoir un historique. Ça demande une préparation, un historique, parfois des analyses de simulations, des scénarios qui nous feraient mal, de quel montant on est en train de parler là, pour pouvoir dire qu'il y a des seuils qui sont acceptables pour le CA et d'autres qui le sont moins. Mais c'est vraiment quelque chose qui vit dans le monde financier, au niveau des compagnies d'assurance, c'est remis en question de manière régulière et pour donner un exemple pour dire que c'est quelque chose qui est fondamental pour le pilotage d'une entreprise d'assurance : avec la crise covid-19, les autorités de contrôle s'intéressent beaucoup à l'impact de la crise par rapport au cadre d'appétence au risque qu'on a mis en place.

Maxime : Vous avez eu un plus grand intérêt des régulateurs du à la crise du covid par rapport à votre appétence au risque ? On vous a demandé d'établir des seuils plus importants ?

R.Barbera : Par exemple de simuler différents scénarios d'évolution de la crise et de regarder ce que ça donne pour l'entreprise. Une évolution qu'on constate c'est notamment le fait qu'en théorie, on a un certain nombre d'exigences fixées par les autorités de contrôle, exemple, on ne peut pas avoir un ratio de solvabilité qui tombe en dessous de 100%. On a pas mal d'exigences qui viennent de la loi Solvabilité 2. En théorie, le cadre d'appétence au risque est propre à chaque compagnie. C'est assez classique dans le monde de l'assurance, les compagnies se disent 'si je ne peux pas descendre en dessous de 100%, on se définit un target de ratio de solvabilité qui peut être 175%, ou au-delà du 100% en se disant que je fixe une limite de tolérance, en disant que si je tombe en dessous d'un certain ratio (125 ou 150) alors là j'active un processus qui fait que la société prend des mesures pour porter son ratio à un niveau plus élevé'. Mais ça, c'est en principe de la 'popote' interne propre à la compagnie d'assurance qui veut se montrer vis-à-vis des marchés financiers, plus robuste. De plus en plus, on pousse les compagnies à introduire des exigences réglementaires qui viennent des autorités de contrôle à travers l'appétence au risque. Donc pour dire alors qu'au départ, c'est quelque chose qui est propre à chaque entreprise pour son pilotage, on se rend bien compte que les autorités de contrôle ajoutent toutes les exigences à travers le cadre d'appétence au risque de la compagnie. Je ne sais pas si je réponds bien à tes questions?

Maxime : J'ai d'autres questions, mais vous répondez globalement un peu à toutes les questions que j'ai sur mon fichier.

R.Barbera : Ok. Dans le cas de notre appétence au risque, on a défini des indicateurs clés, des limites et des objectifs. Donc c'est plutôt quantifier en termes de rentabilité, de solvabilité, etc, et puis on a un volet qui est plutôt qualitatif, on n'a pas du tout d'appétence, nos administrateurs n'ont pas d'appétence pour les risques non-financiers, il faut en avoir le moins possible bien entendu. Ils veulent avoir un suivi régulier des incidents et du montant global, de la somme des incidents par trimestre. C'est comme ça que s'exprime pour le non-financier aujourd'hui l'appétence au risque, je n'exclus pas

que demain quand on aura une plus grande expérience, un plus grand recul quant à la quantification de l'ensemble des risques, peut-être que l'on mettra aussi des limites monétaires au risque opérationnel.

Maxime : Mais pour le moment c'est compliqué ?

R.Barbera : Disons qu'il y a des risques que les administrateurs veulent absolument réduire très fortement. Par exemple, le cyber risk, on ne souhaite pas ne pas faire ce qu'il faut en se disant avec l'argent que j'économise, je le place ailleurs ou je développe de nouveaux produits, ou ce sera mieux pour la performance de l'entreprise en se disant s'il y a quelque chose qui se passe mal, je payerai la facture, mais ce ne sera pas trop grave . Étant donné l'ampleur que peut avoir le risque cyber, pour l'entreprise c'est vraiment un autre choix qui a été fait. Les montants qui sont investis pour le moment, en termes de cyber sécurité par rapport à une entreprise comme P&V, sont des montants colossaux et c'est en fait le reflet de ce que les administrateurs ont dit au moment de la discussion de l'appétence au risque, c'est qu'ils ne voulaient absolument pas d'appétit pour prendre ce genre de risque. La théorie nous dit que si je peux prendre plus de risques, j'ai des chances d'avoir plus de rendement et donc si l'entreprise est capable de prendre plus de risques par exemple, des risques financiers, la théorie financière dit que ça a du sens de prendre un peu plus de risques à condition que l'on ait les moyens de supporter une perte éventuelle qui pourrait survenir. Donc la théorie dit : on a intérêt à prendre un peu plus de risque si on veut un peu plus de rendement. Mais ce raisonnement-là tient difficilement pour les risques opérationnels, notamment les risques cyber, c'est le point de vue de nos administrateurs et je le partage tout à fait. Juste dire, je vais investir un peu moins d'argent parce que cet argent-là, je vais l'utiliser à d'autres fins. Pas vraiment le raisonnement évoqué. Il y a des montants colossaux qui sont dépensés pour justement la cyber sécurité, toujours dans l'objectif d'essayer de limiter l'ensemble des risques liés aux non-financier, donc risques opérationnels, risques de compliance, parce que dans les risques non-financiers, nous avons chez nous une taxonomie des risques. On a trois grandes catégories de risques : les risques financiers, puisque les primes que nous versent les assurés, donc une partie des primes, nous les plaçons sur les marchés financiers. C'est notamment évident quand on compte toutes les assurances vie et assurances pension. C'est une assurance qui couvre sur 30, 40 ans et donc pour pouvoir garantir un montant de pension ou un capital pension qui correspond aux engagements de l'entreprise ou à des montants importants, l'entreprise doit placer son argent de manière judicieuse bien entendu. Donc on a un ensemble de risques financiers. Puis on a une deuxième catégorie pour nous, qui sont les risques assurances. Ça veut dire quoi ? Si en assurance décès, c'est évident, s'il y a plus de morts que ce que nous l'avions estimé via les probabilités historiques, etc. Cela va nous coûter plus d'argent. Donc, l'évolution de la mortalité et la longévité sont des risques d'assurance pour nous. Comme en auto, par exemple, si la sinistralité en auto change, la fréquence des sinistres augmente. Et bien entendu, là pour nous, c'est un risque d'assurance parce il y aura un décalage entre les hypothèses qu'on a prises dans nos tarifs, pour tarifier la prime, et les sinistres qui se passent en réalité. Et puis, on a une troisième catégorie qui sont les risques non-financiers dans lesquels nous avons classé les risques

opérationnels purs (une défaillance humaine, machines, etc), les risques de compliance, les risques liés à l'utilisation des modèles. Il se pourrait très bien que les modèles que nous utilisons ne soient pas parfaits. Par exemple, on nous demande de produire un bilan en valeur de marché et le plus grand montant qui figure au bilan est le résultat d'un calcul avec des modèles. Donc, il y a un risque de modèle, qui fait partie aussi de nos risques non-financiers. Et nous avons aussi dans ces risques-là, des risques stratégiques et donc au niveau des risques stratégiques et au niveau des risques opérationnels, il y a un suivi régulier qui est demandé par les administrateurs, conformément à ce qu'ils ont dit dans le cas de l'appétence de risque.

Maxime : Donc là, si je comprends bien, vous avez quand même participé directement à l'élaboration du cadre pour cette appétence au risque.

R.Barbera: On a préparé un questionnaire, on a eu des questions des administrateurs.

