Risk management of green corporate loans

A study of banks' operational risk management relative to ESG rating and sustainability reporting as assessment tools

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Abstract

In the banking sector, there is an ongoing development in green financing with the emergence of green corporate loans. However, there are variations in banks risk' management and the level of acceptance for issuing green loans. Similarly, there are disparities in the role of different sources of information to assess organisational risks, as per ESG ratings and sustainability reporting. As for now, there is a limited level of research of the operational work in this area as risks and risk management are dynamic and changes with the development of society. Thus, this study explores the operational risk management of green corporate loans and perceives the role of organisations' ESG rating and sustainability reporting in the same context when assessing risks.

The study applies a qualitative method with triangulation, as it combines empirical material from five semi-structured interviews and five sustainability reports from the respective bank to get nuances of the research area. The results show that risk management is partially based on bankers' own perceptions of companies and their relationships with their clients. The level of acceptance of risks is spread which delimits standardisations in processes of assessment. Individual frameworks are used by banks to manage green corporate loans, but these require continuous development and some environmental knowledge. Additional sources of information in assessments therefore play a big role and can be seen as the main source to understand organisations and their related risks. However, organisations' ESG ratings and sustainability reporting are still perceived with a lack of credibility and should be used with precaution in the assessment. Thus, this study contributes to an extension of the empirical material as it demonstrates implications with variations in risk management and provides indications of the role of additional information sources when assessing risks.

Keywords

Green finance; Green corporate loans; Risk management; ESG rating; Sustainability reporting

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1. Introduction

The following chapter provides an overview of the chosen subject and problematises previous research. This concretizes the purpose of the study.

1.1. Background

The concept of green financing has during the last years gained global attention as a result of the increasing environmental problems, caused by economic activities (Li et al. 2018). Thus, the investments made today will indirectly affect the emissions emitted tomorrow (Fair finance guide n.d.). The positive correlation between environmental- and economic performance has, however, initiated actors and financial institutes to transform and find alternative ways to operate within the frames of the planet (Weber, Fenchel & Scholz 2008; Jeucken & Bouma 1999). It has increased engagement in sustainable investing, which can be defined as investments that contribute to sustainability by acting as a link between the financial sector and sustainable development (Regulation 2019/2088/EU). In the banking sector, the increased engagement has further culminated into green financing and thereby the possibility of green corporate loans (Gilchrist, Yu & Zhong 2021).

Green corporate loans lack a common definition but have been expressed as a special financing mode that supports, for example, a greener production (Li et al. 2018). This implies that banks can make additional investments in environmentally friendly projects and other sustainability-related activities through external organisations. It demands banks be selective in their ventures and consider risks and long-term sustainability aspects in their lending practices (Weber, Fenchel & Scholz 2008; Regeringen n.d.; Finansinspektionen 2018). However, risks are constantly changing with the dynamic time we are living in (Settembre-Blundo et al. 2021). This creates continuous new prerequisites for banks' operational work with risks and risk management along with a need to be proactive.

Risk management in the context of banking is the process of managing and controlling different risks to evaluate organisations and to ensure borrowers fulfil the lending terms (Brown & Moles 2014; Francis, Harper & Kumar 2016). However, there is a spread variation of risks in the banking sector ranging from credit risks to emerging environmental risks (Šotić & Rajić 2015; Weber, Fenchel & Scholz 2008; Failing, Grergory & Harstone 2007). Environmental risk management is an extension of risk management to include environmental aspects (Failing,

Grergory & Harstone 2007), the concept, in a sense, combines sustainable investing, green corporate loans and environmental risks together, as it concerns how a banker assesses a potential client. Nevertheless, for bankers to be able to assess all variations, Möllersten and Ejlertsson (2021) emphasise the relevance of systematically identifying and evaluating credits, which defines the agreement between a lender and a borrower, with a need for continuous development of green financing to manage different risks to ensure all actors in the banking sector join forces for sustainable development (Hoshen et al. 2017).

