Abstract

Monitoring credit risks in an effective way is crucial, and Swedish banks can to a great extent use their own models and terms in the evaluation process of an individual’s creditworthiness. There is however a lack of transparency in decision-making process of mortgage loans. Besides the quantifiable factors, uncertainties such as future and external events need to be considered. Due to the difficulty of quantifying the uncertainty aspects, hiring risk-averse individuals becomes important. The aim of this paper is to investigate the risk and uncertainty aspect around the mortgage loan process in a Swedish bank, more specifically the private advisors’ decision-making involving their own subjective judgments in combination with the objectivity of the mechanical evaluation systems. By using previous literature on the field of risk and decision-making, in combination with qualitative interviews from a case study of eight private advisors, this paper aims to map out the mechanisms that drive decision-making under risk and uncertainty. From the empirical findings it was evident that heuristics and intuition played important parts in the advisors’ decision-making process, and that the reliance on technology varied between the advisors. The evaluation depended on the individual advisor’s judgment, the applicant, and the situation.

Keywords - Risk, Risk Management, Credit Risk, Credit Default Risk, Operational Risk, Exogenous Risk, Decision-Making, Uncertainty, Heuristics, Intuition, Mortgage Loan, Subjectivity, Objectivity, Banking System
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1 Introduction

1.1 Transparency Demands in the Financial Sector

A large portion of Swedish households own their own homes, and a majority have financed their purchase through a mortgage loan. For most people, the mortgage loan is the largest and most important transaction in their life time. In fact, it constitutes 90 percent of household debts, which makes the stability of the mortgage market crucial for the whole economy. Mortgage loans also form the largest asset for banks and are essential for their profitability. Moreover, they play an important part in a bank’s funding since the loans are used as collateral when issuing covered bonds (Riksbanken 2014). A transparent and well-functioning market where there is balance between consumers and credit lenders is thus of interest to both parties. Today, however, there is a discrepancy between the interests of the consumers and of the lenders in the mortgage loan market (Finansinspektionen 2015a). There is a lack of transparency in the decision-making process from the lenders’ side, and there are no clear rules for how the credit evaluation should be performed. One recent step that the Swedish government has taken in order to mitigate the information asymmetry between borrowers and lenders is to propose a decree from the European Parliament and Council called the Mortgage Credit Directive. As part of the directive, lenders will become obligated to inform borrowers about the factors that affect the rate and price setting of the mortgage loan (SOU 2015:40).

Meanwhile, banks and other credit agencies have their own company- or office specific risk policies to comply with. Banks are exposed to credit risks every time they issue a loan, and in order to mitigate that risk they set up requirements and terms that the borrower must fulfill. Swedish banks can, to a great extent, formulate their own terms, use their own models for calculating a borrower’s creditworthiness (i.e. if and how much a customer can borrow) and decide which rate to give. The criteria and requirements can therefore differ between banks, and even between offices belonging to the same bank (Finansinspektionen 2013). In addition to the computational factors that are included in the credit evaluation, such as income, debt ratio and payment defaults, banks also need to consider future events and uncertainties in their assessment of a potential borrower’s risk. The uncertainty aspect is hard to measure and quantify, and is many times subject to personal judgment. This adds complexity to the credit
evaluation and decision-making process, and obstructs an unequivocal account for how banks manage risks. (Söderberg 2013; Söderberg, Sallis & Eriksson 2013; Eriksson & Hermansson 2014).

1.2 The Mortgage Market and the Role of the Private Advisor

The financial deregulation of the housing market in Sweden took place in 1985 and implied that banks now could lend out money without the interference of the Riksbank, which resulted in a high increase of bank loans. A later effect was increased house prices the following five years; however this changed in 1991 when the prices started falling. Many households were now overleveraged, and some could not afford to pay their high mortgage loans (Turner 1997). A lesson learnt from this was that monitoring credit risks in an effective way became crucial, and the liquidation of the investment bank Lehman Brothers in 2008, which was followed by the financial crisis, made it even more evident that reducing risks to a minimum is necessary. Ineffective risk management by banks is argued to have been one of the main catalysts of the financial crisis, along with inadequate regulations that failed to prevent a larger crisis (Bessis 2010). The revision of the supervisory authority BCBS¹’s Basel Accords during 2009-2011 aimed at regulating banks’ risks worldwide through an increased transparency of their operations. The previous Basel Accords of 1988 and 2004 involved minimum capital requirements for banks and to control the amount of capital they need as a protection from risks the economy was facing. The revision in 2009-2011 called Basel III entailed even further risk regulations at the international level, particularly due to the admonitions from the 2008 financial crisis (Norholm Just 2014)

It is the private advisor’s role to educate customers about financial risks and their individual financial options. Following the banking crisis in 2008, customers’ perception and trust in banks changed, and consequently the function of the private advisor in banks transitioned from a traditional advisory role to a sales role. The relationship has thus gone from a customer-advisor relation to a buyer-seller relation (Söderberg 2013). Hence, there is a need to understand the context of the customer in order to minimize the bank’s risk (Eriksson & Hermansson 2014). For this reason, hiring risk-averse individuals as private advisors becomes

¹ Basel Committee on Banking Supervision (Bessis 2002)
an important aspect, and caution is one of the key elements as it through time has shown that unsound judgments can lead to great losses for banks (Riskbedömningsprojektet 1993).

1.3 Problem Statement and Purpose

Mortgage loans are one of the main sources of income for banks, however the creditworthiness of a borrower is an uncertainty that lenders face since it is not possible to observe all their characteristics and future actions. An individual's creditworthiness has become further more important as a consequence of the latest financial crisis. With today’s information technology, private advisors can receive a picture of the potential borrower’s creditworthiness more expeditiously, however the accuracy of these systems remains questionable since they do not capture future risks and uncertainties that the private advisor might get from a personal meeting with the potential borrower (Andersson 2001). It is thus the equilibrium between the objectivity of the mechanical evaluation systems and the subjectivity of the private advisor that underlies the decision-making process and affects the credit risk management.

In the light of the most recent financial crisis, risk management in banks has become a much-disputed topic and an area of scrutiny. New EU legislation and regulations such as the Mortgage Credit Directive have and will continue to increase the demand for transparency in the financial sector, pushing banks to be open about their risk management procedures and how they assess customers’ creditworthiness (SOU 2015:40). Despite this, there is still a vagueness surrounding loan processes in banks regarding the evaluation criteria. Banks have a relatively high degree of operational freedom when it comes to creating a decision-support system, and the general evaluation model usually includes default probability calculations based on historical, quantitative data about the customer (Finansinspektionen 2013). But besides the computable evaluation, there is inevitably an uncertainty aspect that cannot be quantified and put into a system. This is where the private advisors have to use their own judgment and what can ultimately settle the decision (Andersson 2001).

Research has previously been done in a Swedish context regarding the role of the private advisor, although the focus has mostly been on the relationship between the advisor and the customer. Researchers have studied the relationship between advisor characteristics and customer risk, however, a study of the behavioral factors of the private advisors at a more
thorough level is recommended (Andersson 2001; Söderberg 2013; Söderberg et al. 2013; Eriksson & Hermansson 2014) Furthermore, with the exception of a few studies (for example Shapira 1995, Andersson 2001 and Söderberg 2013) empirical evidence on managers’ risk conception in relation to their actual behavior remains scarce (Riabacke 2006). In other words, previous studies have brought up the relationship between customers and private advisors, and managers behavior in relation to risk respectively. The private advisors’ decision-making behavior in relation to risk thus is a relatively unexplored field.

This paper aims to clarify how one of the largest banks in Sweden works with risk, or more precisely, how the private advisors deal with the uncertainty aspect of risk and the calculated risk respectively in mortgage loan processes. We intend to both analyze each advisor separately to distinguish if there are perceptible differences and similarities between them, and to look at the aggregated result in order to draw conclusions about the bank’s risk management as a whole. The main purpose for this study is to map out the mechanisms that drive decision-making under risk and uncertainty, and to contribute to the understanding of behavioral economics by examining decision-making behavior and risk management in an organizational setting. Our ambition is that the study will be a first step towards increasing the transparency regarding the mortgage loan process in banks, both for potential borrowers, but also for the decision-makers who will eventually become legally obliged to account for their evaluation.

1.4 Research Question

How do private advisors in one of the largest Swedish banks work with risk management of mortgage loans?

- How does the assessment process work regarding the subjectivity of the private advisor’s behavioral factors versus the objectivity of the mechanical evaluation systems?

1.5 Delimitations

The investigated object will be a Swedish bank at one office located in Uppsala that has been given the fictitious name the Bank, as they were guaranteed anonymity. Interviews have been conducted with private advisors and not with corporate advisors since the mortgage loan process differs significantly for individuals compared to corporate customers. Regarding risk
management, the focus is exclusively on risks related directly to the mortgage loan process, such as credit default risk, operational risk and exogenous risk. Other bank related risks are not dealt with, such as exchange rate risks and liquidity risk, as they do not have the same impact on the decision-process of mortgage loans and its risk elements when it comes to individual borrowers. Further it is the risk that the bank is exposed to that is being investigated, and not the risk that the private advisors or the customers face.

1.6 Thesis Disposition

Chapter 2 - The Banking System
The second chapter presents an overview of the banking system in Sweden in relation to risk and mortgage loans, and provides essential background information in order to facilitate the reading and understanding of the following parts of the thesis. It further describes the loan process, policies, and the general risk approach at the Bank.

Chapter 3 - Literature Review
The third chapter reviews the chosen literature and theories covering risk management and decision-making. Firstly, the area on risk and uncertainty is presented, followed by a description of decision-making theories merging into the topic of decision-making in banks. The chapter ends with a discussion regarding the chosen and excluded theories.

Chapter 4 - Methodology
The fourth chapter describes the methodology used in the study, such as how the data was collected along with a review of the study’s quality. Thereafter, an operationalization of the concepts in the literature review is presented.

Chapter 5 - Analysis of Empirical Findings
The fifth chapter provides a description of the findings from the empirically gathered material including reflections from the advisors, as well as an analysis of the findings in relation to the presented literature and theories provided in chapter 3.

Chapter 6 - Concluding Remarks
The last chapter presents the key findings and answers the thesis’s research question, along with its limitations and suggestions for further research.
2 The Banking System

This section starts with an introduction of the banking system in Sweden in order to build a foundation for the upcoming sections. Thereafter, a review of the Bank and its approach to risk is presented, as well as information about the bank’s mortgage loan process and its lending policies.

In Sweden, the Financial Supervisory Authority (henceforth called the FSA) is the government agency responsible for the supervision and regulatory arrangements of the financial markets. Its mission is to contribute with a stable financial system characterized by high level of trust and well-functioning markets that cater to the businesses’ and households’ needs of financial services. The FSA’s operations are controlled by government appropriations where its objectives and future tasks are set out, such as analyzing the risks that could cause instability in the financial system (Finansinspektionen n.d.). Trends in the housing market along with the households’ debt ratio is therefore followed by the FSA on a regular basis, and every year several reports are published on its website for the public to read. The household’s indebtedness is a vital topic for the FSA as it may result in risk for the banks and for the financial and macroeconomic stability. Since a majority of households’ debts are mortgage loans, the FSA’s supervision of these becomes especially important (Finansinspektionen 2015b).

2.1 Mortgage Cap and Debt Ratio

The maximum amount that Swedish banks lend out to a borrower with the property as collateral is 85 percent of its value. These rules were implemented in 2010 by the FSA as it previously had been a loan to value ratio of 90 percent of the property’s value. With a lower percentage rate, the intention was to make borrowers more equipped to handle fluctuations on the housing market. The repo rate in Sweden is at the moment at a value below zero, indirectly leading to lower mortgage interest rates at the banks (Finansinspektionen 2015b).

A household’s indebtedness can be measured in various ways. A common way is to look at debt ratio, which shows the relationship between total debt and total disposable income. Debt ratio can give an idea of how vulnerable a household is against disturbances in its cash flow (Alfert & Winstrand 2015). A household with high debt ratio has to put a larger portion of its
disposable income on its loan payments, and is thus more vulnerable to higher interest rates compared to a household with a low debt ratio (Finansinspektionen 2015b). Debt ratio does not consider a household’s assets or current loan to value ratio, meaning that a high debt ratio is not always a fair measurement of whether or not a loan should be granted. However, a pursuit towards a low debt ratio can be of advantage if the mortgage rates would increase or if the conditions at the housing market would change. It also leads to lower risk for the households as they become more resistant to increased expenditures or lower incomes. One way to lower the debt ratio is through amortization of loans as it leads to decreased interest costs. Long amortization periods, or no amortization at all, can consequently increase a household’s vulnerability (Riksbanken 2014; Alfelt & Winstrand 2015; Finansinspektionen 2015b).

### 2.2 Financial Information and IRB Approach

Financial information is of importance for the credit granting process in banks. The credit company UC (Upplysningscentralen) is a provider of financial information about individuals among other things. UC provides companies with a base for credit assessments, and can therefore serve as a tool for reducing credit losses (UC 2015).