Maxime : Quelles sont les grosses difficultés que vous avez rencontrées dans l'élaboration de ce cadre alors ?

R.Barbera : Alors, je pense à plusieurs choses. D'abord à la hiérarchie des sujets, c'est-à-dire identifier quels sont les sujets qui sont les thèmes sur lesquels on se dit : je prends une décision sur base de tous les éléments, par rapport à la hiérarchie des sujets. Il faut qu'on se dise par exemple : je prends une décision sur base d'un critère qui est uniquement ce critère-là ou alors je dis 'je prends ma décision sur base de ces deux critères-là, et je vérifie après que, en termes de résultats, ça tient toujours la route'. Donc quel est l'élément qui va après dominer les autres? Donc si c'est plus important pour moi d'avoir un ratio qui est plus élevé avec une contrainte sur le niveau de rentabilité ou est-ce que j'introduis des éléments supplémentaires, que devient la hiérarchie entre les sujets. Et aussi, garder la cohérence parce que plus on augmente les exigences dans des domaines différents et que l'on fixe des limites, plus on peut très bien se retrouver dans des situations où l'on a fixé tellement de contraintes que finalement on ne sait plus bien décider. Et donc la notion de cohérence au sein du cadre d'appétence au risque ce n'est pas facile. S'assurer à l'avance qu'il y'a bien cette cohérence est difficile. Donc il y a la hiérarchie et la cohérence. Par contre le grand intérêt de mener un tel exercice, c'est que l'on confronte les différents administrateurs sur le fait qu'ils ont peut-être un avis différent et donc on les oblige à discuter sur le fait qu'ils peuvent avoir des avis différents sur certains sujets et qu'il faut bien trancher à certains moments.

Maxime : Et donc c'est plus dans l'utilité et l'impact de l'appétence au risque, donc c'est plus positif ?

R.Barbera : Je dirais que s'il y a quelque chose de super important, c'est ça. C'est effectivement de faire surgir le fait qu'ils peuvent ne pas avoir le même point de vue sur des choses qui sont fondamentales et stratégiques. On ne peut pas avoir le même point de vue et donc confronter les gens avec le

fait qu'il peut y avoir des avis différents et trouver la manière de fixer l'objectif pour l'entreprise. Ça oblige à avoir des discussions, questions/réponses, c'est très enrichissant.

Maxime : Est-ce que vous rencontrez un problème lors de la communication de l'appétence au risque pour les plus bas niveaux, si je peux les appeler comme ça? Est-ce qu'il y a un langage commun lié au risk appetite et est-ce que tous les employés dans l'entreprise comprennent bien l'utilité de ce concept ? Aussi, comment est-ce qu'on peut avoir une cascade de haut en bas vers les plus bas niveaux ?

R.Barbera : C'est vraiment fondamental. J'ai écrit il y a quelques années, il y a bien longtemps déjà, dans un de mes rapports et pour moi, que le risque le plus important était justement, en termes de gestion de risques, qu'il y a un décalage entre la stratégie telle qu'elle est définie au plus haut niveau et la réalité des choses qui se passe sur le terrain. Et donc, ça fait des années que nous travaillons dessus. Alors ça dépasse même le cadre d'appétence au risque, ça parle même de toute la stratégie de l'entreprise. Alors la loi Solvabilité II demande aux entreprises de mettre en place des politiques, qui clarifient dans le cadre de la gestion des risques, qui clarifient en fait quelle est la politique de l'entreprise, noir sur blanc, vis-à-vis de certains risques. Nous, ce qu'on a fait, c'est il y a quelques années, dans le cadre de la mise en place de la gouvernance risque au sein de P&V, nous avons élaboré des politiques qui sont de différents niveaux et donc on a des politiques stratégiques et donc dans les politiques, on a notamment la politique d'appétence au risque. Pour nous, c'est une politique stratégique et donc qui est approuvée par le conseil d'administration. Et on a défini en fait une cascade politique, sans vouloir avoir une flopée de documents, qui seraient purement de l'administratif, ça peut être des documents très courts, très concis. En fait, on a une cascade de politiques qui vont de certaines politiques stratégiques, et il n'y en a pas 50, il y en a quelques-unes. Ces politiques sont déclinées dans des politiques tactiques et aussi dans des politiques opérationnelles et donc les politiques opérationnelles sont diffusées auprès de toutes les personnes, qui, dans leurs domaines d'activité, de manière directe ou indirecte, ont un rôle à jouer sur le terrain. On essaye de faire le lien avec ce qui se passe sur le terrain. Exemple : les risques financiers, on a notre stratégie sur les risques qu'on accepte ou qu'on n'accepte pas, jusqu'à quel point, etc., cadre global et puis on décline ça, vis-à-vis des gens qui font des déplacements chez nous, qui savent pour le portefeuille qu'ils gèrent, qu'ils ne peuvent pas investir plus que tel montant, dans tel type d'actif, etc. Ce qui est une traduction concrète pour eux de quelque chose qui est plus général, qui est défini dans une politique stratégique. Si on pousse le raisonnement plus loin, ça se termine part des documents de processus ou des guidelines qui sont utilisés par les gestionnaires de contrats sur le terrain et donc c'est part toute cette déclinaison de politiques qu'on fait le lien entre ce qui est décidé au plus haut niveau et le concret sur le terrain. Au niveau de la stratégie, c'est aussi la même chose, c'est-à-dire que la stratégie qui est définie au plus haut niveau est traduite concrètement dans des objectifs qui parlent beaucoup aux gens sur le terrain, avec des objectifs et des indicateurs, qu'eux maîtrisent très bien dans leurs day-to-day tasks. En termes de stratégie, beaucoup de travail a été fait les dernières années par P&V. Pour tous les gens

sur le terrain, on ne leur demande pas de comprendre parfaitement la stratégie globale, ils doivent avoir une vue sur la stratégie globale, tout le monde doit savoir dans quelle direction on va, mais ce qui est surtout important et c'est quel est leur rôle par rapport à cette stratégie globale.

Maxime : Ils doivent quand même avoir une compréhension globale de la direction de P&V, mais leur but, c'est de savoir comment ils vont contribuer concrètement à cette direction?

R.Barbera : Je dirais même que maintenant, on va même plus loin quand on demande aux gens d'être le plus proactif possible pour eux-mêmes venir avec leurs propres idées par rapport à ce cadre général. Comment moi, qu'est-ce que je peux faire moi sur le terrain pour davantage encore contribuer à la définition du cadre d'appétence au risque, pour aller dans le sens que moi, je connais.

Maxime : Ça m'intéresse beaucoup parce que c'est justement une de mes questions. C'était de voir si l'appétence au risque vous utilisiez ça comme un outil proactif ou réactif. Quand je dis réactif, le risk appetite, il est un peu né de la crise financière, on s'est rendu compte qu'il y avait un problème de gestion des risques et donc c'est en réaction à quelque chose qu'on a fait ça. C'était plus comme un outil de contrôle. Moi, ce que j'aimerais bien prouver et montrer, c'est que ça peut être plus utilisé comme un outil d'aide à la décision et un outil proactif, un outil d'anticipation. Comment est-ce que vous faites pour rendre cet outil-là proactif et pas réactif ?