As of now, there is no solid policy for risk management which allows banks to interpret their own methods for assessments (Rosman 2009; Horcher 2011; Greuning & Bratanovic 2020). Risks and aspects of risk management are, therefore, according to Šotić and Rajić (2015), Rosman (2009), and Horcher (2011) based on shared understanding through perceptions and other individual techniques (Šotić & Rajić 2015; Rosman 2009; Horcher 2011). This creates disparities among banks and a negative influence on the financial sector due to the spread level of acceptance and degrees of interpretation of risks (Cibulskienė & Rumbauskaitė 2012). There are also disparities when it comes to the role of different sources of information to assess organisational risks, such as ESG ratings and sustainability reporting. ESG stands for environmental, social, and corporate governance and evaluates the extent to which a company is committed to sustainable development beyond a company's role in, for example, maximizing profits (Ziolo, Bak & Cheba 2021). ESG can be quantified through ratings based on how well risks are being managed, whereof a low rating implicates a low risk (World bank 2021). Similarly, sustainability reporting further reflects organisations' social and environmental activities and should be progressed with the organisation and the society (Chang, Amran & Iranmanesh 2019).

1.2. Problematisation

As it has been stated (e.g. Cibulskienė & Rumbauskaitė 2012) there are fluctuations in different banks' assessment techniques, Weber, Fenchel, and Scholz (2008) argue that all banks should integrate the assessment of environmental risks into their credit risk management process to legitimate banking activities. This has been attempted by banks through the development of green corporate loans. However, investigations have shown there is no commonly accepted definition of green loans nor universal policies for risk management of green financial credits (Möllersten & Ejlertsson 2021; Stojanovic & Ilic 2018; Cibulskienė & Rumbauskaitė 2012). This has also been demonstrated by Finansinspektionen (2018) that conducted an exploratory

study on different criteria and requirements for green loans which revealed that some organisations do not fulfil the requirements for green loans at one bank to be approved by another. It can imply there are additional variations in the assessment work of sustainability-related risks for green loans. Hoegen, Steininger, and Veit (2017) found similar variations in the incorporation of green aspects in lending practices. Meanwhile, they emphasise the importance of basing bank decisions on factors that can ensure the borrower's ability to repay the loan and the economy's future growth. Although research (e.g. Hoegen, Steininger & Veit 2017) has identified that there are variations, it has not noted what these differences are. Therefore, the effect of green corporate loans and their contribution to sustainable development is questionable, if they contribute to sustainable development as they are intended to and if this is true for all banks that offer them.

Due to the lack of systematic integration of environmental aspects in the whole risk management process of green loans, research has shown further ambiguity in the insurance of how sustainable development is assessed and monitored throughout the process in different banks (Weber, Fenchel & Scholz 2008). Thus, risks associated with the environment have remained managed within the framework of conventional risk. It has, therefore, been stressed that research on risk management systems that promote organisational sustainable development remains limited (Wang, Wang & Lai 2005; Leo, Sharma & Maddulety 2019). Previous research on conventional credit risk management has suggested that, for example, banks solely can determine whether a credit risk is “good” or “bad”, as there has been a lack of advanced evaluation tools (Wang, Wang & Lai 2005). However, Leo, Sharma, and Maddulety (2019) revealed the emergence of improved techniques to assess risks from reviewing annual reports of the world's leading banks. They found that risk management has developed in individual banks from the discovery of updated frameworks with more details, in comparison to the earlier risk management methods in the same banks. The study did not examine how the developed techniques are used in practice, nor did it address environmental aspects of risks. Instead, it focused on stating that there are better possibilities to assess how risks are detected, measured, reported, and later managed. Thus, there is room for this to be examined.