With the implementation of Basel II in 2007, the largest Swedish banks were given authorization by the FSA to use the Internal Ratings-Based Approach (IRB) when assessing credit risk, meaning that banks were given permission to use their own internal models to calculate the capital requirements for credit risk. The IRB is made up of two elements that the bank must estimate; the risk weight formula which is the basis for the capital requirement calculation, and expected loss, which is the product of Probability of default (PD), Exposure at default (EAD), Loss Given Default (LGD) and Credit Conversion Factor (CCF) and is estimated using historical data on credit loss. While these elements are required to be included in the risk model, how they are estimated is up to the bank (Finansinspektionen 2013).

### 2.3 The Bank

*This section presents background information about the Bank provided by the Branch Manager from the Uppsala office and its internal risk department.*
2.3.1 Changes in the Bank

The role of the private advisor in the Bank has gone from being administrative towards being more sales and customer oriented. The advisors work more proactively now compared to a few years back, when they would wait for the customer to contact them with their case. The business acumen has improved over the years and that the advisor’s role is not objective, since their goal is to sell the Bank’s products. For example, they aim to have only full-service customers at the Bank. The mortgage loan process has also been subject to change over time. Going back 25 years in time when the Branch Manager started working in the Bank, there were no credit information systems such as UC available. Instead they had a physical book where they kept records of customers’ financial maintenance, and a black dot meant that the individual should not be granted a loan. IT based systems that can retrieve information about individuals and calculate their creditworthiness have led to more accurate decisions being made. The advisors can process considerably more loan applications now, and can approve a loan immediately if they make the assessment that everything adds up. The trust and responsibility given to the advisors implies cautiousness and responsible lending. However, the Bank has always had very strict requirements in order to obtain a mortgage loan, not only post the 2008 financial crisis. Besides the technological advancements, responsibility and accountability for the decisions have been further decentralized the last years, increasing the need for central control and monitoring of the Bank’s risks. (Branch Manager 2015)

2.3.2 The Mortgage Loan Process

One way for a mortgage loan application to start is through an online application via the Bank’s website. For entirely new customers the online application is the most common starting point. Filling in a physical paper form is also an option, but is becoming less common due to the increased digital bank environment. In the online application information about income and civil status is stated, inter alia. The application is thereafter handed to a private advisor that reviews it and contacts the customer for additional information if needed (Branch Manager 2015).

The mechanical evaluation process starts with a calculation that includes the information stated in the application by the applicant, such as income and current fixed expenses along with the assumed costs for the applied mortgage loan. Since 2007 the Bank uses the IRB
approach with their own estimation of LGD and CCF to calculate risk exposure and capital requirements (Risk Report 2015). The purpose of the calculation is for the private advisor to gain an overall picture of what the applicant’s economic situation looks like today, and how it would look like if the living expenses were to change. At the end of the mechanical evaluation process the private advisors receive a rating suggestion from the system, which they can choose to change to either a higher or lower number based on their own evaluation of the applicants’ aggregated situation. In order to approve the loan, the rating has to be confirmed by the advisor, or if changed, it needs to be followed by a motivation. The rating is based on previous and current information about an applicant. It takes into account the individual’s income, liabilities and potential payment delinquencies retrieved from UC, and for existing customers also how well their commitments with the Bank have been handled historically. Some examples are if payments have been made on time, or if there is a negative balance on the account at some point, which then could lead to a poor rating. In other words, if the applicant is an existing customer with the Bank, the rating system can gather more information about the customer and thus give a better indication of the individual’s overall economic situation. Furthermore, information about a current customer is provided by its account statement where the cash flow is discernable.

A rating between 1-3 means that the applicant is creditworthy according to the system, and 4-5 implies the opposite. The better the rating, the more likely the applicant is to receive favorable terms regarding price setting. If the applicant has a payment default, the system will rate a four or a five, however as mentioned above, the advisors can change the rating to a more favorable number since they can take into account external circumstances that the system cannot intercept. If for example the customer was recently hired and previously had been studying, the taxable income stated in the UC report might be zero and therefore lead to a poor rating. The advisors can thus ask the applicant for a proof of employment in order to complement the application and subsequently give the applicant a better rating (Branch Manager 2015).

2.3.3 The Bank’s Policies

The policies at the Bank are those of responsible lending and minimization of risks in order to avoid large credit losses. Profitability over volume is likewise important as well as common sense in lending. Determining the customer’s repayment ability is imperative, and income should exceed expenditures. Other policies include being cautious and lending out to
creditworthy customers only and not to lend based on the collateral for the loan, but to primarily to base the loan on repayment capacity. If the repayment capacity exists, then collateral is considered. The Bank needs to have good collateral for their loans if the customer in the end would not be able to repay its loans. The Bank has the policy that they trust their private advisors to make the decisions on the Bank’s behalf, as long as they can motivate why they make deviations in cases where the system tells them not to lend money to a customer, as for example when the customer receives a poor rating or when the calculation is inadequate. Looking exclusively at the financial numbers is not enough, since an overall assessment of the information that the customer expresses, in combination with the impression that the private advisor gets from the customer, is just as important for the decision process (Annual Report 2014).

2.3.4 The Bank’s Approach to Risk

The Bank has a low risk tolerance which is reflected in their operations at all levels. The internal risk control department at the Bank works with various types of risks. Their daily work consists of dealing with potential financial risks resulting from fixed interest rates and pace of amortization. The head of the risk department states that credit risks are primarily dealt with at the Bank’s branch operations. Operational risks are dealt with through continuous reporting from the local operations to the risk department. Two ways in which they are mitigating operational risks are by obliging employees to report losses that exceed SEK 25,000, and by having fixed salaries and a limited remuneration system (Risk Report 2015). Further, the exogenous risks in terms of political risks are not considered to exist in the markets where they operate, with the exception of current laws and regulations. The risk department’s instructions on credit assessment are not based on the economic climate in the sense that they do not change the permitted loan to value ratio accordingly. However, the individual private advisor’s assessment of a mortgage loan application can in certain cases be affected by the economic fluctuations (Head of Risk Department 2015).

3 Literature Review

This section provides an overview of some of the extant literature on risk and risk management, as well as theories about decision-making. The section is concluded by a brief summary and a description of the relationship between risk and decision-making as well as
how this study is using the concepts to describe determinants of the mortgage loan process in the Bank.

3.1 Risk Definition

The increased global competition in combination with the diversity of today’s organizations makes it important for companies to find a niche or business strategy that makes them unique, but this ultimately also means taking more risks in order to stand out (Castro, Gulías & Abalde 2008). There is no unequivocal definition of risk (Aven & Renn 2010); the literature on risk offers several suggestions. Some common definitions are: a scenario that has a probability and a consequence (Kaplan 1991); the expected loss of an event (Willis 2007); uncertainty about an event and the severity of the consequences of it (Aven & Renn 2009); a situation where something of human value is at stake and where the consequences are uncertain (Rosa 2010). Evident from the many definitions is that the term risk comprises two parts, one being calculated or quantifiable, risk, and the other uncertainty.

3.1.1 Calculated Risk and Uncertainty

Calculated risk is the objective assessment of possible outcomes of an event, usually based on recorded observations. Riabacke (2006) makes the distinction that calculated risk is a situation where any action has one set of possible outcomes and for each outcome there is a known probability, whereas uncertainty is when the probability of each possible outcome is unknown (Riabacke 2006). To illustrate, when rolling a dice we do not know what the outcome will be, but we know that it will be a number between one and six - there is a measurable probability (risk). When there is no way for us to know either the outcome or the distribution - that is uncertainty. For example, the economy is impossible to predict since it is subject to an infinite amount of immeasurable variables (Knight 1921). Uncertainties are thus subjective assessments of the future, colored by personal or social judgment (Aven & Renn 2009). Subjective probabilities do not hinge on formal computations, but rather on past experiences and heuristics (Cornand & Gimet 2012).

3.2 Risk Management

Risk management is the “identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the
probability and/or impact of unfortunate events or to maximize the realization of opportunities” (Aven 2011). In other words, since risk cannot be eradicated, organizations should take precautions to minimize negative consequences and maximize positive outcomes (Pelzer 2013). Banks face a broad spectrum of risks in their daily operations, which need to be managed properly in order not to lead to losses (Bessis 2002; Pelzer 2013). The growing financial market along with increased diversity of financial instruments has created opportunities for new products and services to arise. Deregulation and technological developments have further changed the banking industry and led to new possibilities and thus increased competition between banks. The existence of banking regulators cannot fully prevent a bank from failing; they rather serve as supervisors of banks’ risk management (Greuning & Brajovic Bratanovic 2003).

A bank’s credit risk management process is a way to determine the quality of the bank’s loan portfolio (Dima & Orzea 2009). Techniques for credit portfolio management have become an integrated part of banks’ business units. Credit portfolio management, credit administration and credit departments all have the goal of reducing banks’ cost of capital in order to enhance the total portfolio performance. Credit risk is one type of financial risk and is defined as all those risks related to when a borrower is unable to fulfil its obligations on time (Bessis 2002; Colquitt 2007; Dima & Orzea 2009). Banks’ credit risk management is the process of mitigating those losses, and credit risk measurements aims at narrowing banks’ credit risk exposure accepted by the lenders when a debt is extended (Colquitt 2007). As a complement to banks’ credit risk management, operational risks and exogenous risks need to be considered as well (Bessis 2002).

The risk that a lending company suffers from economic losses as a result of the borrower’s failure to meet their contractual obligations, in other words, that the borrower fails to make obligatory payments to the bank, is a part of credit risk management and can be defined as credit default risk (Bessis 2002). The importance of acknowledging credit default risks has always been an inherent part of banks’ risk management (Bessis 2002; Greuning & Brajovic Bratanovic 2003; Bessis 2012). Defaults from a small number of essential customers can result in great losses and ultimately lead to insolvency (Bessis 2002). Since the risk primarily lies at the lender, it is essential that the bank keeps these levels at a minimum (Brown & Wang 2002). Defaults such as delays of payment liabilities or degradation of an individual’s creditworthiness, due to for example termination of employment, can inevitably subject a
bank to increased credit risks (Bessis 2002). When a borrower defaults it normally means an equal loss for the lender less any recovery amount (Dima & Orzea 2009), which could be both a total loss and a partial loss of the amount lent (Bessis 2002).

Operational risks are connected to the internal systems of the bank and risks that come with potential system failures and non-compliance with bank policies. It is thus risks that come from breakdowns in internal procedures, either from people in the organization or from the systems (Greuning & Brajovic Bratanovic 2003). System failures are those that come from defaults in the internal reporting systems, information systems or risk-monitoring procedures used for corrective actions. Lack of adequate tools for risk measurement is further connected to operational risks. The operational risks that come from people are for example lack of expertise or human errors (Bessis 2002). Ensuring that the internal operations work without errors therefore becomes important in order to deliver high standard services and products, and to avoid losses. An effective monitoring of operational risks becomes especially crucial for banks and is many times seen just as important as credit default risk management (Dima & Orzea 2009). One step to mitigate operational risk is to establish a common taxonomy for all events relating to this risk type, in order to measure frequencies and costs (Bessis 2002).

Exogenous risks are those created by the external environment that could affect the bank’s financial condition. They are factors that cannot be controlled by the individual organization, but which need to be considered. Politics and banking crises are examples of exogenous risks, and if materialized these could compromise the bank’s operations (Bessis 2002). There is evidence showing that previous banking crises and banking failures are related to poor loan quality, making it even more evident to have an effective risk management of the loan process (Dima & Orzea 2009). Changes in the external environment can further affect the prices of a company’s products, such as a bank’s interest rates (Bessis 2002).

3.3 Risk Attitudes

While faced with a choice that includes an uncertainty aspect, people tend to choose differently depending on their attitude towards risk. Risk preferences are among other things dependent on individual experiences and feelings caused by results of previous choices. Risk aversion is when an option with a lower payoff is chosen prior to an option with a less secure, but possible higher payoff. In other words, a less risky option is chosen prior to an option
when there is a chance of losing value (Kahneman & Tversky 1979; Dillenberger & Rozen 2015). A risk-seeking behavior is thus the exact opposite, meaning that an option with a higher value is chosen, even though the option has a greater chance of failure. Being risk-neutral is when one is indifferent between the risk options. Furthermore, being risk-neutral implies that an individual is neither risk-averse nor risk seeking and has no preference regarding options that involves risk (Tversky & Kahneman 1981). Being held personally accountable and responsible for a decision, or expecting one's decision to be reviewed by others, generally leads to risk-averse behavior and the status quo bias, in which decision-makers prefer maintaining the current state rather than making changes that might potentially lead to loss (Kahneman & Lovallo 1993).