R.Barbera : J'ai 2 réponses à ça. Pour bien définir l'appétence au risque, il faut quand même prendre en compte, au moment où on l'a défini, la question prospective un maximum, tant qu'on peut, avec les moyens du bord et la connaissance qu'on a, à ce moment-là, alors souvent ce qu'on fait, c'est bien entendu, on va regarder les historiques, etc. Il y a quand même un côté prospectif dans le sens où on doit toujours se poser la question. Différents scénarios, différentes choses qui pourraient se passer, pour être sûrs que l'appétence au risque qu'on va fixer avec les administrateurs, elle ne va pas, trois mois après, être remise en question parce qu'un événement fait qu'on ne respecte plus le cadre d'appétence au risque. Ça serait dramatique, donc ça veut dire que quand on met en place un cadre d'appétence au risque, on doit avoir des analyses sous-jacentes, doit se poser des questions, quelle est la résistance de mon cadre d'appétence au risque à différentes situations qui pourraient se produire. Ça, c'est vraiment important. Et je dirais qu'il est très important de mettre en place une réactivité par rapport au fait qu'on pourrait ne plus être en ordre avec son cadre d'appétence au risque. Par exemple, on a une politique qui vient à un niveau inférieur au niveau de la politique stratégique d'appétence au risque, c'est un petit peu basé sur une idée du business continuity plan, c'est les mesures qu'on prend en termes opérationnels si les choses se passent mal, si les systèmes informatiques se crachent, ce que je prends comme mesure, c'est un peu la même idée, c'est de se dire, si je me rends compte que je risque de ne plus respecter mon cadre d'appétence au risque parce qu'un indicateur est en train de déraiser et se rapproche de zones dangereuses et là, chez nous, on le fait vraiment, on déclenche un processus qui

fait que des experts se mettent autour de la table, font un suivi, la plupart du temps hebdomadaire, voire journalier de ce qui cause ce dérapage. On propose des mesures de rectification. Il y a même des mesures de rectification qui ont été élaborées qui se trouvent dans un manuel. Si jamais les choses devaient se dégrader, voilà les mesures que je peux prendre. Ce que je veux dire par là, on doit déjà intégrer du prospectif quand on sait ce qui pourrait se passer quand on définit le cadre d'appétence au risque. Le cadre d'appétence au risque, pour moi, c'est un truc super dynamique, mais vraiment super dynamique. D'ailleurs, avant que les autorités de contrôle nous aient contactés pour voir, étant donné l'évolution des marchés financiers suite à la crise covid, parce que début mars, le marché était très secoué. On avait déjà, depuis plusieurs semaines, déclenché notre petit processus. On s'était rendu compte qu'il y avait peut-être certains indicateurs qui allaient bouger, indicateurs d'appétence au risque qui allaient bouger et donc, ici, on ne met pas un caractère déclenchement de surveillance, alerte, etc. Ça n'a pas beaucoup de valeur ajoutée de mettre en place un cadre d'appétence au risque. Un cadre d'appétence au risque, c'est vraiment de se dire, je m'oblige à prendre des mesures si des choses se passent par rapport à mon cadre d'appétence au risque. Et puis, il y a des évolutions des choses, qui peuvent faire en sorte qu'on est amené à revoir régulièrement son cadre d'appétence au risque, parce qu'il pourrait, compte tenu de facteurs externes ou internes, ne plus être très bien adapté. Ça, on le voit, on le constate donc ça veut dire qu'on remet sur la table des questions fondamentales vis-à-vis du comité de direction, du CA. On repose des questions pour ajuster le cadre d'appétence au risque, pour moi, c'est même un processus continu et d'ailleurs chez P&V, tous les ans, on demande aux administrateurs, formellement, de revalider le cadre d'appétence au risque qui a été mis sur la table, tient la route, peut continuer ou on demande s'il y a nécessité de porter des ajustements.

Maxime : Quand vous dites processus continu, le cadre peut changer d'un mois à l'autre ou vous avez quand même un cadre bien défini noir sur blanc pour l'année ?

R.Barbera : Ce serait dramatique que le cadre change d'un mois à l'autre, je dirai même, en vitesse de croisière, hors crise un peu exceptionnelle, mais même en tenant compte de crise, un cadre d'appétence au risque, pour moi, devrait au moins tenir la route entre 3 et 5 ans. Parce qu'on ne peut pas revoir la stratégie de l'entreprise, ou alors il y a quelque chose qui cloche. On ne peut pas revoir la stratégie de l'entreprise tous les ans. On est là, dans la stratégie, dans le long terme. Et donc, en théorie, quand on met un cadre d'appétence au risque, il doit absolument pouvoir résister de 3 à 5 ans. Il peut y avoir des événements qui font qu'il doit être ajusté et amélioré.

Maxime : Quand vous parlez de processus continu, ça ne veut pas dire revoir le cadre du risk appetite ?

R.Barbera : C'est au moins se poser la question tous les ans, si on estime qu'on doit changer quelque chose. La plupart du temps, il n'est pas nécessaire de le faire. Mais c'est ce qu'on a mis en place chez P&V, c'est quelque chose qui est un standard sur le marché.

Maxime : OK, donc c'est annuel. La révision du cadre est annuelle.

R.Barbera : En tout cas, tous les ans, on se pose la question de savoir si on doit revoir ce cadre.

Maxime : Mais ce n'est pas pour autant qu'on le fait.

R.Barbera : Non, d'ailleurs dans la majorité des cas, on estime qu'on n'a pas besoin de le faire.

Maxime : C'est plutôt positif au final, si vous estimez que vous n'avez pas besoin de le revoir, c'est que le cadre initial a été bien défini, si je comprends bien.

R.Barbera : Et normalement, un cadre doit être défini pour plusieurs années, sinon, il y a un souci parce que ça a quand même de gros impacts sur le pilotage de l'entreprise. Donc on ne peut pas changer de cap tous les ans.

Maxime : Oui c'est assez logique.

R.Barbera : Je ne pourrais pas dire, dans l'élaboration de mon plan à trois ou cinq ans, que je suis en train d'égaliser maintenant, pour valider que mon plan tient la route, je vérifie que mon plan et des scénarios alternatifs ne mènent pas des activités qui vont engendrer un non-respect du cadre d'appétence au risque.

Maxime : J'ai encore deux petites questions. Si vous avez 5/10 minutes, c'est simplement de voir si vous avez un tableau récapitulatif, on va dire, de l'appétence au risque. Donc je suppose que vous avez un cadre qui est écrit de manière qualitative, mais est-ce que vous avez un tableau avec des mesures précises, des pourcentages, ce genre de choses. Ou est-ce que c'est simplement un cadre qui est écrit disons 'pour ce genre de risque, on a un appétit qui est moyen ou qui est grand'. Comment est-ce que vous faites pour articuler concrètement? Là, c'est plus au niveau de la forme que le cadre va prendre sur papier.

R.Barbera : On a les deux, donc on a des indicateurs avec lesquels on dit 'on ne veut pas descendre en dessous de tel pourcentage'.

Maxime : Vous avez à la fois des indicateurs précis et chiffrés et simplement quelque chose de plus qualitatif?

R.Barbera: Oui, c'est exact.

Maxime: Dernière question : est-ce que vous pensez, enfin je ne sais pas quand vous avez vraiment commencé l'élaboration et l'utilisation du risk appetite, est-ce que vous pensez avoir des choses à apprendre, on va dire du milieu bancaire et de ce qui se fait dans les banques? Est-ce que vous vous inspirez de ce qui se fait à l'extérieur, même si chez concurrents ou ce genre de choses dans le milieu bancaire pour définir votre appétence au risque ? Ou est-ce que c'est un processus qui est purement interne ?

R.Barbera : Non, on regarde, bien entendu, ce que les concurrents font et publient, puisque beaucoup d'informations sont publiques.

Maxime : Par exemple, votre cadre d'appétence au risque est public ?