Francis, Harper, and Kumar (2016) indicate that a well-developed sustainability work itself is a factor that can reduce certain risks. For example, as Giese et al. (2019) and Li et al. (2018) discovered, a reciprocal relationship between a lower ESG rating and good risk management. Regardless, according to Arjaliès and Bansal (2018), ratings change and their role in the context

of investment decisions differ among banks. Hence, it becomes interesting how this is taken into consideration in the risk management of green corporate loans. Similarly, there are changes regarding the role of corporations' own sources of information to demonstrate sustainability performance, like sustainability reports (Diouf & Boiral 2017). Diouf and Boiral (2017) studied the quality of sustainability reports in investment decisions and found that more positive than negative information tends to be disclosed. Moses, Che-Ahmad, and Abdulmalik (2020) further state that this uncertainty of quality can mislead stakeholders and create a credibility gap with implications for the progress of standardisation and investment decisions. However, research has shown that banks rarely decline companies' credits even if they show an increased sustainability risk (Finansinspektionen 2018). Finansinspektionen claims it still allows banks to influence borrowers' mindsets to be more sustainable.

In light of the ongoing development and sighted differences of risk management systems with environmental inclusions, it is necessary to investigate the variations among individual banks. Thus, previous research (e.g. Leo, Sharma & Maddulety 2019; Diouf & Boiral 2017) has for example shown there are improved techniques to work with risks through reviews of sustainability reports, however, it has not revealed how their role is perceived in the operational work within banks or how it is relative to other different sources of sustainability information. Likewise, previous research (e.g. Hoegen, Steininger & Veit 2017) highlights differences, but perhaps there are also similarities and ultimately, it is questionable how much these types of loans actually fulfil their purpose of contributing to a more sustainable future. Stojanovic and Ilic (2018) highlight that there is a lack of studies on green financing wherein the work of environmental protection is a long-term process that needs continuous research to understand how it evolves. The gap in knowledge in combination with the risks of misleading sustainability reports and variations of ESG ratings in sustainable investment decisions, thereby, creates new research implications.

1.3. Purpose and research questions

The purpose of this study is to contribute to a deeper understanding of banks' operational risk management of green corporate loans. The objective is also to perceive the role of different information sources, as per ESG rating and sustainability reporting to assess risks in the same context. This is concretised through the following research questions,

Q1. How are banks working with risk management of green corporate loans?
Q2. What role do organisations' ESG rating and sustainability reporting have when assessing risks?

1.4. Disposition

Chapters two and three presents’ terms and concepts related to sustainable investing through green corporate loans and perspectives on risk management. This is to understand the emerging work of responsible lending practices and its implications for sustainable development which can be assessed through ESG rating and sustainability reporting for instance. Thereby, the study creates a theoretical frame of reference to be used for further discussion. Chapter four presents an overview of the theoretical frame of reference and conceptualises how the banks are working with risk management of green corporate loans and their perceptions of the role of organisations’ ESG rating and sustainability reporting when assessing risks. Chapter five describes and motivates the method and research approaches this study applies, namely interviews and sustainability reports. The following chapter six presents the empirical findings from the collected data and different perceptions of risk management within the frames of green corporate loans and the role of ESG rating and sustainability reporting in assessment of risks. Chapter seven discusses the findings in relation to the theoretical frame of reference. The last chapter compiles the results of the study and concludes with theoretical insights and suggestions for future research.

2. Implications of perspectives on green finance

The following chapter presents terms and concepts associated with sustainability, sustainable investing, and the ascent of green financing and green corporate loans. This information is of relevance to bring more clarity to the field of research on green lending practices and outlines the first of two parts of the theoretical frame of reference.

2.1. Sustainable investing

The disclosure regulation defines sustainable investment as an investment that contributes to sustainable development (Regulation 2019/2088/EU). That means it should bring well-being over time through social, environmental, and economic considerations, and aspire to the UN sustainable development goals (SDGs). This work towards a sustainable future can, however, take form in various ways. In the banking sector, it can be achieved through lending practices if the investment supports a social goal, combats inequalities, or creates environmental stability (Weber, Diaz & Schwegler 2014). An investment can be referred to as sustainable as long as it does not cause significant damage to another of the sustainability objectives and comply with good governance practices.