3.4 Risk, Uncertainty and Decision-Making

During risky and uncertain conditions, decision-making strategies become especially important since it concerns assessing probabilities, whether known or unknown. The notion that risk can be defined as quantifiable while uncertainty is immeasurable entails that the process of assessing possible outcomes requires different tools or methods. As mentioned above, uncertainty is frequently subject to personal judgment and dealt with through the use of heuristics (Aven & Renn 2009) while quantifiable risk can be measured through observations or sophisticated calculation tools (Andersson 2001). While denominated as risks, credit default, operational, and exogenous risks are all exposed to elements of uncertainty, for example employment status, system failures and macroeconomic factors, and should thus be managed with regards to that (Bessis 2002). There are several normative, prescriptive and descriptive theories attempting to explain how decisions are or should be made under risk and uncertainty. The following section outlines the descriptive theory bounded rationality and some of the most common heuristics used in decision-making under risk and uncertainty.

3.5 Decision-Making Theories

The chosen theories on decision-making include bounded rationality, heuristics, intuition and modes of thinking. These are descriptive rather than prescriptive theories that will be used to interpret and partially explain our findings.
3.5.1 Bounded Rationality and Heuristics

Managerial decision-making is inevitably subject to personal judgment. People inherently possess cognitive biases that affect assessments and judgments (Bazerman & Moore 2009). The term judgment refers to the evaluation of evidence in order to make a decision. It is thus the ability to make a decision or form an opinion from circumstances presented to us (Kahneman, Slovic & Tversky 1982; Gilovich, Griffin & Kahneman 2002). Economist and sociologist Herbert A. Simon introduced the term bounded rationality, which is the idea that decisions are affected by cognitive limitations, time and cost constraints and incomplete information. Because of these boundaries we tend to make decisions that are satisficing (from satisfy and suffice), i.e. we search until we find a satisfactory and sufficient solution rather than examining all possible alternatives (Simon 1957). Rational decision-making is thus when the expected decision process leads to the most favorable result, based on the decision-maker’s risk preferences and values and an assessment of these in a correct way (Bazerman & Moore 2009).

Managers frequently use heuristics (rule of thumbs) as a way of simplifying the decision-making process, and this often occurs unknowingly. They are commonly described as mental shortcuts intended to facilitate probability assessments (Dane & Pratt 2007). While an effective strategy in many cases, the misuse of heuristics can lead to biased and erroneous decisions. It is common to be unaware of the reliance of heuristics, which in some cases can divert people from making objective decisions. In turn, when being aware of the occurrence of heuristics one can decide when to use them and when to eliminate them from the decision-making range (Bazerman & Moore 2009). Bazerman & Moore (2009) outline three major heuristics that are generally used in decision-making that can lead to various biases: the availability heuristic, the representativeness heuristic, and congruence heuristics. A fourth heuristic called source credibility is also relevant when analyzing decision-making behavior as it can give rise to severe misjudgments (Hovland & Weiss 1951; Chaiken 1994; Guillory & Geraci 2013).

3.5.1.1 The Availability Heuristic

The availability heuristic is described by Tversky and Kahneman (1973) as the tendency to assess the probability of an event happening based on how easily the occurrence of that event
is brought to mind. Emotionally triggering, vivid and explicit events are more readily available than vague or complex events. Availability heuristics typically lead to correct judgments, since we remember events that happen frequently more easily than rare events. However, relying solely on availability can cause biases in judgment. One example is ease of recall, which is when recent events are more easily retrieved in memory than earlier events, and vividness can make an instance seem more important than a less vivid, but more frequent, instance (Bazerman & Moore 2009). An event can thus be perceived as more significant compared to other options that are not as easily evoked. Vague, complex or abstract events are typically less easily retrieved from memory. The lack of time or resources can restrain from a deeper investigation when faced with a choice, which through the availability heuristic allows the individual to quickly arrive at a conclusion (Tversky & Kahneman 1973; Bazerman & Moore 2009). Another bias related to the availability heuristic is illusory correlations. This occurs when a relationship is perceived between variables, even if such a relationship does not exist. Assuming that two events, which arise at the same time, are related and caused by each other is thus ascribed to illusory correlations. Certain groups and traits can at some times be related, but just because they can do not necessarily mean that they always do (Kahneman et al. 1982).

### 3.5.1.2 The Representativeness Heuristic

The representativeness heuristic refers to the propensity of decision makers to rely on representative information and make assessments based on stereotypical characteristics. Managers using this heuristic might for example predict a person’s performance by their age, gender or background. Moreover, managers tend to evaluate performance based on previous success, failing to consider that performances tend to regress to the mean, and are thus basing their judgments on unrealistic expectations (Bazerman & Moore 2009). It can further work on an unconscious level, leading an individual to engage in a behavior which it might not have done at a conscious stage. Representative information can also be relied on when the available information is insufficient in order to make a clear-cut decision, or even when more sufficient information is available. It is more likely to be wrong when relying on representativeness to make a decision, as being more representative does not always mean that it is more probable. In other words, people can easily misjudge their ability to correctly foresee the likelihood of an event, by for example overestimating the probability that an event will happen based on representative information (Nilsson, Juslin & Ohlsson 2008). The conjunction fallacy is a bias inclined to the representativeness heuristic. Kahneman et al. (1982) were among the first to
introduce this bias, explaining that people tend to choose a more representative option prior to a more likely one. Further, a conjunction fallacy occurs when it is easier to picture two events taking place simultaneously, compared to imagining them taking place separately, although the latter can likewise occur. One way to avoid this bias is to think about events in term of frequency, rather than probability (Kahneman et al. 1982; Gilovich et al. 2002).

3.5.1.3 The Congruence Heuristic

The congruence heuristics, or positive hypothesis testing, is the tendency to intuitively use selective information when assessing a situation and assume that one’s own statements are true in the absence of contradicting evidence (Bazerman & Moore 2009). The heuristic is used when remembering information selectively or in cases when an interpretation is prejudiced. When strong emotions are involved regarding a specific issue or situation, the use of the congruence heuristic is particularly common. A reason might be if one wishes for a specific conclusion to be true, or in situations when one tries to weigh up the costs of being wrong (Gilovich et al. 2002). This heuristic is prone to several biases, for example the confirmation trap, overconfidence, anchoring and hindsight knowledge. The confirmation trap involves actively searching for and interpreting evidence in support of a statement. Anchoring refers to the habit of using initial pieces of information as a reference point for future judgment, even though it might be insignificant for the final outcome. For example, people tend to have difficulties adjusting their opinions from the impression they get when meeting someone for the first time. Overconfidence is a common bias in judgment and occurs when we are too confident in the accuracy in our own beliefs, which can be problematic when decision-makers neglect to take preventive actions in case of failure. Finally, hindsight knowledge is a bias that arises when people think that they could have predicted the outcome of a decision after they have gained knowledge of the actual outcome, and rejects the idea of any other possible outcome (Bazerman & Moore 2009).

3.5.1.4 Source Credibility

Source credibility is the tendency to make judgments based on if the person conveying the information is perceived as a high or low credibility source (Hovland & Weiss 1951), or in other words “a communicator’s positive characteristics that affect the receiver’s acceptance of a message” (Ohanian 1990 p. 41). It is thus the credibility of the communicator that is going to determine if the receiver accepts the message as trustworthy or not. If the source, the
communicator, is perceived to be one of valid statements, then the source is likely to be acquiring expertise or at least be conceived as an expert. Further, if the source appears to have a high degree of confidence in the statements being made, the credibility and trust increase. The degree of confidence in the communicator, and the extent to which the receiver accepts it, lies as a base for trustworthiness. Although it is important to acknowledge that credible sources are not always more valuable than less credible ones, as these occasionally can be more persuasive depending on the context. An example is when the receiver is already favorably inclined to the statement, which the less credible source backs up (Ohanian 1990). The framing effect is a bias susceptible to source credibility, implying that people respond to a certain choice in dissimilar ways depending on how it is presented. Furthermore, individuals tend to seek risk when a negative structure is presented and avoid it when a positive one is presented (Tversky & Kahneman 1981).

<table>
<thead>
<tr>
<th>Heuristics</th>
<th>Biases</th>
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</thead>
<tbody>
<tr>
<td>The Availability Heuristic</td>
<td>Ease of recall, illusory correlations</td>
</tr>
<tr>
<td>The Representativeness Heuristic</td>
<td>The conjunction fallacy, stereotyping</td>
</tr>
<tr>
<td>The Congruence Heuristic</td>
<td>The confirmation trap, overconfidence, anchoring, hindsight knowledge</td>
</tr>
<tr>
<td>Source Credibility</td>
<td>The framing effect</td>
</tr>
</tbody>
</table>

*Table 1 Heuristics and Biases*

### 3.5.2 Intuition

A majority of the research on strategic decision-making has long been advocating systematic and rational analysis in favor of intuition. Recent studies in cognitive science, however, acknowledge the positive effects of intuition in certain environments, and dismiss the general belief that intuition is irrational or arbitrary. Rather, it is said to be a complex combination of concepts, facts, patterns and techniques that are imprinted in our minds (Khatri & Ng 2000) which can transform isolated pieces of information into a holistic perception of a situation in a matter of seconds (Dane & Pratt 2007).

In unstable environments where there is little time to gather sufficient data or the data is unreliable, intuition has shown to be beneficial in organizational decision-making. In high-
velocity settings where decisions need to be made swiftly, intuition can even lead to higher decision quality than computational models (Khatri & Ng 2000; Dane & Pratt 2007). According to Standard and Poor's Industry Survey, the banking industry is classified a moderately unstable environment due to technological changes and governmental regulations and relies on rational, quantifiable models to a large extent (Khatri & Ng 2000).

Intuitive deduction, or intuiting (Dane & Pratt 2007), relies almost exclusively on past experiences and accumulated knowledge about a specific situation. Consequently, a person with several years of experience is more likely to rely on intuition in decision-making than novices who tend to follow principles and instructions. Intuition often manifests itself in the form of a ‘gut feeling’, which can be described as the process of feeling out the problem, and trusting that this sensation or instinct is correct (Khatri & Ng 2000). Some scholars claim that the use of intuition leads to biases in judgment, or affectively charged judgments (Dane & Pratt 2007).

3.5.3 Modes of Thought

From the previous section it is evident that heuristics and intuition allows for individuals to make decisions through mental shortcuts. Building further into the topic of decision-making, Kahneman (2011) refers to heuristics and intuition as ways of arriving quickly at a conclusion without much effort put into it, titled system 1 thinking. Occasionally a search for an intuitive or heuristic solution fails, where there is need for a more deliberate and pervading way of thinking. In those cases a need for a more effortful form of thinking can be needed, which Kahneman (2011) refers to as system 2 thinking. Compared to intuition and heuristics, which is a more instinctive thought process, system 2 thinking allows for a more logical and thoughtful way to arrive at a conclusion, and ultimately make a decision. System 2 thinking is further referred to as “slow thinking” and relies more on complex calculations (Kahneman 2011).

3.6 Decision-Making in Banks

There are several factors influencing decision-making in banks, for example national and supranational regulations, organizational structure, and individual characteristics of private advisors. Decision-making in banks depends to a high degree on the organizational structure.
and at which level decisions are made. In decentralized banks the accountability for decisions and their outcome lies on the individual handling the case, as opposed to a centralized structure where a central credit committee makes final decisions. The main issue regarding credit decisions in banks is balancing return against risk. Decision support systems are typically used to retrieve historical financial information about loan applicants in order to assess their credit rating. These systems can transform credit records that show payment delinquencies, liquidity, savings, net assets and debt ratio into variables that are inserted in algorithms that calculate the applicants’ ratings (Andersson 2001; Magnusson & Olsson 2008). According to Bessis (2002), ordinal ratings are insufficient when measuring credit risk - private advisors also need to consider the bank’s credit policies, which can aid in moderating their personal risk propensity. However, studies show that private advisors frequently base their credit assessments on non-financial information, which originates mainly from personal interaction with the applicant and through the use of intuition and experience. The non-financial information is often ambiguous and derives from the advisor’s intentional or unintentional personal judgments of the borrower’s characteristics (Andersson 2001). This entails that the credit granting process differs between advisors that in turn can lead to arbitrary and erroneous decisions (Bellucci, Borisov & Zazzaro 2010).

3.7 Theoretical Summary

Based on the presented literature and theories there is a clear link between different types of risk and decision-making behavior. Firstly, individuals have different attitudes towards risk. Risk aversion means that a less risky option is chosen prior to one where there is a chance of losing value, risk-seeking is when an option with a higher value is chosen, even though the option has a greater chance of failure, and risk-neutral is when one is indifferent between the risky options. Bounded rationality on the other hand involves the assumption that due to cognitive boundaries, individuals tend to make decisions that are satisficing, and thus do not explore all possible options. There are various approaches to problem solving, and some occur unknowingly. Heuristics are shortcuts to decision-making, such as basing a decision on how probable it is for an event to occur, making judgments based on stereotypes, searching for support for a pre decided conclusion, or whether or not the source of information is credible. Gut feeling, or intuition, is the ability to instantly form an opinion without having access to all the facts. An intuitive decision can thus be made based on our immediate perception of a
situation. Two modes of thinking are described, one being system 1 where intuition and heuristics plays part, and system 2 that is used in situations where a more deliberate way of thinking is needed.