R.Barbera : Non, ça, je n'ai pas dit, mais il y a des rapports dans lesquels, souvent, des compagnies développent des informations sur le cadre d'appétence au risque. Je ne pense pas nous personnellement, qu'on ait développé beaucoup de choses publiques là-dessus, mais ça peut se trouver probablement dans des publications. Si vous regardez AXA, AG Insurance, risque appétence, vous allez trouver des choses. C'est quand même un peu confidentiel au niveau de l'appétence au risque que les compagnies fixent, mais on trouve beaucoup de choses et on sait beaucoup de choses de ce que les concurrents font au niveau assurance. Alors au niveau bancaire, quand on parle avec des banquiers, ils ont l'impression que parce qu'ils font de la banque, forcément ils comprennent et que c'est plus simple de comprendre l'assurance. Moi qui ai fait les deux, je pense que c'est le contraire, que le business model assurance est beaucoup plus complexe et différent du business bancaire. Notamment par rapport à des perspectives longs termes, etc. Je pense que les banquiers sont plus focalisés sur des aspects de court terme alors que beaucoup de compagnies d'assurance, en tout cas des compagnies d'assurances qui font des activités dans le cadre des assurances vie, assurances pension, etc, forcément, par leur métier, sont plus projetées sur du plus long terme. De manière générale, je pense que l'on a toujours à apprendre, mais de ce que j'ai vu pour l'instant, il y a quand même deux business modèles assez différents entre une banque et une compagnie qui fait de l'assurance vie.

Maxime : Pour vous, un cadre qui est défini dans une banque ne va pas être applicable facilement à une compagnie d'assurance?

R.Barbera : Il y a probablement des éléments qui seront bons, qui pourraient être repris, mais que du coup nous avons aussi, puisque dans nos politiques, on a fixé aussi des limites en termes de risque financiers. Il y a des choses qui sont certainement valables, j'en suis certain.

Maxime : Vous n'allez pas spécialement vous inspirer de ce qui se fait dans le milieu bancaire. Vous n'estimez pas, par exemple, que c'est plus développé dans le milieu bancaire, l'appétence au risque,

que dans le milieu des assurances ?

R.Barbera : Peut-être qu'en termes de fonctionnement et d'outils, d'intégration, d'indicateurs dans leurs systèmes informatiques, etc., ils auront intégrés de manière plus automatisée un certain nombre de contrôles qu'on ne peut pas trouver dans une compagnie d'assurance moyenne, en termes de production, de chiffres, de limites, etc.

Maxime : Écoutez, je n'ai pas spécialement de questions. Je pense qu'on a bien fait le tour du tout ce que je voulais voir. Est-ce que les documents par rapport au cadre de chez P%V, vous pouvez les divulguer si mon mémoire est confidentiel ? Je peux avoir accès à ce genre de documents ? C'est des trucs que vous ne divulguez pas du tout. Comment est-ce que ça se passe chez vous ? Dans les banques, la plupart me disent : on ne donne rien du tout.

R.Barbera : Chez nous, on ne divulgue pas non plus, aussi pour des raisons liées au fait que P%V a un emprunt subordonné, et donc la moindre information qu'on divulguerait pourrait poser un problème par rapport à la réglementation lié aux emprunts côtés sur des marchés financiers, donc on fait très attention à tout ça. Par contre, on peut parcourir en 10 minutes mon écran, sans que vous fassiez de capture d'écran, la politique d'appétence au risque.

Maxime : On peut prévoir ça en 10 minutes, comme vous dites. C'est suffisant. C'est pour moi avoir une vue claire de comment ça se passe, comment ça s'articule de manière concrète.

R.Barbera : Voilà, faisons comme ça.

Maxime : Merci pour votre temps.

9.6 Appendix F - Interview's summary with Raffaele Barbera

Presentation of the interviewee and purpose of the discussion:

Raffaele Barbera is graduated in Business Administration from the Solvay Brussels School. After different experiences in financial services at the European Commission and at ING Belgium, he became the Head of Risk Management for the group P&V. He is directly involved in the risk appetite design, implementation and definition. He offers a vision of the risk appetite in an organization outside the banking sector.

The main purpose of this interview is to analyse the level of risk appetite implementation within P&V and to perceive the main challenges and best practices to deal with them.

Summary of the interview:

Mr. Barbera explains he is directly in charge of the risk appetite elaboration within P&V insurance. He has to ensure that risks are well identified and that the Risk Appetite Framework in itself is well formulated. Two years ago, the group P&V has reviewed completely its risk appetite, mainly due to the Solvency II ⁸ regulation for insurances. He stresses the relevance of the focus on risk appetite but also exposes different challenges.

First, administrators have a very low appetite for non-financial risks. For instance, colossal amounts of money (compared to the group financial capacity) are invested in protection against IT failures and cybercrime. It is difficult to align all the administrators' expectations with the risk appetite of the group in itself. Their expectations lead to a various range of objectives that are impacted by different risks.

Second, there is a real difficulty to align risk appetite and decision-making. Mr. Barbera says it is complex to tell which criteria to use when taking a decision. 'Do we need one metric for our risk appetite? Or maybe five? Do we need to prioritize them in the decision-making process?' These are real challenges within P&V. He also adds that the measurement of their objectives' performance is subject to noise. They use a certain type of model to aggregate different components and obtain a market value (due to the Solvency II requirements). The use a model A or model B does not give the same value. Model risk is then also a key issue.

⁸Solvency II is 'a set of common rules to facilitate the activities of insurance companies across the EU, ensure that they can survive in difficult times, and protect policyholders. The Solvency II directive became fully applicable to European insurers on 1 January 2016. It covers 3 main areas, related to capital requirements, risk management and supervisory rules' [EC](#) [\(nd\)](#).

Third, he evokes a gap between the risk appetite definition at the top levels and how it is managed 'on the ground' at the lower levels. His opinion is that this observation is applicable to lots of other processes within the organization, such as objectives. There is a difficulty to cascade down the risk appetite implementation and make it practical at the lower levels.

In addition to these challenges, he explains how the Risk Appetite Framework is articulated. There is a risk taxonomy developed in three categories. First, the financial risks (market, interest rates). Second, the insurance risks (increase in the mortality rate, abnormal number of automobile claims). Third, the non-financial risks (compliance, operational, model, IT). The framework also regroups different key indicators.

Finally, Mr. Barbera expresses the ways P&V deals with the risk appetite and their good practices. He stresses the importance of using historical data to design the risk appetite. 'We need experience to establish norms that make sense'. The use of thresholds is largely implemented in the process and completed by qualitative statements. Moreover, in order to fill in the gap between the top and bottom levels, he advises encouraging employees bringing their own contribution to the process but also reporting major incidents (based on an accurate declaration form that asks to evaluate the different impacts). His opinion is that lower levels have to deal directly with risks and their vision should not be neglected. A last key point for him is that annual discussions about risk appetite within the organization are important, but it does not mean annual revision. He says that 'it would be dramatic that the Risk Appetite Framework changes each year. In fact, even in crisis time, the framework does not change. If it does change each year, it reveals problems of strategy'. He adds 'an accurate review is relevant every three or five years, but a risk appetite does not change overnight'.

9.7 Appendix G - Interview's transcript with David Hillson

D. Hillson: OK, so we're on my personal account, which has forty minutes, but sometimes I extend this if the network is not very busy and then sometimes, they just cut you up after 40 minutes. If we get cut, then we can use the same link to reconnect. So you just exit and come back in again with exactly the same link.

Maxime: I just have to click on the same link, and it will work again.

D. Hillson: So I'm in your hands. Let's see. I do have somewhere else to be at eleven. So if we make that kind of hard deadline. But let's see how we get on with the other things.