Understanding the importance of banks in the economy can be achieved by studying sustainable investing. They act as a link between the financial sector and sustainable development through investments and lending practices (Weber, Diaz & Schwegler 2014; Jeucken & Bouma 1999). By steering capital towards sustainable investments, the financial markets contribute to sustainable development together with its stakeholders. However, there are limited requirements and uncertainty about how sustainable investments lead to sustainable development as Finansinspektionen (2018) has seen variations in the assessment work within different banks. Still, it has increased the general engagement in sustainable development which has culminated in green financing and green loans (Gilchrist, Yu & Zhong 2021).

2.2. Green financing and green corporate loans

Green finance is often interchangeably used with sustainable investment (Stojanovic & Ilic 2018). In practice, it is wider and includes more than investments. Green financing combines money and business with environmentally friendly behaviour (Hoshen et al. 2017). The area includes individual and business consumers, producers, investors, and financial lenders (Stojanovic & Ilic 2018). It can be expressed due to financial incentives, the desire to save the

planet, or a combination of both. Green financing emphasises the benefits of the environment and values environmental protection, unlike traditional financial activities. Thereby, it refers to financial investments that are flowing into sustainable development projects, environmental products, and policies that encourage the development of a sustainable economy.

The associated concept of green loans is undefined but has been expressed as a special financing mode, supporting, for example, a more environmentally friendly production (Li et al. 2018). Additionally, it has the potential to stimulate a more sustainable economy (Hoshen et al. 2017). These loans are beneficial for corporations since they promote sustainability, which is helpful for the development of society at large (Stojanovic & Ilic 2018). However, the lack of a universal definition brings variations in the assessment of sustainability-related risks for green corporate loans (Finansinspektionen 2018). As similar, Möllersten and Ejlertsson (2021) argue that banks have different frameworks and therefore also deal with green financial investments and loans differently. New rules and laws periodically appear globally and domestically which affect current investments. Green corporate loans thereby need to account for various environmental externalities, for example, through banks' lending practices (Stojanovic & Ilic 2018; Regeringen n.d.).

2.3. Banks' responsible lending practices

Lending practices differ among banks but have traditionally been seen to evaluate economic factors, such as financials, risks, and return on investments (Hoegen, Steininger & Veit 2017). Thus, decisions must be based on factors that can ensure the borrower's ability to repay the loan and the future growth of the economy. Environmental concerns have therefore been a part of the lending process, but only to a limited extent. For example, Hoegen, Steininger, and Veit (2017) stress that banks do not usually consider various social dynamics or the context of decision-making when granting a loan. Hence there are organisations that have been declined by one bank to get approved for a green loan by another (Finansinspektionen 2018). This indicates differences in the banks' assessment work and how their green lending practices contribute to sustainable development. Individual banks use their own techniques to perceive risks and decide the conditions they give their clients (Möllersten & Ejlertsson 2021; Stojanovic & Ilic 2018; Cibulskienė & Rumbauskaitė 2012).

During the lending process, banks evaluate the potential borrowers’ default risk based on various corporations and their loan characteristics (Francis, Harper & Kumar 2016). Banks

typically include various covenants in their loan contracts which necessitate that borrowing firms fulfil conditions, such as maintaining a minimum level of capital and net worth, and regular reporting of financial information to the bank.

3. Risk management as a base for green lending practices

The following chapter presents terms and concepts related to risks and risk management. This is relevant as risk management is fundamental to understanding and contributing to sustainable development in green lending practices. Thus, risks can be assessed through various sources of information whereof ESG rating and sustainability reporting are cited. The information outlines the second and final part of the theoretical frame of reference.