Besides interpretations that can vary depending on who is making the decision, decision-support systems can further provide with numeric information in order to facilitate the decision-making. Risk management in banks, or more specifically credit risk management, relies on the judgments of decision makers’ evaluation of the existing circumstances, but also on the financial information provided by decision support systems. When it comes to decision-making of mortgage loan applications, there are several factors included in the process before the final decision is being made about the applicant. As the presented literature states, there are various factors affecting a decision made by an individual. Previous experience along with characteristics and surroundings inevitably has an impact on decision-making. Altogether, based on how a certain individual perceives a given situation, and to what extent it uses the available decision-making tools, the outcome can vary. In this study, we intend to analyze the decision-making process by looking at how credit default risk, operational risk and exogenous risk are managed by private advisors, as well as examining if and what kind of heuristics and/or intuitive deduction that they use when managing uncertainty aspects along with their risk attitudes.
The choice of literature and theories was based on their prominence over other theories in the area of behavioral economics, and the bearing they have had on current research on risk and decision-making. The conscious decision to exclude well-established theories, such as the expected utility theory and Kahneman and Tversky’s prospect theory (1979) was made for several reasons. To start with, the expected utility theory is a normative theory that aims at explaining how decisions should be made optimally, which is not the purpose of this study. Moreover, it has been criticized for being overly rational and conservative, and incompatible with empirical evidence of decision-making. The prospect theory was removed from the study retrospectively as it was inapplicable to our findings. The theory concerns decision-making behavior under risk where the probability of outcomes are known (Kahneman & Tversky 1979), and thus not under uncertainty, which is one of the main focal points in this thesis. We do, however, to a limited extent look at risk attitude which is a part of the theory. The

<table>
<thead>
<tr>
<th>Themes</th>
<th>Concepts</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Management</td>
<td>Calculated risk</td>
<td>Knight (1921); Riabacke (2006)</td>
</tr>
<tr>
<td></td>
<td>Uncertainty</td>
<td>Kahneman, Slovic &amp; Tversky (2002); Aven &amp; Renn (2009); Cornand &amp; Gimet (2012)</td>
</tr>
<tr>
<td></td>
<td>Credit Default Risk</td>
<td>Bessis (2002); Brown &amp; Wang (2002); Greunung &amp; Brajovic (2003); Dima &amp; Oreza (2009)</td>
</tr>
<tr>
<td></td>
<td>Operational Risk</td>
<td></td>
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<tr>
<td></td>
<td>Exogenous Risk</td>
<td></td>
</tr>
<tr>
<td>Risk attitudes</td>
<td></td>
<td>Kahneman &amp; Tversky (1979); Tversky &amp; Kahneman (1981); Kahneman &amp; Lovallo (1993); Dillenberger &amp; Rozen 2015</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Decision Making</th>
<th>Bounded rationality</th>
<th>Simon (1957); Bazerman &amp; Moore (2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Heuristics</td>
<td>Hovland &amp; Weiss (1951); Tversky &amp; Kahneman (1973); Tversky &amp; Kahneman (1981); Kahneman et al. (1982); Ohanian (1990); Chaiken (1994); Gilovich et al. (2002); Dane &amp; Pratt (2007); Nilsson, Juslin &amp; Ollsson (2008); Bazerman &amp; Moore (2009)</td>
</tr>
<tr>
<td></td>
<td>Intuition</td>
<td>Khatri &amp; Ng (2000); Dane &amp; Pratt (2007)</td>
</tr>
</tbody>
</table>

Table 2 Themes and Concepts

3.8 Reflection on Choice of Theories

The choice of literature and theories was based on their prominence over other theories in the area of behavioral economics, and the bearing they have had on current research on risk and decision-making. The conscious decision to exclude well-established theories, such as the expected utility theory and Kahneman and Tversky’s prospect theory (1979) was made for several reasons. To start with, the expected utility theory is a normative theory that aims at explaining how decisions should be made optimally, which is not the purpose of this study. Moreover, it has been criticized for being overly rational and conservative, and incompatible with empirical evidence of decision-making. The prospect theory was removed from the study retrospectively as it was inapplicable to our findings. The theory concerns decision-making behavior under risk where the probability of outcomes are known (Kahneman & Tversky 1979), and thus not under uncertainty, which is one of the main focal points in this thesis. We do, however, to a limited extent look at risk attitude which is a part of the theory. The
exclusion of these theories limits the depth of our analysis, as we omit a thorough investigation of each individual’s risk attitude and focus largely on observed behavior. Moreover, the aforementioned heuristics only constitute a portion of decision-making behaviors identified in the literature. However, the ones presented in this study were deemed appropriate in this context, while others were either assumed insignificant or overlapping the ones mentioned. For example, the affect heuristic (emotional response to certain stimuli) (Bazerman & Moore 2009) carries similar qualities as the availability heuristic and the representativeness heuristic and purports the same biases. One of the authors that is referred to numerous times throughout the literature review, psychologist Daniel Kahneman, was awarded in 2002 with the Nobel Memorial Prize in Economic Sciences for his work on the psychology of decision-making and judgment (Petersen 2002; Nobelprize n.d.) and is also cited by several other authors (Andersson 2001; Bazerman & Moore 2009; Eriksson & Hermansson 2001), which gives reinforcement for the chosen theories within this field. The subjectivity in the selection of theories is an aspect that is taken into consideration throughout the analysis and acknowledged as a possible drawback in the study’s rigorousness.

4 Methodology

This chapter outlines the design of the research along with how the study was conducted, which incorporates the approach and strategy of the research, followed by the method, data collection and research purpose. The chapter ends with a discussion regarding the quality of the study, as well as its limitations.

4.1 Research Approach

The thesis is conducted through a study of a Swedish bank, to which we wish to shed new light on the fields of risk management and decision-making, more specifically how the private advisors work with risk management in the mortgage loan process. An exploratory approach is suitable for this study since new insights of the role and behavior of the private advisor are the investigated areas. For this research the flexibility of an exploratory research becomes valuable, since the direction of the study might vary depending on the findings (Saunder, Lewis & Thornhill. 2009). However, a combination of an exploratory approach and a descriptive approach can in line with Babbie (2012) provide a better overall view of the situation. In this case it would be the behavior of the private advisors, along with understanding the situation around the mortgage loan process and the risks it involves. Using
a mix of these methods makes it possible to investigate a situation where there is no clear single set of results, as the aim is to investigate each private advisor’s decision-making process and not the general role of the private advisors in banks (Yin 2009).

4.2 Research Strategy

As the purpose of the study is to extend the understanding of the examined behavior, a qualitative research design is appropriate. This design is also suitable since it can contribute with insights from several sources in a real-life context and capture the perceptions and views of the individuals (Yin 2011), without making generalizations about the role of the private advisor. The results will not be statistical averages, as each individual’s own interpretations and experiences will speak for themselves. Furthermore, the base for the research consists of a study of one case company where data is collected and analyzed. A case study is adequate when performing a qualitative empirical study, especially when examining a present phenomenon in its actual context. It is likewise suitable for an exploratory and descriptive study as the studied phenomenon and the contexts it is being studied within, are not definite from the beginning and therefore can be altered (Saunders et al. 2009).

In order for the research question to be investigated and answered, an abductive approach has been adopted as a way to find evidence for the conclusions. Abduction is a method used when the investigated field is a dilemma and the purpose is an attempt to explain it. Since the thesis’s purpose is partially one of investigating the private advisors’ behavior, and how these can affect decision-making in the mortgage loan process, it was considered a suited approach for the study. The approach has become more frequently used in research as a way to overcome the difficulties that traditional approaches, such as induction and deduction, can induce (Saunders et al. 2009). The study aims at identifying decision processes for the individual private advisors, which therefore means using the gathered empirical data in order to find the best explanations for each case (Bryman & Bell 2015).

4.3 Method

An empirical investigation has been done primarily through interviews with individuals in a real life context (Saunders et al. 2009). Interviews enable the respondents to answer more freely, in contrast to questionnaires that already are established by the researchers (Yin 2011).
An appropriate way to conduct a qualitative study is through semi-structured interviews since it, in line with Saunders et al. (2009), is advisable when the questions asked might vary depending on how the conversation develops. It thus means that all the questions were not included in all interviews. The questions were kept open and the order of the questions varied depending on the individual’s answers. The interviews were in other words not standardized, since this is recommended when conducting qualitative interviews. Interviews also allow for the respondents to comment if there is anything unclear about the question they are asked (Saunders et al. 2009). The interview guide for the private advisors, branch manager and head of the risk department can be found in Appendix 1, 2 and 3.

4.3.1 Case Selection

The chosen case is one of the biggest four banks in Sweden. The private advisors were told prior to the interview that their real names would not be exposed in the thesis, as a way to obtain honest answers. Each respondent has thus been given a fictitious name in this thesis in order to facilitate the reading, see table 3. The reason for choosing one of the bigger banks in Sweden is due to the fact that they often have stricter criteria for approving a mortgage loan application, compared to smaller credit institutions where a higher mortgage rate can be a substitute for lower creditworthiness (Dima & Orzea 2009).

4.3.2 Units of Analysis

Interviews were conducted with the private advisors and the branch manager at one chosen office in Uppsala, along with the head of the risk department. The studied objects were primarily the individual advisors, since the main purpose is to explore how this set of people act as individuals and not as a group. For that reason the unit of analysis is the individual. The information about each private advisor will then be used in order to generalize among the group of interviewees, since this is the aggregate of individuals (Babbie 2013). Semi-structured interviews were conducted with the private advisors with the purpose of gaining information about how they work with the mortgage loan process and their relation to risk management. In order to form a clearer picture of how the credit assessment works, an interview was conducted with the branch manager. This was valuable in order to find out what the role of the private advisor looks like today. Information from the risk department provides with understanding of the Bank’s approach to the risk related to the mortgage loan.
process. The information collected from the branch manager and risk department makes this thesis an embedded case study (Saunders et al. 2009). Furthermore, the gathered information from a sub-unit in the organization ultimately leads to several units of analysis (Babbie 2013). The approach to retrieve information from the branch manager and risk department facilitated the understanding of the bank’s mortgage loan process and risk management.

<table>
<thead>
<tr>
<th>Informant</th>
<th>Years Active</th>
<th>Role</th>
<th>Length</th>
</tr>
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<tbody>
<tr>
<td>---</td>
<td>---</td>
<td>Internal Risk Department</td>
<td>E-mail</td>
</tr>
<tr>
<td>---</td>
<td>25</td>
<td>Branch Manager</td>
<td>90-120 min</td>
</tr>
<tr>
<td>David</td>
<td>2</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
<tr>
<td>Lisa</td>
<td>3</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
<tr>
<td>Hanna</td>
<td>3</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
<tr>
<td>William</td>
<td>6</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
<tr>
<td>Ben</td>
<td>9</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
<tr>
<td>Carl</td>
<td>14</td>
<td>Private Advisor</td>
<td>35-50 min</td>
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<tr>
<td>Ester</td>
<td>19</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
<tr>
<td>Robert</td>
<td>30</td>
<td>Private Advisor</td>
<td>35-50 min</td>
</tr>
</tbody>
</table>

Table 3 Informants

4.4 Data Collection and Analysis

The interviews with the private advisors were conducted face-to-face and lasted around 45 minutes each. Regarding the risk department, a questionnaire was sent out in order to better understand the underlying structure of the Bank’s credit risk management. The interviews with the private advisors were conducted in Swedish and subsequently translated into English. The interviews were further audio-recorded in order to increase the validity of the gathered empirical data (Bryman & Bell 2015). Before the final interviews were conducted with the private advisors, the interview with the branch manager took place along with pre-interviews.
with two of the private advisors. This way it was possible to gain a broader picture of the work around the mortgage loan process at their office. It was also beneficial in order to understand the private advisors’ role and the instruments they use in the mortgage loan process. It was further helpful to have the information from the branch manager and the pre-interviews when the questions for the final interviews were to be formulated. Before the face-to-face interviews, the interview questions were sent out to the respondents via e-mail. This way they had the opportunity to look through the questions to see if any of them were unclear, and also had time to prepare their answers. Regarding the questionnaire sent to the risk department, e-mails and one telephone conversation took place in order to formulate the final questions as accurate as possible.

In order to facilitate the summary of the empirical findings, the audio-recorded interviews were transcribed. This method is time consuming but in this case considered necessary since it facilitates the analysis of the various findings, as it becomes a data file for analysis (Saunders et al. 2009). Every interview was listened to twice in order to verify that the written information was correct. Since the purpose of the thesis partially is to compare the private advisors’ thoughts around the mortgage loan process, having it in writing eased the comparison and analysis.