Maxime: OK, perfect. So I suppose you see my updated list of questions. So the first one: 'how would you describe risk appetite with your own words?' In fact, I've rewatched your videos and I found a lot of interesting explanations for my thesis. So maybe we can start with the second question : how to make risk appetite a proactive tool instead of reactive? I mean, I saw in my literature review that risk appetite is born mainly after problems occur. And I want to explain that it could be used proactively before problems occur and in order to achieve objectives.

D. Hillson: OK, well, it would be good just to step back to the definitions first. I guess you see in the book that you get to see this.

Maxime: Yes, I saw the cover, but I didn't read the book.

D. Hillson: OK, so I mean, it was in 2012, but there is somewhere, page twenty, twenty-five I think it is. There's one, two, three, three pages of definitions of risk appetite from different organizations. So it's, you know, it's not a commonly accepted term even now. The book was written seven, eight years ago. So what we did, what I do in my own definition, with my friend. She and I worked together for twenty years and we're just writing a new book together, actually, on decision-making, which I think is one of your questions later. Very interesting point. But so we developed, I thought, some risk appetite definitions together because we saw such a confusion and so we started with the idea of physical appetite. Risk appetite is how hungry you are for food. And it's kind of an internal thing. It's an internal drive or tendency or need that you have to fulfill. And the problem is, it's very intangible. So how do you describe how hungry you are? You know, breakfast was three hours ago. I haven't had anything to eat since breakfast. I have this kind of feeling in my stomach. So how hungry am I? Am I, you know, six on a scale of one to 10, what units do we use? And so we have this problem with physical hunger, the physical appetite. We can't describe it. It's big or small. And so, you know, you should also be quantitative and you can have an appetite for other things, an appetite for physical

activity. You can have an appetite, sex appetite, sex drive. How do you describe these things? What units? And so what we eat in food, we talk about a proxy or something else that stands in the place of hunger or appetite. So we have phrases in English like: 'I could eat a horse'. Of course, you can't eat a horse, but it tells you that my appetite is very big. It's this size, or steak or a salad or a sandwich. And so the food, the amount of food stands in for the feeling inside about how hungry I am. So this is important when we come up to the next question. So when we're talking about risk appetite, which is how hungry we are for risk, how much risk do we feel it's right to take, then we have to express that in something else because we have no units for hunger. So we talk about risk appetite in terms of an amount of risk, like you talk about physical appetite in terms of an amount of food. But the amount of food is not the hunger. It's what you think would satisfy the hunger. Yeah, and the amount of risk is not the risk appetite, it's how much risk you think you would take in order to satisfy that risk appetite.

Maxime: And when you talk about the amount of risk, it's the same as risk thresholds?

D.Hillson: Exactly, risk thresholds or risk tolerance, and that's another one of your questions.

Maxime: I saw your scepticism about the risk tolerance notion. Maybe we can talk on it later.

D.Hillson: Yeah, I mean, language is difficult and a lot of people spend lots of time on definitions, which is not always productive, especially in other languages. So we then go from tolerance and thresholds to French or to Spanish or to Chinese. And it's a different discussion because the base words mean different things. So I think there are different concepts here. So there's the internal drive to take risk and that is risk appetite. And individuals have it, but groups also have it. So you have an individual risk appetite and a group risk appetite. Now, a physical appetite is influenced by lots of different things. How hungry you are now is different from how hungry you will be at two o'clock or maybe, you know, when you were a child or when you're an older person. And when was the last time you ate something? How fast is your metabolism? You know, when is the next meal coming and what's your expectation? And so all of these things kind of influence and some of them are hard things, like your rate of metabolism, which is a fixed thing, and you can't measure it. And some of them, you know, there's a duration since the last time you baked, but some of them are a bit softer, like your expectation of when you should next be eating. And so there are lots of things that influence our risk appetite. How much risk do I want to take on my drive to take in a particular situation may not be appropriate. And I tell the story in one of the webinars about when I was going to a conference and was invited out for lunch before the conference. And we went to this really nice restaurant and my host said: 'you can eat anything'. And I was really hungry. So I wanted a big meal with a glass of wine, but I was then having to lead a workshop at two o'clock. And so my hunger, if I satisfied my hunger, my appetite, I would have eaten something that would not help me to meet my objectives. So I had to moderate my appetite and just have a light meal and no wine so that I could meet my

objectives in the afternoon. Now, that's why it's important. Let me come to the next question. How do you make risk appetite a proactive tool? Because risk appetite is what it is, you know, so your level of hunger for food is what it is now. You can't influence it. The only way you can influence is to eat something or to have some kind of mental, you know, meditation or some change or thinking. The same is true with your risk appetite as an individual. Your drive to take risk in a given situation is what it is. And you can only be satisfied by taking the risk or by changing your thinking. Now, risk appetite is related to a given situation. So how much risk you want to take when you're in a board meeting trying to make an investment decision or when you're relaxing with some sports and you're rock climbing or you're surfing or you're playing soccer or whatever you do, the situation drives how much risk you attend. So you might find with the investment decision, you're very cautious because of the situation, because of the market and competition. And so when it comes to relaxing and you get out of work, you take off your suits and you get with your friends, that maybe you just want to kind of blow off some steam and have a good time. And so you do something crazy. And so you take more risk in your social life than you do in your business life. So your risk appetite is driven by the situation you're in. You don't just have one risk appetite, you have a risk appetite in a situation. So now when we talk about making risk appetite proactive and measuring it, well, let's go back to the measuring thing first. How do you measure risk appetite? And we have this somewhere in one of your questions, one of these questions, where it'll come when we talk about non-financial risks. Physical hunger, you measure it in terms of food because it is food that will satisfy your physical health. When it comes to risk appetite, then we're talking about taking risk in order to achieve objectives. And how do you measure risk? You could use a financial measure, value, evaluate risk or something like that, or discounted cash flow or net present value or internal rate of return or hurdle rates, all sorts of financial measures, but they're not applicable to all your objectives. So the key thing with understanding and expressing risk appetite is to use the same units as your objectives. And this is the key to measuring non-quantitative or non-financial objectives. So we've got to translate your drive to take risk, your tendency to take risk, your risk appetite, or their thresholds around an objective. And so that plus or minus, a bracket of above or below variation or variability, how much variation you feel is appropriate around that objective. So you have to use the same units as that objective. So if your objective is to increase market share by five percent, then a percentage is the unit of the objective. So you express your risk threshold in percentage terms, plus or minus one percent or, you know, three percent to six percent. That's our acceptable range of market share. That would be that we are prepared to accept, although we're aiming for five. And that's the risk, that's the uncertainty that we place on that objective, which reflects how much risk we are prepared to take in achieving an increase in market share. That's in percentage. So if we're talking about profit or revenue or something, which is purely financial, then you measure it in euros or pounds or something, because that's the unit of the objective. So then the question is, when we are coming to qualitative objectives, what are these units of the objectives? And every objectives must have units because it has to be measurable. You have to know how you know if you've achieved it. And you can only know if you've achieved it, if you've got some

measures for it. And so if we're talking about reputation, then reputation is completely fuzzy. But how do you know if you have a good reputation? Well, you measure it in terms of referrals or maybe even your share value of customer satisfaction, surveys of analysts, reports. There are a lot of ways you are referred to in the press, the business press and in the regular press, positively or negatively. So we have clear measures of reputation but reputation itself, is intangible. You know, you have a good reputation because there are things you can measure. And so then we can express our risk appetite and this drive to take risk with reputation in measured in the same terms. Does that make sense?