3.1. Risks, credit rating, and risk management

Risk is a term of variation and is based on individuals' perceptions concerning the effect of uncertainties on certain objects (Šotić & Rajić 2015). The credit risk of a loan is therefore reflected through phases of rating, costing, pricing, and monitoring (Weber, Fenchel & Scholz 2008). Ratings are made to clarify the general level of risk, costs to determine the level of security, interest rates to match the rating, and monitoring to determine if any changes are required Banks are faced with various risks ranging from movements in interest rates, reputational risks, credit risks, technology and operational risks, and foreign exchange risks from fluctuations (Leo, Sharma & Maddulety 2019; Power et al. 2009). Also, other emerging risks as the upcoming risks related to the environment due to the need to change and operate within the frames of the planet (Settembre-Blundo et al. 2021; Jeucken & Bouma 1999).

Nevertheless, Leo, Sharma, and Madduelty (2019) declare credit risks will always be the largest risk banks face. It can be expressed as the risk of potential loss to the bank if a borrower fails to meet its obligations. It is therefore critical to see new techniques emerging from conventional risk management that can ensure systems where risks are closely monitored and managed.

Risk management concerns forecasting and evaluating financial risks as well as identifying procedures to limit or avoid their impacts by controlling the potential consequences of credit risks (Brown & Moles 2014; Francis, Harper & Kumar 2016). Möllersten and Ejlertsson (2021) explain there are further ongoing developments for improved risk management methods to be able to assess all the variations of risks. According to Leo, Sharma, and Maddulety (2019), it could imply operational risks such as losses associated with losses due to unconscious external events. They see operational risks like the risk of having inadequate internal processes, people, or systems. Hence, it is not always possible to eliminate all risks but understanding them is an important step in deciding how to manage them (Horcher 2011). The credit rating, therefore,

assesses the creditworthiness of a borrower in general terms or with respect to a financial obligation (Weber, Fenchel & Scholz 2008). The credit rating will determine whether a borrower is approved for credit as well as the interest rate. Banks should systematically identify different risks to follow their progress. That requires variations in the risk management process in terms of skills and techniques. Whereof Witzany (2017) argues that banks must ask themselves whether they are able to assess the credit in question. Banks should therefore strive to integrate environmental risks by default into their lending processes to legitimate their business activities and underline that they are not based on loans to lenders that cause negative environmental impacts (Weber, Fenchel & Scholz 2008).

3.2. Perspectives of operational risk management

The process of risk management follows a standard risk management framework through identification, evaluation, and management (Brown & Moles 2014). The cause of the risk must be identified, the extent of the risk has to be evaluated and decisions have to be made as to how this risk is to be managed. Similarly, the initial stage of risk management should according to Weber, Fenchel, and Scholz (2008), evaluate the borrower's default risk which acts as a base for the bank to conduct a credit evaluation to determine the probability of default. In this process, methods are sought to quantify- and grasp the entire risk profile, since financial risks are created by transactions, like investments and loans (Horcher 2011). This is done in order to identify how likely a company is to be able to meet its obligations versus the risk that they will not.

If a bank accepts a credit, it should be assessed throughout the complete loan period (Weber, Fenchel & Scholz 2008). Risks and credit risks change, which Weber, Fenchel, and Scholz emphasise must be reflected in the banks' own ratings. A bank can, for example, make efforts to get the borrower back on track if the credit risk increases, otherwise, the bank could be liable for losses. The authors explain that the costing of credits should therefore be based on the rating to try to determine what it would cost the bank if the company went bankrupt or similar. The costing demonstrates the level of security an organisation can offer, on which the pricing will be based. It means that if a company has a higher credit risk it will pay more to compensate for the risk. Although risk is a basis for opportunity and arises from exposure (Horcher 2011). It brings the possibility of loss and the opportunity for profit which needs to be managed.

The importance of controlling risk management has also been highlighted (Weber, Fenchel & Scholz 2008). This step involves monitoring the rated risks, which allows for potential changes in the credit risk to be adjusted as it allows banks to act out in an early stage if new risks are identified. It is relevant as it ensures the ongoing development of a borrower's credit risk profile which can change over a longer time. In terms of environmental monitoring, this stage of control can be crucial although it requires additional instruments to manage emerging risks throughout the whole duration of a loan.