4.4.1 Operationalization

The interview questions are based on the three different risk types credit default, operational and exogenous risk in order to easier distinguish between the advisors’ decision-making behavior in certain situations. They are partly formed after the potential risk and uncertainty factors that these risks entail according to theory, but have been adjusted to fit into a bank setting. In the analysis of the empirical findings, the questions have been congregated into themes, namely Creditworthiness, Rating, Border Line Cases, Risk of Errors, Responsibility, Relationship, Future Events, and External Actors.
<table>
<thead>
<tr>
<th>Questions</th>
<th>Themes</th>
<th>Risk and Uncertainty factors</th>
<th>Expected Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Background information</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>How long have you worked at the Bank?</td>
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<tr>
<td>How long have you worked as private advisor?</td>
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<tr>
<td>Has the role changed since you started?</td>
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</tr>
<tr>
<td>Do you work in the same way and use the same tools since you started?</td>
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<tr>
<td>What are the policies regarding lending at this office?</td>
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</tr>
<tr>
<td><strong>Credit Default Risk</strong></td>
<td>Creditworthiness Rating Border Line Cases</td>
<td>Failure to meet contractual obligations (Bessis 2002)</td>
<td>System 2 thinking and rational decision-making since the credit default risk mainly involves quantifiable elements.</td>
</tr>
<tr>
<td>What does the mortgage loan process look like for:</td>
<td></td>
<td>Inability to correctly measure creditworthiness (Colquitt 2007)</td>
<td></td>
</tr>
<tr>
<td>- existing customers?</td>
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<tr>
<td>- new applicants?</td>
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<td></td>
</tr>
<tr>
<td>How do you evaluate applicants?</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Which factors do you consider most important?</td>
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<td></td>
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<tr>
<td>What kind of questions do you ask the applicants?</td>
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<tr>
<td>To what degree do you use the mechanical rating?</td>
<td></td>
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<tr>
<td>Do you occasionally disregard the rating? If yes, why?</td>
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<tr>
<td>Which factors determine the decision in border line cases?</td>
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</tr>
<tr>
<td><strong>Operational Risk</strong></td>
<td>Risk of Errors Responsibility Relationship</td>
<td>System failure, human error (Bessis 2002)</td>
<td>System 2 thinking; errors can be detected and prevented Reliance on heuristics and intuition since human error, policy compliance and relationships are uncertainty aspects that can affect judgment</td>
</tr>
<tr>
<td>Does the system commit errors on occasion?</td>
<td></td>
<td>Non-compliance with policies (Greuning &amp; Brajovic Bratanovic 2003)</td>
<td></td>
</tr>
<tr>
<td>Do the private advisors commit errors on occasion?</td>
<td></td>
<td></td>
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<tr>
<td>Does your relationship with the customer affect your decision?</td>
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<tr>
<td>Do you feel responsibility for:</td>
<td></td>
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<tr>
<td>- The Bank?</td>
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<tr>
<td>- The customers?</td>
<td></td>
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<tr>
<td><strong>Exogenous Risk</strong></td>
<td>Future Events External Actors</td>
<td>Events created by the external environment e.g. political and economic climate (Bessis 2002)</td>
<td>System 2 thinking when mitigating risks that are related to current regulations. Reliance on heuristics and intuition since there is no way to quantify future uncertainties</td>
</tr>
<tr>
<td>How do you handle potential future events that might affect the</td>
<td></td>
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<tr>
<td>customer’s repayment capacity?</td>
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<tr>
<td>Which other actors do you consider before making the decision?</td>
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**Table 4 Operationalization of concepts**
4.5 Research Purpose and Limitations

Collecting information through semi-structured interviews is a way to find out how the individuals at the bank work with credit assessments of mortgage loans. This way it was easier to adjust the questions asked since not all employees might be working in the exact same way with the mortgage loan process. After gathering an empirical base from interviews, the results was analyzed in relation to the literature about decision-making and risk. Our hope is to contribute to the understanding of behavioral economics by examining decision-making behavior and risk management in an organizational setting.

One downside to qualitative research is that it often is a subjective view of a topic. The findings risk being a result of what the researchers feel is important (Bryman & Bell 2015). Furthermore, our case study of the private advisors s not generalizable for the whole population of private advisors. The number of informants affects the validity of the empirical data (Yin 2011), and in order to increase the validity of this study, all private advisors at the office in Uppsala were examined. The material collected through the questionnaire might affect the validity, since it was not possible to have a discussion around the answers as it was during the face-to-face interviews. However, as the material rather serves as background information, the validity of the analysis should not be impaired. Since the interviews were conducted in Swedish and translated into English, along with the interview guide in Appendix 1, this might have affected the reliability. However, the reliability of the data gathered from the private advisors is strengthened due to the fact that they had the possibility to add further perspectives to their role as private advisors after the semi-structured interview was done. Also, since the interviews were semi-structured it was possible to adjust the ongoing interview in order to capture the individual perception of the personal advisor.

5 Analysis of Empirical Findings

This section presents information from the interviews with the eight private advisors, along with an analysis of the findings in relation to the previous presented literature on risk and decision-making. The section begins with a presentation of the private advisor’s role in the Bank, followed by sections divided into the risk types credit default risk, operational risk and exogenous risk.
5.1 The Role of the Private Advisor

While asked about their role as private advisor, they all feel that their work environment and tasks have changed compared to when they started working at the Bank. Lisa and Hanna mention that new technological tools have facilitated their work around the loan process and made it more efficient. The other private advisors instead emphasize that these tools have led to an increased complexity in their work environment. David, Robert and Carl experience that new regulations from the FSA have decreased their own scope, and thus made the loan process more complex. Furthermore, they all experience that the amount of mortgage loan applications today has increased significantly compared to when they started at the Bank. As a consequence, their role is less consultative today, which can be connected to Söderberg (2013) and the statement that the relationship between the private advisor and customer is becoming less advisory. Ben for example believes that his work was easier before, as the advisors today have to learn everything at once. Ester states that the tools have changed from manual data gathering towards more of a data process where the tools do the gathering for you. When she started working she had to collect most financial information manually, and the rating was likewise set manually and not by the system. William states that simply because there are more calculations and automated data gathering nowadays, the private advisors do not solely need to rely on the numbers when making a decision. David adds that even though today’s customers can do most of their matters online, this is not the case regarding mortgage loans, as a private advisor has to make an individual, manual decision regarding each loan application.

5.2 Credit Default Risk

Questions regarding creditworthiness, rating and borderline cases belong to credit default risk, since they relate to how the advisors work to minimize the risk of future payment defaults from the borrower’s side.

5.2.1 Creditworthiness

Credit default risks are related to a borrower’s failure to make obligatory payments to the bank (Bessis 2002). Defaults in the form of payment delays can subject a bank to increased credit risks (Brown & Wang 2002), and while asked about topics related to this aspect, the answers varied between the advisors. Lisa expresses that if an applicant has several payment
defaults, she declines the application right away. However, if the applicant has only one payment default, and a valid explanation for it, she might reconsider. She mentions cases where applicants are well-spoken and might give a general good impression, but states the importance to be able to see beyond this and to focus solely on the applicant’s reasoning around his or her economic situation and the upcoming acquisition. An applicant that enters the bank and seems to be in a hurry to get a loan is dealt with caution. Lisa’s thoughts here can be related to source credibility, more specifically Tversky and Kahneman’s (1981) description of the bias the framing effect, due to her ability to see beyond a good impression. Moreover, the congruence heuristic can be observed, and particularly anchoring. Anchoring implies that the opinion one gets from a first impression is hard to adjust (Bazerman & Moore 2009), which can be linked to how Lisa bases her judgment on the first meeting with the applicant. Furthermore, stating that an applicant with several payment defaults will be declined right away shows that Lisa relies on the objective evaluation tools to a great extent and therefore on the available quantifiable risk aspect in this matter, since the payment defaults can be observed with help from the evaluation tools (Andersson 2001).

Ben, William and Carl likewise talk about situations that are dealt with caution; such as if an individual avoids answering certain questions around a payment default, or tries to convince the advisor to approve the application. In those cases they usually reject the application. Source credibility is detectable here, since the three advisors, in line with Hovland and Weiss (1951), consider how believable the applicant appears. Intuition is likewise observed as they seem to be relying on their gut feeling, especially since they are seemingly basing their decisions on past experiences or a specific situation, which is is relatable to intuitive deduction (Dane & Pratt 2007). These situations include unreliable data, in this case the information obtained from the applicant, which is in line with Khatiri’s and Ng’s (2000) statement that intuition is useful in decision-making where the available information is insufficient or unreliable.

Several of the private advisors stated that the applicant’s awareness of his or her economic situation is one of the main decision elements in the mortgage loan process. Both Lisa and Ester emphasize that the customer should be aware of what a mortgage loan and its obligations mean. David and Ben state that it is not rare that the customer is not in line with the obligations of a mortgage loan, which could lead him to decline the application, even if the applicant has a good income and no payment defaults. “If I get the impression that the
customer understands the arrangement of a mortgage loan and the obligations that follow, then I make the conclusion that it is a reasonable customer”, David adds. The reasoning can be linked to source credibility due to the tendency to base judgments on whether the customer seem knowledgeable about loan obligations, aligned with Ohanian’s (1990) statement that the characteristics of the communicator affect the acceptance of the receiver's message.

Moreover, Ben states that he always calls the customer before he looks at the applicant’s background data from UC, in order to decide if the application should be approved. He claims that the conversation itself will provide him with enough information about the applicant in order to make an accurate decision. As he expresses it, “at that stage I already know if the applicant does or does not add up to my standards”. Besides source credibility, the congruence heuristic and anchoring are relatable in Ben’s case, as he uses selective information from the conversation with the customer and neglects the background data from UC. Moreover, it could be a case of overconfidence due to his conviction in his own beliefs, and the confirmation trap (Bazerman & Moore 2009) as he searches for information confirming whether or not the applicant adds up to his standards. Ben’s interpretation of the applicant’s creditworthiness is thus at risk of being biased (Gilovich et al. 2002). Carl uses information from UC as a reference point and combines this with his gut feeling when deciding if an applicant should obtain a loan or not. He further states that it is important that the applicant appears trustworthy, in other words if the source is credible (Hovland & Weiss 1951) and intuition (Dane & Pratt 2007).

Hanna and Robert state that income alone cannot constitute the basis for a decision, since people tend to spend according to their assets, meaning that someone with low income might have better balance than a high-income customer. Their arguments indicate that they are aware of the availability heuristic due to their reasoning that income does not necessarily reflect the individual’s suitable loan amount, even though the presence of that event is more likely brought to one’s mind (Tversky & Kahneman 1973). Hanna and Robert use the cash flow information provided by the account statements in order to determine if the application should be approved or not. They therefore rely on the subjective information from the evaluation tools, namely on the observed quantifiable risk (Andersson 2001). Robert and Carl both state that if the information given by the UC reveals several credits, they presume that this behavior will persist, which would generate a risk for the bank. This reasoning can be related to the congruence heuristic due to the use of selective information when determining
that the applicant is a risk for the bank, and anchoring as they use initial pieces of information as a reference point (Bazerman & Moore 2009), in this case previous credits, for future judgment. Furthermore, the representativeness heuristic can be observed due to their impression that credit inclined individuals in general gives them a negative impression (Nilsson, Juslin & Ohlsson 2008; Bazerman & Moore 2009).

From what the private advisors stated about situations related to creditworthiness, it seems that their risk behaviors in uncertain situations are risk-averse, as they all spoke about specific scenarios where caution is needed. All of them seem to rely on their system 2 thinking due to the brought up situations requiring a more thoughtful way to arrive at a conclusion (Kahneman 2011). They however all showed signs of relying on their intuition and heuristics, hence system 1 thinking as well.

5.2.2 Rating

The mechanical rating system is a tool that Robert dislikes. He claims that it neglects to consider all aspects of the applicant and thereby risks approving loans to the “wrong” customers. Robert is the only private advisor who expressed that he did not use the rating as a guidance tool at all. Robert’s feelings toward the mechanical rating system can be related to the congruence heuristic as he speaks about the days before the rating existed and feels that back then more accurate decisions could be made, and therefore remembers information from the past selectively (Bazerman & Moore 2009). Furthermore, this could be a case of illusory correlations as Robert connects the rating system with a possible approval of a loan application that should not be approved, even though a correlation between the two traits does not necessarily exist (Kahneman et al. 1982). Further, his avoidance of the rating could mean that his evaluation of an applicant becomes more subjective.

Carl is likewise critical to the mechanical rating system, as he is uncertain regarding what factors are included in the rating. He continues by saying that the rating only forms a snapshot of the applicant’s economic condition today, and that one should keep in mind that this situation might change. Consequently, he considers the rating to be more of a suggestion and not a tool that makes the decision for him. The credibility that the customer emits is of main importance for his decision and since he does not rely on the rating, intuition instead plays its part (Khatri & Ng 2000). Source credibility is the main heuristic that can be discernible in
Carl’s evaluation process, since he, besides from the given numerical information, relies to a great extent on the arguments given by the applicant before making the final decision, relating to Hovland and Weiss’s (1951) statements on judgments based on how credible the source is. Just as in Robert’s case this could lead to a more subjective interpretation of an applicant, as he seems to put little faith in the mechanical rating system.