Maxime: Yes. I mean, if you define objectives, for example, for reputation, you will define your objectives, but depending on different measures. So, yes, media coverage, customer satisfaction. So do we have to try to aggregate all those measure or do we have like some most important measures? Do we have a hierarchy in those measures? That's an key point for me.

D.Hillson: OK, so then it depends on who you're talking to. So if you're talking to the chief executive or the chairman or the top team, how will they talk about reputation? Will they want five measures or one measure? You have to talk the language of your audience, and especially when you go to your future employer at Ernst & Young, you know, this is something you will learn really fast. You have to know the level of detail that your audience requires. What do they talk about? If they're talking with lots of financial metrics, then you give them those financial metrics back. If they are just using a five-point scale, you know : excellent - very good - good - acceptable - poor - very poor. Then you report in those terms. You have to use that language, not your language. So it's possible to have multiple indicators of reputation and to track them all separately. And you could have a, you know, a three or five factors trend line or a heatmap or or a scorecard or you can aggregate them in some way in order to create a combined unit. You know, the problem with the financial crisis or one of the problems was that people were aggregating financial metrics and they just use value-at-risk, pretty much. And the problem was that when we then reported to the boards in that one financial metric, saying it went up by half a percent yesterday or it went down by a quarter percent tomorrow. They focus so much on the one metric that they forgot the details that was behind it and underneath your one metric, which appears to be stable. Things were all over the place. That was one of the things that was happening in the financial crisis, because there was an over focus on one metric. So we do have careful with aggregation and creating a single measure, but it can be done.

Maxime: OK, that's clear.

D.Hillson: So now, how do we get to be proactive? So that's the second question. I think risk appetite itself is the wrong driver for business decisions, because risk appetite is internal and intangible. It has to be expressed in something. So it's the risk thresholds, which are the drivers or the tool that we use, in order to help us make better decisions. Now, the problem is that because risk appetite is

internal and then we express it in risk thresholds, we're expressing something intangible in tangible terms. So what happens if your risk appetite is inappropriate? So we go back to my meal before the conference, before the workshop, where my risk appetite was saying, you're hungry, eat a big meal and drink wine. And that was wrong. That would give me a bad outcome for my objective. So I had to choose something different and I chose against my appetite. All right. So if I just took my appetite expressed in a choice from the menu, what my risk appetite told me is eat the food, drank the wine. And I would have a bad workshop because I'm sleepy or drunk, or both, but I'm not at my best, so I had to choose. Now we have to introduce intentionality or in your words, to be proactive. All right. So that means you have to understand, if I follow my feeling, where would that lead? And is that a good place or not a good place? If it's a good place, that's OK, I'll go that way. If it's not a good place, I need to do something different. I need to act against my appetite. I need to make a choice, which is different from where I would just go with my feeling. And that means we have to choose something. Now, what can we choose in the risk world when we're dealing with uncertainty? And you'll see this is in one of the webinars, maybe one of the videos. What we could choose is our risk attitude. So risk attitude is a specific choice you make in a given situation to take more or less risk. So risk-averse, you take less risk. Risk-seeking, you take more risk. Risk-neutral or risk-tolerant, you are somewhere in the middle. So we could say in my meal example, I was risk-seeking. I was going to take on a lot of food and wine because I had this drive to do that. But what I needed to do in order to perform well in the workshop was to choose to take less food. I had to be food-averse. So if we're talking about risk and, you know, you look around your chief executive, you see all your colleagues taking all that merging and lots of mergers and acquisitions activity, you know, they're buying small companies, diversifying. They're doing all sorts of different things. And you think "oh, I have to do that". But in order to do that, you would actually expose your company to more risk than you can cope with. Then you have to moderate your risk appetite and you can only moderate it by an active and intentional choice. A proactive choice to say, "I want to do this, but I'm going to do that" because doing that will help me achieve my goals. I just got somebody at the door. I need to just make it very quick. 30 seconds.

Maxime: Yeah, no problem.

D.Hillson: I'm sorry about the interruption. OK, so just to finish that thought then, what do you say? How do you make risk appetite a proactive tool. What I would say is that you start with your risk appetite, express it and risk thresholds. Then you examine those risk thresholds and you see if they're appropriate, if they lead you where you want to go. And if not, you make a choice in your risk attitude to do something different. And it's the risk attitude, which is the proactive tool, because you can only be proactive with something that you can change.

Maxime: So the risk appetite in itself is not really proactive?

D.Hillson: Exactly. Get hungry as you are if you have a tendency to take risk.

Maxime: Appetite needs thresholds and attitudes to be proactive?

D.Hillson: Exactly. So what you need to do is choosing a different attitude which will result in a different set of risk thresholds which are more appropriate to the situation.

Maxime: Yeah, that's very clear, thank you.

D.Hillson: So we kind of answered when it started with the qualitative-quantitative questions. Well, how to use this for non-financial objectives, but where do we go in your question set after this?

Maxime: One of my big interrogation is how to cascade down the risk appetite. I saw one of your video when you are talking about risk culture and the distinction between a top down, a tone at the top approach and a bottom up approach, and you say: 'yes, we have to combine both and to meet like in the middle'. But is it the same approach for risk appetite? Because I talked with some people in the banking world and told me that employees at the lower levels have problems to report issues to the top levels and on the opposite, the high level in the company have problems to have like a common risk appetite language within the organization. So, yes, there are two problems for me.

D.Hillson: This is easy. This is an easy question to ask because risk appetite and risk thresholds relate to objectives. So an organization has top level strategic objectives, which is the responsibility of the board or the senior leadership team to achieve them. They don't go out and make machines and develop IT systems and run projects. The senior team have an organization underneath them which does that, and it might have departments and divisions and groups and it might have portfolios and it might have projects and programs, have operations and marketing and functions and all of those things. But for all of these things, there is a hierarchy underneath the top of the organization. And in order to achieve the strategic objectives of the organization, those objectives are divided into a hierarchy of objectives. An objectives' break in structure if you like. So you can say that you meet your structure objectives through meeting your department objectives. And each department meets its departmental objectives through meeting portfolio objectives, and the portfolio objectives are met through meeting projects and operational objectives. So you break down from this. You have a pyramid, a hierarchy of objectives, and each set of objectives should correspond to a level in the organization. So you have your top team, middle management, you have your projects and operations, you have your functions. And each level in the pyramid has a set of objectives and an organizational element which is tasked with delivering those objectives. So a well-structured, well-functioning organization has a coherent set of objectives where the objectives are aligned. So you can take the top level objectives and you can

break them down, achieve these objectives here at the next level. They give me the top objective or you could be at the bottom. You say : 'why do I have to do this project?' I have to do this project in order to achieve this portfolio objective. But why do I have to achieve this portfolio objective? Well, to achieve this department objective. why do I have to do that? To contribute to the organization. So you have a top-down definition of objectives and you have a bottom-up fulfillment or implementation of objectives, achievement of objectives. Now, so we have a hierarchy of objectives and then a good organization. The organizational levels match the objective levels. So it's clear this element is responsible for these objectives. Right now, risk appetite relates to objectives so we can do exactly the same thing. We should do the same thing in terms of understanding and expressing risk appetite that we do with the objectives. You start at the top and then you break down the risk appetite. You define it top-down. And then you take the risks bottom up. So what we say is that the top level, the board, has to define how much risk they want to take for the whole organization against the strategic objectives, each strategic objective is broken down into the next level. Let's call them departmental or group objectives. You can define how each of the next level objectives contributes to the top objective. In the same way, risk thresholds at the top should be broken down into risk thresholds at the next level of objective. So these risk thresholds together add up to this one. And if you are taking more risk at the next level down, which would then be outside of the risk threshold at the top level, then you're taking too much risk at the next level. So what we need to do is to decompose or split our risk appetite as expressed in thresholds from the top all the way down to the bottom. And when we get to the very, very bottom level and we're talking about projects and operations, then the way we decide if a particular risk is acceptable or not is we measure that risk against the project's risk thresholds. So in terms of actually managing risk at each level, the risk is measured in terms of whether it's acceptable or not to whether we have to mitigate because we can accept it or reduce it. It's measured against the risk thresholds at that level. And so the amount of risk we're taking down here, projects and operations will be appropriate in order to make sure we don't take too much risk in the portfolio. And if we take the right risk to the portfolio level, then we'll stay within the threshold at the department level, at the whole organization. The whole thing to define how to cascade the risk appetite down, is through the objectives.