However, Cibulskienė and Rumbauskaitė (2012) argue that there is no solid policy for risk management of credits that exists. The permit to consequently let banks interpret their own indicators for risk assessment can create a negative influence on the financial sector, as what is acceptable for one bank may be viewed as a risk for another. In this context, the risk rating will therefore be determined by the overall level of security an organisation can offer a credit (Weber, Fenchel & Scholz, 2008). Thereby, risk management is a dynamic process that should evolve together with the operations within the organisation in question and remain flexible (Horcher 2011; Settembre-Blundo et al. 2021). As Settembre-Blundo et al. (2021) revealed, it is for example possible to design individual sustainability-based risk management systems. They developed a tool to assess different credit risks in terms of sustainability. Still, individual organisations need security measures to contrast and mitigate the effects of the risk situation whereof banks have an active role when it comes to reviewing and evaluating (Francis, Harper & Kumar 2016). It has been argued (e.g. Horcher 2011) that it is not possible to eliminate all risks and that they must be managed via other factors. Hence the integration of environmental risks into the risk management process can further legitimise a bank's sustainable business activities (Weber, Fenchel & Scholz 2008).

3.2.1. Environmental risk management

The World Bank has provided guidelines for other banks' on incorporating environmental assessment of organisations' different credit risks to, for example, ensure projects' sustainability (Weber, Fenchel & Scholz 2008). The guidelines can set out borrowers' responsibilities for assessing, managing, and monitoring environmental and social risks which are supported by banks through investment to achieve environmental and social outcomes. Thus, the integration of environmental risks into credit risk management validates that banks do not cause negative environmental impacts and act as responsible corporate citizens (Weber,

Fenchel & Scholz 2008). However, incorporating more environmental aspects into the guidelines is an area of constant development.

Environmental risk management extends the concept of risk management (Failing, Grergory & Harstone 2007). Therefore, it requires banks to have more knowledge regarding local conditions, processes, and practices. It also becomes relevant to assess the indirect impacts of the proposed actions of factors like, for example, social, biological, and ecological conditions. According to Sharfman and Fernando (2008), the environmental risk management process helps declare why better environmental performers also are better financial performers. Better environmental performance is also associated with better financial performance, due to the resource efficiency it creates. Similarly, Francis, Harper, and Kumar (2016) emphasise that well-developed sustainability work can reduce the risk, which banks tend to reward with favourable interest rates.

Finansinspektionens report from 2018 argues that banks at a larger scale have begun to value sustainability aspects in their lending practices. Meanwhile, they found credits to rarely be declined even if there is an increased sustainability risk. It is important to continually develop green financing as it is necessary for environmentally friendly projects and to reduce the risk of climate change for the development to remain sustainable (Hoshen et al. 2017). Li et al. (2018) revealed that the level of disclosure of sustainability information tends to vary among organisations. Banks have further incorporated their own strategies for credit risk management in regard to the environment but are struggling to integrate environmental risks into their credit decision-making process to assess borrowers' environmental impact and their future success (Weber, Fenchel & Scholz 2008). Thus, there are limited tools to ensure the purpose of a loan is being fulfilled. Even though there are several sources of information available for banks and other stakeholders in terms of borrowers' own established sustainability reports and other published material like ESG ratings, relating to risks in terms of sustainability.

3.3. ESG as a measure for rating risks

Rating risks can occur in different ways but in terms of the environment, ESG, in particular, can have relevance to banks (Ziolo, Bak & Cheba 2021). Financing of activities and other projects must take environmental, social, and governance criteria into account to contribute to, for example, the SDGs. The concept of ESG breaks down the complexity of sustainability into those three pillars that together show a combined sustainability performance (World bank

2021). The rating of ESG further demonstrates an overall performance in measurable values as it quantifies individual companies' exposure to industry-specific risks and how well that company is managing those risks. A low ESG rating, therefore, implicates a low risk.