David, Ben, Lisa, Ester and Hanna all state that the rating is used as a guide prior to their decision. Lisa further expresses that once she moves on to the rating process, she has already made the decision to approve the loan application, however, if the rating is completely opposite to the assessment she had in mind, then she reconsiders. Hanna likewise uses the rating system as a tool towards the end of the mortgage loan process, when she needs guidance prior to the actual decision. Hanna states that she instead lets her gut feeling be the decisive factor, hence relying on intuition (Dane & Pratt 2007). In other words, the rating seems to serve as a primary tool for these five advisors’ decision-making.

William relies on the rating to a great extent. As he expresses “if the rating shows a certain number, there is a reason for it”. If an applicant is rated a five, then he declines the application right away. This is in line with the availability heuristic since it allows for him to arrive at the final conclusion quicker and a further assessment of the application is not needed (Tversky & Kahneman 1973). He continues to say that the internal rating system can give customers a worse rating if he or she has inquiries at other banks, which he considers unfair and can for that reason change to a better rating.

Summing up the rating section, Robert and Carl were critical to the accuracy of the rating, whereas the other advisor’s relied on it as a guidance in their decision-making. This could indicate that the other advisors, especially Robert and Carl, relies more on their own subjective assessment of an applicant. William’s extensive reliance on the rating implies that he uses system 1 thinking, since he does not seem to reflect around other factors. The other advisors are leaning more towards a mix of system 1 and system 2 thinking due to a mix of heuristics, intuition and their reflections around factors outside the mechanical rating (Kahneman 2011). Regarding risk attitude, William’s way of changing the rating to a better one can indicate a risk seeking behavior (Tversky & Kahneman 1981), as the individual originally was given an inferior rating and according to the system should have been declined the loan.
5.2.3 Borderline Cases

Concerning borderline cases where there are uncertainties regarding the applicant’s creditworthiness, William relies largely on his gut feeling. He states that the calculation is of importance, however, in cases where he is hesitant if the application should be approved or not, he trusts his instinct. With time he has learnt to figure out which scenarios are realistic to believe, and which are not. He states that if a situation seems to be too good to be true, then it usually is, and that “the combination of being realistic and pessimistic is important in order to make a good decision”. The previous reasoning is relatable to intuitive deduction (Khatri & Ng 2000; Dane & Pratt 2007), as he lets his gut feeling make the final decision for him. Additionally, if he believes that the applicant’s situation is about to improve, for example if the individual is young and has a good education, it can lead to an approval. This scenario means that source credibility plays a part, since the characteristics and trustworthiness of an applicant can be determinant (Hovland & Weiss 1951; Ohanian 1990).

Nevertheless, both William and Robert express that even if you can approve the application, there is nothing forcing you to do so. For that reason they argue that if no valid reasons for approving the customers’ mortgage loan application can be found, then it should probably not be approved. Here, the congruence heuristic can be noticed, as they believe that no application should be approved if one cannot find evidence for why it should, thus relying on selective information to assess the situation (Bazerman & Moore 2009). Ben and Robert also mentioned that they would rather decline an application if they are uncertain about it, thus letting their gut feeling and intuition decide.

Contrarily, Carl’s experience tells him to take a chance on a customer even if the calculation does not add up, as it might be profitable in the long run: “I have met customers who remember me from a long time ago, saying ‘thank you for believing in us when no one else would give us a loan’. They might have been borderline cases back then but now they have good incomes and are desirable customers”. Here Carl’s gut feeling levels in, as well as the congruence heuristic as he seems overconfident that his own intuition is correct. He also uses selective information, as in his previous success of similar cases, when he assesses the situation and thus assumes that his own statements are true since contradicting evidence is absent. Also, hindsight knowledge can be applicable in the sense that he has now gained knowledge of the actual outcome, and seems to relate the positive results of previous cases to
intuitive deduction, and not to other factors that might have weighed in (Bazerman & Moore 2009).

David and Hanna also rely on their gut feeling in borderline cases. Besides that, Hanna can take into account if the applicant has a relative that is an important customer in the Bank, which can be a determinant in borderline cases. The availability heuristic, more specifically illusory correlations, is detectable as Hanna is worried that the important customer might leave the bank if the relative’s application is not approved. Hanna thus perceives a relationship between these two variables, even though there is no certainty that one will affect the other (Bazerman & Moore 2009).

David states the ability to see a potential long-term relationship with the customer as a determinant when deciding on border line cases. Sustainability with his customer is of main importance for David. He likewise relies on his gut feeling in uncertain cases, and if he feels that the positive impression outweighs the negative impression, he approves the application. Intuition and the congruence heuristic are observable here due to the reliance on gut feeling and the use of selective information in order to determine if a long-term collaboration with the applicant is possible (Khatri & Ng 2000; Bazerman & Moore 2009).

David, William and Ester further expresses that co-borrowers is a good way to mitigate the risk for both the Bank and for the customer. This way one individual is not solely responsible for the loan if something unexpected were to happen that affects the individual’s economic situation. Lisa on the other hand expresses that an upcoming inheritance can act risk mitigating. These scenarios can be related to the congruence heuristic, as they search for information proving that the individual is reasonable through adding a co-borrower to mitigate the risks, and source credibility since it is hard to know exactly when, and if, the inheritance will come, thus the applicant’s persuasive ability plays a part.

Determining borderline cases seems to involve gut feeling to a great extent, the use of system 1 thinking, and also the more slow system 2 thinking due to their reflection around various aspects of the applicant (Kahneman 2011). Carl gave the impression of a risk-seeking behavior as he rather took a chance on a customer (Tversky and Kahneman 1981), whereas the other advisors appeared to be more risk-averse and cautious in borderline cases, aligned with Kahneman and Lovallo (1993).
What can be concluded from the findings related to credit default risk is that the Bank’s mechanical evaluation system is used to different degrees by the advisors. Depending on the applicant, the use of heuristics and intuition is used to various degrees. Carl seemed to be the most risk-seeking in the above mentioned situations and the other advisor’s gave a risk-averse impression. A mix of system 1 and system 2 thinking was evident, as the advisors reasoned around various aspects in most situations, besides from William and his reliance on the rating to a great extent.

5.3 Operational Risk

Risk of errors, responsibility and relationship with the customer are themes that belong to this risk type as they concern how the advisors deal with the risk of system failure and human error. Their personal sense of responsibility and relationship with customers reflect how well they comply with the Bank’s policies of lending out responsibly and to creditworthy applicants only.

5.3.1 Risk of Errors

While the calculations and ratings are based on objective information about the applicants, such as income, payment delinquencies and other financial history, there seems to be awareness among the advisors that there are imperfections in the system that calculates and rates the applicants’ creditworthiness. Everyone except Robert and Ben responded that they suspect that errors in the system occur occasionally, but that there is no way to know for sure since the error could go unnoticed for a long time, or not be discovered at all. For example, a customer’s payment default might occur years after the decision, and be caused by external factors that cannot be traced back to the calculation or rating made at the time. Hanna claims that the system frequently defaults, for example by not including credits that are connected to certain credit cards in the rating, or by not updating financial information about customers often enough, all of which can easily lead to wrongful approvals. To avoid this Hanna says it is important to look for clues outside the system. They all emphasize the importance of manually checking that the application form has been filled in correctly and that the income corresponds to the report from UC. The implication that they have to perform manual work that the system is designed to do suggests inefficiency in the process. It also reduces the objective nature of the system and increases the risk of personal judgment biasing the
decision. Lacking the adequate tools for decision-making is an aspect of operational risk (Bessis 2002) which the Bank seems to be facing, but there is no clear procedure on how to deal with the system’s shortcomings.

Besides potential system breakdowns, there is always the risk of human error (Bessis 2002), especially since individuals, and not machines handle the majority of the process. However, everyone except Ben and David ascribe human errors almost exclusively to the applicants. For example Lisa, Carl, Hanna and Robert say that the applicants sometimes lie, exclude information or adjust figures in the application form and that one can never trust the applicants completely. They all say that talking to the applicant is the key to correcting any potential errors. The fact that neither of them reflected on their own propensity to make mistakes can insinuate reliance on the congruence heuristic which can lead to either overconfidence in their own accuracy or the confirmation trap, since the lack of disconfirming evidence might lead them to assume that they never commit any errors (Gilovich et al. 2002; Bazerman & Moore 2009). One reason that this bias might occur is because the advisors cannot, in an effortless way, examine if the applicants that they have rejected turned out to be creditworthy customers in another bank. Likewise, they cannot know for certain that defaults are a result of their misjudgement or caused by external, unforeseeable events.

It can be problematic if the human error aspect is overlooked and not properly dealt with. As many of them stated earlier, the stress level and amount of loan applications have increased since they started working, giving less time for each application to be thoroughly processed and less room for mistakes. In situations where lack of resources and time impede a carefully executed investigation, reliance on heuristics becomes prevalent (Tversky & Kahneman 1973), which in turn increases the risk of biased decisions. Only David mentioned that he believes that the advisors commit errors occasionally by for example typing in the wrong information or neglect to include important aspects in the evaluation. He assumes this to be related to stress and the increased workload.

In general, the advisors seem to be more critical towards the system than to their own tendency to make mistakes. William, Carl and Ben all say that they have never made any severe mistakes that have led to credit losses. This reasoning is reminiscent of the congruence heuristics, and particularly overconfidence in their own accuracy. Moreover, the absence of failure, or credit loss, might easily lead them to believe that their way of evaluating is directly
correlated to the outcome, also known as the confirmation trap. It could also be a case of hindsight knowledge, i.e., a bias deriving from the congruence heuristic that entails overestimating their ability to predict the outcome of their decisions and disregard the possibility that the outcome could have been different (Bazerman & Moore 2009). The fact that they have never experienced a credit loss might affect their perception of the evaluation process, thinking it is more equitable than it actually is. The hindsight bias can lead people to judge their decisions based on results, and not on the process and logic behind their reasoning (Bazerman & Moore 2009). While this deterministic reasoning might not be problematic at the moment (as several of them pointed out that the Bank has a long history of low credit losses), it can damage the quality of the evaluation since the results can be affected by factors that lie outside of the advisors’ direct control. Since the banking sector is a rather unstable environment due to regulations and technological changes (Khatri & Ng 2000), and all advisors have experienced an increase in workload and stress, there might eventually be a need to revise the decision-making processes rather than relying on past success, especially since time constraints will effectively lead to higher reliance on heuristics and intuition (Tversky & Kahneman 1973).

5.3.2 Responsibility

Due to the decentralized organizational structure in the Bank, the advisors are given a high degree of operational freedom which is intended to increase the advisors’ interest in the outcome of their decisions. However, the high level of responsibility and trust also constitutes a risk for the Bank, since there are no explicit rules for the decision-making procedure. All the advisors responded that they feel responsible towards both the bank and the customers, but to different degrees. William, Ester, David and Hanna feel equally responsible towards the bank and the customers. Ester mentions that loyalty towards her employer, team spirit and not wanting to get a demerit are factors that reinforce her sense of responsibility, while William and David referenced their own accountability and reputation, and not wanting to make mistakes as grounds for their sense of duty. Robert emphasizes his responsibility for the bank over the customers, since it is the bank’s money that is being lent out. Carl, Ben and Lisa say that they primarily feel responsible for the customers, mainly because it is easier and more fun to work with satisfied people. Their own sense of accountability and the strong disinclination to make decisions that might lead to credit losses or demerits signal a risk-averse attitude among William, Ester, David and Hanna (Kahneman & Lovallo 1993), which is in line with the Bank’s cautious risk policies but could be caused by personal risk references. It could also
be an effect of the status quo bias, which commonly occurs when decision-makers are held personally responsible for the outcome of their decisions (Kahneman & Lovallo 1993).

5.3.3 Relationship

All the advisors responded that having a relationship with the customer speeds up and facilitates the decision-making process, partly due to accessibility of their financial history but also because they know that the customer is trustworthy. The calculation may have less importance when it comes to making a decision for an existing customer that the advisor has a relationship with. Knowing the customer does not necessarily result in an approval, however. For example, Lisa, Ester and William mention that even though the calculation adds up, the awareness that the customer does not have a balanced cash flow can affect the decision negatively. Conversely, an inadequate calculation can be overlooked if the customer, to their knowledge, is trustworthy and considered capable of handling a mortgage loan. Robert admits that he might be more lenient towards existing customers regarding payment defaults than he would be to a new applicant, adding that “we want to keep our old customers happy primarily, they are the ones we make the most money off”. Ben says that with an existing customer that he knows well, there is hardly any need to think about it; a quick phone call is usually enough for an approval.

Interestingly enough, in some cases where the information is readily retrievable, as with existing customers, there seems to be more reliance on heuristics, particularly the availability and congruence heuristics. This might be because, as Robert insinuated, a willingness to help out existing customers first which in turn could be related to the Bank’s policy of profitability over volume. It is furthermore an indication of risk-averse behavior since the advisors are more prone to avoiding uncertainty and possible losses that the new applicants generate (Kahneman & Tversky 1979; Dillenberger & Rozen 2015).