Maxime: The same process as objectives. But do you mean that we have a kind of aggregation of lower thresholds to obtain a global view at the top?

D.Hillson: Yes.

Maxime: And does this kind of structure I mean, it could make objectives too independent. Do you understand what I mean? There is a hierarchy and there is one objective for this project, one objective for another. But in fact, risk for a project could have impacts on other projects or portfolio objectives. So is it not too rigid or the structure too independent?

D.Hillson: No, because if you think about the life cycle of an objective, strategic objectives have a lifetime which is measured in months and years. Projects have a much shorter life cycle. Project objectives only exist for the lifetime of the project. The objectives are either achieved or not. A portfolio objective roll and over again a slightly longer time period, but not for the same length as the whole organization. So when we're building our portfolio, it's the management of the portfolio at the portfolio level which defines whether or not we've got the right set of objectives at project level. So the management of the portfolio is about managing the combination, the aggregation of projects and operational objectives in order to achieve the portfolio. And similarly, when we're at a departmental or group level, departmental risk management or department of management, not risk management. It's about making sure we have the right elements in our portfolio in order to function properly as a department. And then the board is responsible for making sure that all of our departments are functioning together so that functions in order to achieve our strategic goals.

Maxime: OK, that's very interesting. Next, a very interesting point for me is the link between risk appetite and decision-making. So, in fact, in my thesis, I want to show that even for kind of non-financial organizations, the risk appetite implementation could have many benefits. And I want to show that it does have an impact on decision-making. So how to link both concepts like risk appetite on the one hand and decision making on the other hand?

D.Hillson: You need to read my new book, but I haven't finished writing it yet. So we're halfway through. I think we've got four chapters out of eight that are written. So I'm sorry it's going to come too late for you, but it's absolutely the same question. When we're making decisions, a decision is choosing between a number of viable options, one of which is to do nothing. And all decisions involve risk. If it's a real decision, I mean to say, shall I wear my black socks or my grey socks today? It's not a risk. It's not a real decision. It doesn't matter, you know, so it's up for the things that matter, like do I invest in my pension or do I buy a new car? That's an important decision. And I have to think about that because there are thousands of pounds involved and there's a long-term implication. And it also I enjoy my car more than I enjoy my pension, but it's short-term. I can kill myself in the car, but I can't kill myself in my pension. So when we're making decisions, there are lots of factors. Decisions are always risky. They involve risk. So real decisions are risky. And that means that we need to assess the amount of risk associated with each of our options, including the "do nothing" option or "the carry on option". And then we have to know how much risk is acceptable for this decision, otherwise, how do you choose between your risky options? So do I take, you know, I drive out for miles and I'm looking at a BMW at the moment. The only convertible is the spider, which doesn't fit in my garage. So then I have to say, OK, so I can't have a car I want. But I need to do something else. What do I do? Lots of uncertainties. See it. I don't know why I told you about my car. That's irrelevant. But I cut myself off now. Then we have to know how much risk are we prepared to take with the decision.

So, you know, plus or minus ten thousand pounds, five thousand pounds on the cost of the car, plus or minus how much on the performance. Plus or minus how much on the residual value. Plus or minus how much on the brand and the reputation and the kind of the way people look at you when you drive past. All of those things are, you know, we have to know what I have, what is acceptable. Then we can choose the right decision option. So you can only make a good decision when the decision options are risky if you know how much risk is acceptable for the decision. In other words, if you've expressed, understood and expressed your risk appetite for the decision. So the decision has objectives, their decision objectives, things that we want to achieve. I need transport, my old car needs replacing. I want to have one that has a mix of performance and prestige and various other things. So here my decision objectives, how much risk am I prepared to take on those objectives. And then I measure each of my decision options against these objectives. And I have to know, does the riskiness of this option fit within the thresholds of my objectives? So it's absolutely fundamental to understand and express your risk appetite for the decision and then to know how much risk you want. Risk exposure is associated with each option so that you can fit the options against the objectives and choose the right one.

Maxime: OK, and so the risk appetite should be used only as a decision-making tool or also as, a monitoring or controlling tool or both maybe?

D.Hillson: Finding the acceptable level of variation. So it gives you the thing against which you're measuring or monitoring. So you say this much risk is too much. Then you monitor how much risk you actually have and your risk exposure is then measured against these thresholds. And if you push against the threshold and you breach the thresholds, then you need to take action, some risk management or something, change the objectives or do something different. So risk appetite isn't a monitoring tool. It's the threshold against which you monitor. But that's part of the monitoring system, but you're not monitoring risk appetites because risk appetite is fixed and your risk appetite is what it is. It's defined in terms of thresholds. You moderate your thresholds by choosing an appropriate risk attitude. Then you've got a set of risk thresholds that say for this situation or objective or decision, here are my risk thresholds. Then you take the decision or you run the project or you make the investment or do whatever you want to do. And then you see how much risk you've actually got at that point. And you monitor that against the thresholds. And if you breach the threshold, then you're in trouble. So the risk appetite is the sort of the foundation of your measure, but you're not measuring risk appetite.

Maxime: OK, next, what are your real recommendations to design the risk appetite for qualitative risk? So first, why is it important to integrate this kind of risks in the risk appetite, framework and statements, and how to really make it like concrete to have a specific design? So, do we need a specific design, in fact, for qualitative risks and how to make it relevant in the in the organization?

D.Hillson: Well, so just in terms of language, it's qualitative objectives, right. Not qualitative risks.

So to answer your question, risk appetite is objectives-focus, not risk-focused. Well, you don't have a risk appetite for a particular risk. The risk fits within the risk appetite or it doesn't. But you have an appetite for an objective and the risk affects the objective. So they were related. But you need to be clear on the relationships. So I don't see any fundamental, theoretical or conceptual difference between the approach for qualitative or quantitative objectives. As we said right at the very beginning, the key is that all objectives need to be measurable and you use the units of the objective to determine the thresholds that come out of the appetite, because everything is done in the same units of the objective. Then the principle is the same, whether it's dollars or euros or whether it's media reports or market share or customer satisfaction or staff turnover or whatever metric you use, you then define thresholds in those terms and it could be dollars or it might not be dollars, and then you measure against it. So I think that the system is the same. There is an education task here and I think of what you said, what can the non-financial organizations learn? I think it's the other way round. I think the financial organizations need to learn from non-financial ones, because my view is that the financial organizations think they know all about risk appetite and risk management and risk exposure just because they can measure it in dollars or euros. And they're missing all of the qualitative risks which they are all exposed to and they don't know how to measure and monitor those. So I think they need to be looking at the marketing organizations and you know, the social media platforms and all of this kind of qualitative stuff and say, well, 'how do you do it when you don't have any dollar signs?' Because a financial organization is equally exposed to non-financial risks. And I think that competence in the financial side is blinding them to their exposure to qualitative risks. And so, you know, I've worked with all different, pretty much every industry sectors you could mention. And the hardest challenge for me as a risk specialist is into the financial sector because they all say insurance company or an investment company or they will say, 'Oh, we know, of course, we don't have to do risk management. We're a bank or we're an insurance company. It's our business to take risks', but they just meet financial risks. And when you talk to them about some of these softer things like reputational staff, morale or culture that I know it's all about the dollars. Well, it isn't. So I think the lessons to be learned is in the opposite direction. What about another five or ten minutes, and how is this focusing on where you're going with your thesis yet?