To entail a rating, there are different official providers of frameworks and policies, for example, created by the World bank that companies can use (World bank 2021). Several banks have incorporated ESG factors into the decision-making process for investments. It has further enabled them to align their business models with sustainability. Thus, there is a reciprocal relationship between a lower ESG risk rating and good risk management, and therefore a lower business risk and higher valuation for favourable credits (Giese et al. 2019; Li et al. 2018; Ziolo, Bak & Cheba 2021).

ESG ratings can be used by banks to select companies with the potential to reduce risks and bring opportunities stemming from environmental and social concerns (Briand, Urwin & Chia 2011). Investment decisions can therefore be affected by corporations' ESG ratings and are becoming more important in green financing (Li et al. 2018; Briand, Urwin & Chia 2011). The integration of ESG in the investment process values long-term aspects which are needed for sustainable development (Briand, Urwin & Chia 2011). However, this implies that all investors and funders must understand the sources of ESG risks and have an overall appreciation of them (Briand, Urwin & Chia 2011). They must also be able to distinguish between information and affirm individual organisational situations (Du Riez 2014). The rating is based on ESG information that is commonly included in organisations' own sustainability reporting.

3.4. Sustainability reports as an assessment tool of sustainability performance

Sustainability reports are established to reflect organisations' financial, ethical, social, and environmental activities (Chang, Amran & Iranmanesh 2019). To evaluate and display sustainability accomplishments to internal and external stakeholders, a combination of qualitative and quantitative measures should be used (Boiral, Heras-Saizarbitoria & Brotherton 2019). The report has been seen as a tool for managing stakeholders' perceptions of a company's reputation and legitimacy (Moses, Che-Ahmad & Abdulmalik 2020). Through these aspects, the report should provide transparency with a balance of positive and negative information for comparability, accuracy, timeliness, clarity, and credibility over time. The application of all principles is assumed to ensure the quality of sustainability reporting (Diouf & Boiral 2017).

As a result, there is a need for disclosure of sustainability information to reflect several aspects of organisations' performance to enable a reasoned, overall assessment (Diouf & Boiral 2017). Hence the improvement of quality of sustainability reporting enhances their usefulness for stakeholders and facilitates the evaluation of corporate sustainability performance with the possibility of comparing information, benchmarking between various organisations, and informing investors about corporate sustainability performance. Accordingly, Simoni, Bini, and Bellucci (2020) discuss the importance of following external reporting standards, like the global reporting initiative (GRI), as the credibility and reliability of sustainability reporting have been widely criticised**.** Enclosed information can mislead stakeholders and create a credibility gap with diffusion in its progress for standardisation, although the reports initially should increase accountability and transparency to stakeholders (Moses, Che-Ahmad & Abdulmalik 2020).

Chang, Amran, and Iranmanesh (2019) found that information in sustainability reporting tends to be disclosed only if it leads to an improvement of the corporate image and has raised doubt about the imbalance between positive and negative aspects. Because of the ambiguity of lack of transparency and credibility, it raises questions about the quality of standardisations because corporations may greenwash their reports to fill the potential gap (Moses, Che-Ahmad & Abdulmalik 2020). The credibility gap has also been seen to undermine the use of sustainability reports in financial decisions (Diouf & Boiral 2017). Moses, Che-Ahmad, and Abdulmalik highlight external auditing as a solution since it promotes accountability to a company's stakeholders which increases stakeholders' trust in the enclosed information. An increased level of reports is today being audited by third parties, by assurance providers like accounting or consulting firms (Boiral, Heras-Saizarbitoria & Brotherton 2019). However, this is not a regulatory requirement. There have also been efforts for standardisation of sustainability reports but remain problematic (Diouf & Boiral 2017). According to Diouf and Boiral (2017), this is because observed inconsistencies limit the quality and credibility of information. The reports have been seen as a marketing instrument or as tools for organisational legitimation.