It is clear that existing customers and new applicants have very different starting points in the decision-making process. The quantifiable risk aspect concerning repayment capacity is less prominent for existing customers than new customers, since the advisors have easy access to financial data. With new applicants come uncertainties, since there is less historical information about them and less knowledge about their trustworthiness. The selective use of information implies that the advisors rely on the congruence heuristic, and the conclusion that
they know whether an existing customer is trustworthy or not relies to a great extent on the availability heuristic. While the whole decision-making process for existing customers can be done over the phone, new applicants are almost always booked in for a personal meeting. The new applicants only get one chance at making a first impression on the advisor before the decision is made, and because anchoring is a common bias in situations where information and time are scarce (Bazerman & Moore 2009), they risk making an adverse impression that will affect their evaluation negatively. As stated earlier, source credibility and representativeness are heuristics relied on by several of the advisors, and can have adverse effects for the applicants if they fall victim to biases related to these heuristics.

Altogether, the findings imply that the Bank, or at least the examined office, has no operational risk management strategy. The ad hoc solutions to potential human and system errors reflect the individuality in the advisors’ decision-making process. Nevertheless, the advisors are in most cases risk-averse and cautious, hence complying with the policies of responsible lending. The difference in how new applicants and existing customers are evaluated by all the advisors, however, suggests that the policy of basing decision on creditworthiness is interpreted differently, since their perception of what constitutes a creditworthy customer varies. This further prevents the Bank from giving the applicants a unanimous explanation of the factors that underlie the evaluation and rate setting. Dima and Orzea (2009) write that it is important to ensure that internal processes work flawlessly in order to deliver high standard services and products. This might be especially crucial for the Bank to acknowledge, considering the increased decentralization and responsibility given to the branch operations and the advisors. While operational risks do not directly lead to credit losses, they can impair the quality of the decisions.

5.4 Exogenous Risk

Questions about exogenous risk included how the advisors deal with future events that might affect the applicants’ creditworthiness and which external actors that they take into consideration during the evaluation process.

5.4.1 Future Events

Exogenous risks arise in relation to events that cannot be controlled by the bank or its staff (Bessis 2002) and are almost exclusively immeasurable and unforeseeable (Knight 1921). The
advisors emphasized different kinds of future events that can affect an applicant’s credit evaluation, and how they deal with them. Accidents and diseases are external factors that the advisors are all aware of can affect the repayment capacity, but that they cannot fully mitigate. Lisa, Ester and Hanna all claim that it is their job to educate and inform the customers about how to protect themselves if something were to happen. This is done by having a dialogue about health, life and unemployment insurances and by asking about family plans and savings. This implies that they use system 2 thinking primarily, as they use logical reasoning and do not rely on personal judgment or heuristics (Kahneman 2011). David’s stance against these unforeseeable events is partly to inform about insurances but also to deal with them when they actually happen.

An uncertainty aspect that William, David, Carl and Robert brought up was profession and their prospective labor market. They saw professions like medical doctors and nurses as having a stable labor market and therefore constitute low risk. Examples of risky professions included pilots, freelancing photographers, musicians and postgraduates. The consequence for applicants who have an education or work within a high risk industry is not automatically a rejection since the evaluation is based on repayment capacity today, but they will in most cases receive stricter demands or a lower borrowing sum. Attributing certain professions with characteristics that are correlated to risk implies that the aforementioned advisors rely on the representativeness heuristic when assessing the probability of credit default (Bazerman & Moore 2009). The representative information that they ascribe each labor market is based on stereotypical views, and might not be factual. Making these claims without thoroughly investigating the veracity of the actual probability of credit default for different professions could lead to illusory correlation and seeing relationships or patterns between variables that might not exist (Kahneman et al. 1982). However, Carl says that it is important not to look at the applicant’s profitability today only, but to rely on one’s gut feeling and trust that even though the calculation does not add up it might improve in the future. Ben only reflects upon potential future events to a small degree but says that the applicants bring it up frequently, trying to assure him that their income will increase over the upcoming years. But, as he and several of them pointed out, the actual decision is based on current information about the applicant. The aforementioned advisors are all handling uncertainties by using system 1 thinking, as they mainly rely on heuristics (Kahneman 2011).

5.4.2 External Actors
When reflecting on which external actors that affect the decision-making process, varying associations were made. Ester, Carl and Robert mention real estate agents as being influential, since they can refer their customers to the Bank in a collaboration of sorts. The risk of the real estate agents ceasing to send their customers their way if the advisors reject them a loan can lead them to approve applications or to make decisions faster to maintain a good relationship. As with borderline cases, Hanna and Ben both bring up relatives as external actors that can affect their decision in a positive way. For example, applicants who have parents with good ratings might be given better terms or a more lenient evaluation. Ben also takes into account if the applicant is a colleague of an existing high-income customer, since they most likely have similar salaries, and might for that reason give those individuals more favorable terms than if they had no connection to the Bank. Both Hanna and Ben rely on the congruence heuristic by using selective information and by anchoring relatives’ performance to the evaluation of new applicants (Gilovich et al. 2002; Bazerman & Moore 2009), and largely use system 1 thinking (Kahneman 2011).

Competition by other banks and lending institutions was mentioned by William, Ester, David and Lisa. They sometimes compete with other banks regarding interest rates, but not to the extent that it compromises the Bank’s profitability policies. Ester says that customers nowadays are very well informed about differences between banks, making it a necessity to keep a competitive edge. Only Lisa and David mentioned the FSA and regulations as external actors that they take into consideration in the decision-making process, in the way that they need to comply with the existing rules and stay informed about potential changes. An interesting observation is that none of them mentioned the general economic condition or the possibility of a recession as potential uncertainty factors. This could be related to the risk department’s statement that the market in which they operate is relatively free from political risk, and that credit assessment instructions remain the same despite the economic climate. The future events that they consider most probable are directly related to the customer, such as their profession or the risk of them getting into an accident or incur a disease. They seem to be relying on availability heuristics when assessing future events, and taking into account events that are easily brought to mind and excluding abstract and complex events, such as changes in the general economic condition (Bazerman & Moore 2009).

The uncertainty aspect that future events and external actors comprise is viewed and handled differently by the advisors. Since exogenous risks are uncertain events with unknown
outcome and distribution (Knight 1921), there are no tools to correctly quantify these possible occurrences, which entails that the assessment is made individually and ad hoc. As Aven and Renn (2009) point out, assessments of uncertainties are subjective and coloured by personal judgment, and thus exposed to biases. Carl is the only advisor who mentioned using intuition, but it is evident that all of them are relying on intuitive deduction since there are no rational ways of quantifying these events. Not surprisingly, most of the advisors tend to use heuristics when assessing future uncertainties, in particular the representativeness and availability heuristics. This might lead to defective decisions that cannot be justified in retrospect.

5.5 Summary of Results

<table>
<thead>
<tr>
<th>Actual Risk and Uncertainty factors</th>
<th>Actual Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credit Default Risk</strong></td>
<td></td>
</tr>
<tr>
<td>Rating primarily used as guidance, not as determinant factor.</td>
<td>System 1 thinking primarily</td>
</tr>
<tr>
<td>The financial information is partially relied on.</td>
<td>System 2 thinking occasionally</td>
</tr>
<tr>
<td>Payment defaults are dealt with caution</td>
<td>Heuristics: primarily the congruence heuristic</td>
</tr>
<tr>
<td>Important that individual is in line with the loan obligations</td>
<td>Intuition</td>
</tr>
<tr>
<td>Cash-flow balance</td>
<td>Risk aversion primarily</td>
</tr>
<tr>
<td>Determine the credibility of the applicant</td>
<td>Partly objective and partly subjective</td>
</tr>
<tr>
<td>Long-term relationship</td>
<td></td>
</tr>
<tr>
<td><strong>Operational Risk</strong></td>
<td>Heuristics: primarily the congruence heuristic</td>
</tr>
<tr>
<td>System omitting information</td>
<td>Risk aversion primarily</td>
</tr>
<tr>
<td>Applicants and advisors making mistakes</td>
<td>Partly objective and partly subjective</td>
</tr>
<tr>
<td>Relationship affecting evaluation</td>
<td></td>
</tr>
<tr>
<td><strong>Exogenous Risk</strong></td>
<td>System 1 thinking by a majority</td>
</tr>
<tr>
<td>Accidents, disease, unemployment</td>
<td>System 2 thinking</td>
</tr>
<tr>
<td>Labor market</td>
<td>Intuition</td>
</tr>
<tr>
<td>External actors</td>
<td>Heuristics: primarily the availability heuristics</td>
</tr>
<tr>
<td></td>
<td>Mainly subjective</td>
</tr>
</tbody>
</table>

Table 5 Risk and uncertainty factors and behavior

The aggregated use of heuristics that we could detect among all advisors implies that the whole mortgage loan process is predominantly subjective. Due to time constraints as a result of an increased amount of mortgage loans, it seems that system 1 thinking is a dominant mode
of thought for the private advisors, although there were signs of possible use of system 2 thinking in some situations. The congruence heuristic is the overall most commonly used heuristic, followed by the availability heuristic and intuition. When looking individually, William, Lisa, Carl, Ben and Robert rely on heuristics more frequently than Ester, David and Hanna. There is no apparent correlation between the overall use of heuristics and the amount of years they have worked as private advisors. Despite the theory stating that intuitive deduction increases with experience, and novices tend to rely more on rules and instructions (Khatri & Ng 2000), in this case the use of intuition does not seem to be related to experience but rather to the advisors’ personal risk preference. This is most likely a result of the decentralized responsibility and lack of detailed instructions. A more detailed presentation of the results can be found in appendix 4.

6 Concluding Remarks

This chapter outlines the main conclusions of the thesis derived from the empirical findings and the analysis. This is followed by a paragraph concerning managerial implications and contributions. Lastly, the limitations and suggestions for future research are presented.

From our findings there are several conclusions that can be drawn about the decision-making process and risk management of mortgage loans. Firstly, the process has changed significantly the last decade due to new technology that can accumulate and calculate financial information faster, enabling increased productivity and efficiency. However, the increase in applications has decimated the time spent on each individual. For the advisors, this has resulted in increased reliance on heuristics when evaluating the applicants, since there is no way to thoroughly measure all risk aspects involved. Regarding modes of thought, both system 1 and system 2 was demonstrated. System 1 in terms of intuition and heuristics was present in the majority of the situations, whereas system 2 thinking was dominant in only few cases.

For the credit default risk assessment, the advisors technically have the same starting point with the system’s calculation and rating, which is supposed to provide them with an objective evaluation of the applicants’ creditworthiness. Nevertheless, the rating is used to different degrees and during various stages of the process among the advisors. The use of heuristics as either a supplement or substitution to the rating signifies that the process to a great extent is
based on subjective assessments that vary between the advisors. The advisors are free to use the rating as they see befitting, and the use of intuition and heuristics might be appropriate in many situations since the system cannot assess future events and personal characteristics. The issue is that the process lacks uniformity and modularity, and consequently cannot be recounted in a comprehensible way. With the upcoming Mortgage Credit Directive, the Bank will be obliged to answer for their decisions by informing the customers about what factors that underlie the evaluation process, hence the need for the advisors to have common evaluation principles and techniques. Regarding the risk attitudes of the advisors’, these were dominantly risk-averse with exception for two scenarios regarding the rating and borderline cases, where indications of a risk seeking behavior was apparent.

The operational risks, including human and system malfunctions and non-compliance with policies, are ineffectively dealt with at the examined office. Bessis (2002) proposes that classifying and measuring frequencies and costs of events that constitute risk is one way to manage and mitigate them. The main operational risks that we could observe were occasional errors made by the systems, the advisors and the applicants, largely consisting of miscalculation due to omission of information. These errors can lead to inaccurate decisions, which is why they need to be carefully monitored and corrected. The advisors’ relationship with the applicant also constitutes a risk, since it at times leads them to deviate from the Bank’s policy of only lending to creditworthy customers. The advisors’ personal sense of responsibility is likewise an operational risk, since it affects their perception of who bears the most risk. Moreover, there is no standardized procedure regarding exogenous risks either. Some of them work proactively by informing about insurances, and thereby mitigating some external risks factors. In other cases, the advisors’ personal perception of risks related to external events affect the evaluation, occasionally leading to biased decisions.

From these conclusions, the questions of how private advisors in one of the largest Swedish banks work with risk management of mortgage loans and how the assessment process work regarding the subjectivity of the private advisor’s behavioral factors versus the objectivity of the mechanical evaluation systems can be tentatively answered. To summarize, the private advisors at the examined bank manage risks in compliance with the Bank’s policies, but the interpretation and measurement of credit default, operational and exogenous risks differ between the advisors to a great extent, depending on the situation and the applicant. They all use the calculation that the system provides as a basis for their decision, but frequently
disregard suggested rating. Instead they tend to rely on heuristics and intuition, both consciously and unconsciously. Hence, the decision-making process is largely subjective, since the objective information is used to the advisors’ preference.