Maxime: It's really focused on some interesting things, it truly meets my expectations. And that's yeah, it will help me a lot in order to formulate my recommendations. So the link with decision-making is done. Well, regarding the actuality and covid-19, I don't really know how to formulate the question in fact, but maybe we can talk about what is the positive impact of having a well-designed risk appetite when tackling the issue of the covid-19 pandemic?

D.Hillson: I think the key is to really understand your objectives. And I know this sounds boring because I keep saying the word objective, but for an organization, well, I guess you're talking about an organization. So why? What does our organization exist? Why are we here? And then when

something changes, it could be covered. It could be, you know, major terrorist attack. It could be a major infrastructure failure. It could be a weather event, extreme weather event. Something happens. How do we maintain our integrity as an organization to deliver our organizational objectives? And I think the organizations that are not clear about that are going to be blown and disrupted and may not survive. So the key thing is not Covid-19. That's just the latest in the series of disruptive events. The key thing is who are we? What are we trying to do and how are we going to do it? Then the world changes around us and we have to change with it. Now, a company that communicates information and fax machines are developed because of the Internet. How do I communicate? And so, you know, you look at BP, they've you know, they've talked about fifteen thousand redundancies. They've talked about reducing their carbon footprint by 40 percent in the next ten years because they're not an oil company, they're an energy company. And so their objective is to provide sustainable and affordable energy to the general public and business. And it's not about oil. If you say we're an oil company, you're lost because that's not going to be sustainable. But what we need to understand is our core objectives and the amount of risk that we can take around those core objectives. And then whatever happens, whether it's a global lock down, whether there's a breakdown of global supply chains, whether it's a resurgent China and, you know, protectionism in major companies, whether it's Trump winning again in America and America goes off the global sea. The question is: 'how is my organization going to continue to meet our strategic objectives?' Whatever happens, that means really understanding our objectives and our risk appetite against them.

Maxime: So for you specifically, the focus is not really on covid-19, but on all the unexpected events that could happen. But it's kind of 'unknown unknown' events. I don't know if I if I'm clear, like for me, a risk is something known, but the probability of occurrence is a bit unknown. But like Covid-19 or earthquake or something like it, it's unknown. So does it make sense to try to incorporate this kind of events ?

D.Hillson: Yes, absolutely, because there will always be something. So when you're saying how much risk am I prepared to take, it could come from anywhere. You're not saying how much risk in a global pandemic, or how much risk in the global financial crisis and how much risk in a breakdown in global supply chains or in national security. You're not being specific. You're being focused to this objective. How much variation can we cope wherever it comes from. So resilience is risk-independent.

Maxime : Ok perfect, it is clear for me.

D. Hillson : That's a good thing ! Do not hesitate to send further questions by email if you feel you need it. By the way, I'm interested in reading the final output of your work. I can sign a confidence accord or something if it is required, but your subject and your questions are very interesting !

Maxime: Thank you so much, for your time, for your explanations and your availability. Your contribution adds a considerable value to my work. Goodbye and have a nice day !

D. Hillson: That's a pleasure, Maxime. Goodbye !

9.8 Appendix H - Interview's summary with David Hillson

Presentation of the interviewee and purpose of the discussion:

Dr. David Hillson, also known as The Risk Doctor, is 'an international thought-leader in risk management, with a global reputation as an excellent speaker and award-winning author. Countless individuals, teams and organizations have benefited from David's blend of innovative insights with practical applications, presented in an accessible style that combines clarity with humour. He also shares his insights regularly through books, papers and articles, as well as the regular series of Risk Doctor Briefings' Hillson (nd). He is the author of the book 'A short guide to risk appetite' and has approached the risk appetite in different videos or webinars. His contribution to this thesis is an undeniable asset.

The main purpose of this interview is to discuss deeply all the challenges and difficulties reported in the previous interviews. A specific questionnaire (available in Appendix I) was designed based on the outcomes of the previous interviews to focus the discussion on them. The final goal is to obtain some insights to formulate relevant recommendations.

Summary of the interview:

First, Mr. Hillson gives its own view of the risk appetite, starting from the basic definition of appetite. He describes it as an internal drive and something intangible. Therefore, he stresses the need to translate risk appetite into thresholds, as people do by translating their appetite in a certain amount of food. This is a kind of proxy to make the risk appetite tangible. Also, he emphasizes the importance to design risk appetite for objectives and then for the risks linked to these objectives (objectives-focused approach). All objectives need appropriate risk thresholds. Hence, a key point for him is to have the thresholds defined in the same units as their related objective.

Second, the current 'reactive' character of the risk appetite is approached. Mr. Hillson confirms that many organizations use risk appetite in the wrong way, as a reaction to bad outcomes that have already occurred. He stresses a key point: risk appetite in itself is not the driver (or the sufficient driver) to make the approach proactive. Risk appetite is what it is and he suggests that organizations go against their risk appetite (introducing the notion of intentionality) if the latter is not appropriate for the achievement of their objectives. His solution to moderate the risk appetite is to act on the organization's risk attitude because the latter can be modified, the risk appetite not.

Third, a challenge reported in all the interviews is the risk appetite cascade down through the lower levels. Mr. Hillson answers directly: 'this is a very easy question'. In fact, given that risk appetite (and

thresholds) directly relate to objectives, the process to cascade it down is the same as for objectives. There are different levels for objectives, this is the same for the risk appetite. It must be defined at the top and broken down the lower levels. He adds that this top-down approach is to be completed with a bottom-up approach. He summarizes with 'a top-down risk appetite definition and a bottom-up achievement of it'.

Fourth, the approach to make the risk appetite something that matters for organizations is discussed and comes the link with decision-making. Taking decision includes a choice between variable options. He develops the importance of analysing three things when making this choice: the riskiness, the risk appetite and the risk thresholds for each option. He really perceives risk appetite as a powerful decision-making tool for organizations that take time to analyse these three aspects. Also, risk appetite for him is not a monitoring tool.

Finally, the link between the risk appetite and the current pandemic is discussed. His opinion is that whatever the unexpected event (here COVID-19, but 'it could be the election of Trump'), organizations that struggle the most are those who 'don't know who they are, why they exist and where they go' and don't know the notion of resilience. His position regarding these unexpected 'risks' (which are not really 'risks' since organizations don't know the existence of these uncertainties) is that risk appetite must be defined for them. According to him, resilience has its place in a risk appetite definition.

9.9 Appendix I - Interview's questionnaire with David Hillson

1. How would you describe risk appetite with your own words?
2. How to make the risk appetite a proactive tool (and not reactive as it was the case after, for instance, the GFC)?
3. How to cascade down efficiently the risk appetite? How to obtain a common 'risk appetite language' inside the organization?
4. What are the main current challenges in implementing the risk appetite within an organization?
5. What would be your recommendations to tackle the difficulties of designing the risk appetite for qualitative objectives within an organization? In fact, do we define risk appetite for risks or for objectives? (risk-focused vs objectives-focused approach)
6. How to link risk appetite and decision-making? How to show that the risk appetite has a 'positive' impact on effectively making decisions?
7. How would you link risk appetite and COVID-19?

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