6.1 Managerial Implications and Academic Contribution

From a managerial point of view, our study has contributed by mapping out the mechanisms that drive decision-making under risk and uncertainty. By doing this, we could detect risk factors affecting the decision-making process for which the advisors have no common risk management strategy. Moreover, the similarities and differences between the advisors showed that there are risk events that were dealt with inefficiently. There is no unified depiction of the private advisor’s decision-making process around the mortgage loan, as it depends on the individual advisor’s use of judgment and the bank’s decision tools. As technology is changing so do banks’ decision-making tools, which needs to be considered when developing risk management strategies.

In an academic context, this study has provided with unique insights into actual decision-making under risk and uncertainty in relation to risk attitude and personal judgment. By combining literature on risk with theories about decision-making, and empirically investigating the two areas in an organizational setting we have contributed to the field of behavioral economics. For example, the theory about bounded rationality assumes that lack of time and resources leads to the use of heuristics (Simon 1957), but we could find that reliance on heuristics was prevalent even in situations where data was readily available, which might be due to skepticism toward new technology.

6.2 Limitations and Suggestions for Further Research

The three risk types credit default risk, operational risk and exogenous risk were not always easy to differentiate between, especially when it came to the analysis of our result in terms of what belongs to which category of risk. Regarding risk attitudes, it was likewise hard to determine if the advisors were risk seeking, risk neutral or risk-averse occasionally. However, we made an overall judgment based on the gathered empirical material and based our conclusions on that.
Due to the existence of several biases we had to make a choice and select those we deemed were most in line with the selected heuristics and ultimately our findings. We chose to exclude motivation theories from our study since we did not want that direction in our thesis, but we are aware of the biases that can emanate from motivational reasoning. As we did not get the impression from the interviews that they granted loans due to motivational factors, this was further a factor leading to its exclusion. A suggestion for future research could be to investigate motivation-biases at a thorough level, especially in relation to customers’ positive attitude towards advisors who have granted their loans. One other interesting aspect could be to perform a longitudinal study, where the private advisors’ attitudes and behaviors are studied over a longer period of time.

Lastly, we are aware that the geographical location and the delimitation to one office and one bank only affect the results in various ways. The decision-making process is likely to be influenced by the surroundings, in terms of labor and housing markets, as well as the risk culture and policies at the specific bank. Nevertheless, an investigation of several banks’ mortgage loan processes would have entailed a comparative study, which was not the purpose of this paper.
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Appendix 1 Interview Guide, Private Advisors

1. Hur länge har du jobbat på banken?
2. Hur länge har du jobbat som personlig rådgivare?
3. Har din roll som personlig rådgivare förändrats sedan du började?
4. Arbetar du på samma sätt och med samma verktyg som när du började?
5. Hur ser bolåneprocessen ut för:
   - existerande kunder?
   - nya kunder?
6. Hur räknar banken ut kundens kreditvärdighet?
7. Vad har ditt kontor för policies angående kreditgivning?
8. Hur bedömer du själv kundens kreditvärdighet?
9. Vilka faktorer bedömer du som viktigast?
10. Vad ställer du för slags frågor till kunden?
11. Till vilken grad använder du bankens internrating när du bedömer kundens kreditvärdighet?
12. Händer det att du bortser från ratingen? Om ja, av vilka skäl?
13. Påverkar din relation med kunden hur kreditbedömningen eller beslutsfattningen görs?
14. Hur hanterar du potentiella framtida händelser som kan påverka kundens återbetalningsförmåga?
15. Vad är det som slutligen avgör i de fall där kunden ligger på gränsen?
16. Händer det att fel görs i bedömningsprocessen, t.ex. att fel uppgifter skrivs in och bidrar till en felaktig bedömning?
17. Händer det att systemen gör fel uträkningar?
18. Känner du ett eget ansvar för banken?
19. Känner du ett eget ansvar för kunden?
20. Vilka andra intressenter tar du hänsyn till när du ska ta ett beslut om bostadslån till en kund?
1. How long have you worked at the Bank?
2. How long have you worked as private advisor?
3. Has the role changed since you started?
4. Do you work in the same way and use the same tools since you started?
5. What does the mortgage loan process look like for:
   - existing customers?
   - new applicants?
6. How does the Bank calculate the applicant’s creditworthiness?
7. What are the policies regarding lending at this office?
8. How do you evaluate applicants?
9. Which factors do you consider most important?
10. What kind of questions do you ask the applicants?
11. To what degree do you use the mechanical rating?
12. Do you occasionally disregard the rating? If yes, why?
13. Which factors determine the decision in border line cases?
14. Does the system commit errors on occasion?
15. Do the private advisors commit errors on occasion?
16. Does your relationship with the customer affect your decision?
17. Do you feel responsible for the Bank?
18. Do you feel responsible for the customers?
19. How do you handle potential future events that might affect the customer’s repayment capacity?
20. Which other actors do you consider before making the decision?
Appendix 2 Interview Guide, Branch Manager

1. Hur länge har du arbetat i banken?
2. Hur ser den personliga rådgivarens roll ut?
3. Är den personliga rådgivaren en säljare eller rådgivare främst?
4. Hur har den personliga rådgivarens roll förändrats över tid? hur har det påverkat kreditgivningen, tar man hänsyn till andra faktorer nu?
5. När införde ni personliga rådgivare för bolåneprocessen? vad var skälen bakom det?
6. Vad går de anställda igenom för process för att bli personliga rådgivare?
7. Hur ser processen ut från ansökan om bolån till beslut?
8. Vilka faktorer räknas in i beslutsprocessen för bolån?
9. Väger några faktorer tyngre än andra när man tar beslutet?
10. Vad är din roll i beslutsprocessen för bolån?
11. Har personliga rådgivarna olika sätt att bedöma eller har ni tydliga riktlinjer som de följer? Kan deras egen erfarenhet påverka?
12. Hur arbetar ni på kontoret med riskhantering och hur förmedlas det till de anställda?
13. Vilka faktorer vägs in i maskinella ratingen?
14. Hur riskkompenserar ni om en bolånekund medför högre risk?
15. Vad använder ni för beslutsstödssystem? hur ofta förändras detta (IT systemen)? Hur förändras det?
16. Är den personliga rådgivarens egna bedömning det som avgör om kunden får ett bolån, eller bedömer “datorn” det?
17. Hur fungerar skuldkvoten?
18. Har IT stor påverkan i beslutsprocessen?
19. Ratingen, sätts den i kreditprocessen?
20. Är det främst UC som hjälper till med att verifiera uppgifterna om kunden?
21. Hur förändrades kreditgivningsprocessen efter senaste finanskrisen, blev det strikare?
(Translated)

1. How long have you worked at the bank?
2. What does the private advisor’s role look like?
3. Are they sellers or advisors primarily?
4. How has the private advisor’s role changed over time? How has that affected the credit lending? Do they consider other factors now?
5. When were the private advisors given responsibility for the mortgage loans? What were the reasons for that?
6. Please describe the process for becoming a private advisor.
7. What does the process look like, from the application of a mortgage loan to the final decision?
8. Which factors are included in the decision-making process for mortgage loans?
9. Are some factors more important than others?
10. What is your role in the decision-making process?
11. Do the private advisors evaluate differently or do they follow distinct guidelines? Can their own experience weigh in?
12. How does this office work with risk management and how is that communicated to the employees?
13. Which factors are included in the mechanical evaluation?
14. How do you manage high risk customers?
15. What kind of decision-support systems do you use? How often do they change?
16. Is it the private advisor’s own evaluation or the system’s evaluation that determines the decision?
17. How does the debt ratio work?
18. Does IT have a large influence on the decision-making process?
19. Is the rating set during the credit evaluation?
20. Is it mainly UC that is used to verify the applicant’s information?
21. How did the credit lending change after the most recent financial crisis? Did it become more strict?
Appendix 3 Questionnaire, Head of Risk Department

1. How do you work with financial risks? How do you work with interest rate risk and credit risk? do you have a risk model?
2. Tell us about how you work with borrowing money "on the market", which then is lent to the customer, and the risks around it.
3. What are your thoughts on lending of long-term bonded loans vs. to have enough funds available in the bank?
4. Which external risks you take into account? (Politics, market, economic conditions, etc.)
5. How do you work with operational risks (eg the policies followed at the branches, do you use tools to in order to reduce margins of error due to human factors?)
6. Credit derivatives - do you work with those?
7. What are your thoughts regarding the debt ratio and the a customer’s debt ratio?
8. Where do you obtain your figures for benchmarks (eg cost estimate regarding the customer when there should be a certain amount left every month for a person to spend, etc.).
<table>
<thead>
<tr>
<th>Private Advisor (PA)</th>
<th>David</th>
<th>Lisa</th>
<th>Hanna</th>
<th>William</th>
<th>Ben</th>
<th>Carl</th>
<th>Ester</th>
<th>Robert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years as PA</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>6</td>
<td>9</td>
<td>14</td>
<td>19</td>
<td>30</td>
</tr>
</tbody>
</table>

**PA – then and now**

- Smaller scope for PA due to FSA, customers manage most transactions on their own.
- New systems have facilitated her work, more efficient.
- More administration than advisory. More stressful.
- Higher demands on knowledge.
- Now, easier to trust your gut feeling. More loans, harder to know customer.
- More formalized and regulated now, freer assessment criteria before. More like a ‘factory’ now.
- More complex now, more rules and regulations. Larger volume of applications, faster decisions.

**Key Mindset in Credit Evaluation**

- Long-term relationship, profitability, repayment ability, only lend money to reasonable customers.
- Good income, good UC report, trust gut feeling.
- Cash flow balance, UC, assets, maintenance, trust gut feeling.
- Good calculus, trust gut feeling, cash flow balance.
- High income.
- Trust, good personal knowledge, income, believe in customer.
- Repayment capacity, trust gut feeling, cash flow balance.
- Gut feeling, cash flow balance, repayment capacity, surplus.

**Reason for changing the internal rating**

- No income showing on UC due to studies.
- No income showing on UC due to studies.
- If there are assets that are not included in the calculation.
- Many inquiries at other banks that leads to a 4→3.
- New customers that are automatically rated 3 if they have good income. Would not change a 4 or 5.
- Trust that the customers situation will change for the better.
- Own business, property’s market value.
- If customer can explain payment default. Lower cost of capital.

**Meets new customers face-to-face**

- Always before approving application.
- Always before approving application.
- Before approving application if there is time.
- Always before payout, never always before approval.
- Always before approving application, but can give rejection without meeting.
- Always before approving application.
- Always before approving application.
- Always before approving application.

**Borderline Cases: determination factors**

- Gut feeling.
- Most customer – reasoning before charisma.
- Total impression, gut feeling, relatives in the bank.
- Get feeling, customer knowledge.
- Parents are customers in the bank.
- Get feeling, trust, recovery aspect.
- Gut feeling.
- Assets.

**System Errors**

- Stress can lead PA to neglect information.
- Calculation incorrect due to errors in application.
- System frequently neglects to include essential information, unreliable.
- Systems not showing all information/credits.
- Calculation incorrect due to errors in application, Rating often too good.
- Calculation incorrect due to errors in application.
- System showing old information.
- Ratings often too lenient. Errors if customer state incorrect figures in application form.

**Human Errors**

- Withholding info, forgetting to mention info, inserting wrong numbers in application.
- Verify everything, not only trust the customer.
- Wrong information in application form.
- Lack of knowledge.
- Wrong information in application form.
- Misinterpretation of question in application form.
- Inserting wrong numbers.
- Forgets or consciously neglects to include other credits in application form.

**Future Risk Events**

- Employment status, education, high income, co-borrowers.
- UNB (unemployment insurance), calculates everything manually, informs about insurances, education, mortgage rates.
- Inform and educate customer about potential risks, talk about insurances.
- UNB, co-borrowers, retirement plan.
- High margins, stricter requirements for customers with unstable employment or professions.
- Type of profession, repayment capacity, income.
- Spair assets, make sure applicant thinks about potential future events.
- Labor market, age

**Overall Risk Attitude**

- Risk-averse.
- Risk-averse.
- Risk-averse.
- Risk-averse.
- Risk-averse.
- Risk-seeking.
- Risk-averse.
- Risk-averse.

**Other**

- Regarding approval or not - what is best for the bank generally what is best for the customer.
- “What is the maximum amount I can borrow” – customer. “What are you willing to pay for your living?” - Lisa.
- “It is my responsibility to educate the customers about what a mortgage loan entails.”
- “If you have doubts – decline application.”
- “If a situation seems to be too good to be true, then it probably is.”
- “If you have to ask yourself if the customer understands its obligations.”
- “Think worst case scenario.”

**Decline ratio**

- 30%.
- 10%.
- 30%.
- 20%.
- 10%.
- 2%.
- 10%.

**Risk management motto**

- “Quality before quantity”
- “See beyond a charismatic approach and focus on the customer’s reasoning”
- “It is my responsibility to educate the customers about what a mortgage loan entails.”
- “If you have doubts – decline application.”
- “If a situation seems to be too good to be true, then it probably is.”
- “Don’t base your judgment solely on the customer’s profitability today, think ahead.”
- “Make sure that the customer understands its obligations.”
- “…Think worst case scenario.”