4. Overview of the theoretical frame of reference

The following chapter summarises both parts of the theoretical frame of reference by compiling the themes and highlights key findings in previous research on risk management and green corporate loans. This is further used in the discussion to understand how banks are working with risk management of green corporate loans and their perceptions of the role of organisations' ESG rating and sustainability reporting when assessing risks.

4.1. Theoretical conceptualisation

Chapter two and three presents a variety of concepts and terms relating to the research area, as well as provide background to what work that is being performed at banks, with the former focusing on green financing and the latter on risk management and connect this to ESG rating and sustainability reporting. Hereafter, it is presented how these chapters interrelate and coincide with banks' operational risk management of green corporate loans.

Sustainable investing within banks concerns how they, through lending practices, support social goals or create environmental stability (Weber, Diaz & Schwegler 2014). As this is a way to contribute to sustainable development, the concept becomes relevant to this study. Green financing is often used interchangeably with sustainable investment (Stojanovic & Ilic 2018), as forementioned. It is, however, wider (Hoshen et al. 2017) as it refers to financial investments that flow into sustainable development projects, environmental products, and policies that encourage the development of a sustainable economy (Stojanovic & Ilic 2018), given that this study investigates this form of work within banks, this concept is also important. Green financing is further associated with green loans (Li et al. 2018), which concerns the actual loan that banks offer their clients. This ties into responsible lending practices, as this is how the banks work with green corporate loans, which this study takes a closer look at.

As we see in 2.3, as part of a bank's lending process, they evaluate a potential borrowers' default risk based on various corporations and their loan characteristics (Francis, Harper & Kumar 2016). In chapter three, the risks the banks account for are more clearly described, with a main risk being credit risk and credit rating being used to evaluate and perceive this, through the process of risk management. However, risks relating to environment are emerging and is starting to be considered in the lending process as well (Settembre-Blundo et al. 2021; Jeucken & Bouma 1999). Consequently, there has been an extension of risk management to include the

work with environmental risks in the loan process, which can be referred to as environmental risk management (Failing, Grergory & Harstone 2007). To perceive the environmental risks, banks may employ tools like ESG rating or sustainability reporting. Whereas both tools are complex as explained in 3.3 and 3.4 but provide information on the work a company does with sustainability. Nevertheless, banks employ individual techniques for evaluating potential clients.

The compiled concepts and theories described are used as a basis for analysis to guide the discussion of the empirical findings. They are also being used to map and discover new perspectives of banks' operational risk management of green corporate loans and the role of ESG rating and sustainability reporting when assessing risks.

5. Methodology

The following chapter describes the methods and research approaches that have been used to study how banks are working with risk management of green corporate loans and the role of organisations' ESG rating and sustainability reporting when assessing risks through interviews with bankers and material from respective banks' sustainability reports. Thereby, it motivates the collection of empirical data and analyses its processing in regard to factors such as sample selection and quality.

5.1. Research design

The research design is based on a qualitative method with an inductive approach. As this study centres around banks which are regulated businesses, they are not able to disclose internal or customer-related data (e.g. Swedbank n.d.). They can, however, partake in qualitative studies, which motivates the method chosen. Moreover, a qualitative study will offer more details, context, and understanding of the issue at hand, unlike a quantitative study that more commonly is based on cold and hard facts (Fossey et al. 2002; Höglund-Nielsen & Granskär 2017). Furthermore, a qualitative method facilitates the identification of themes and studies empiricism with an ambition to develop new understandings (Boell & Cecez-Kecmanovic 2014; Fossey et al. 2002; Höglund-Nielsen & Granskär 2017). This study looks at themes and patterns in the data collection from sustainability reports and interactions with bankers in order to understand perceptions. By inferring patterns, Patton (2002) explains that the inductive approach will enable the researcher to draw conclusions from the empirical data. The theoretical frame of reference supports the data analysis and facilitates the work of interpretations and entails the use of already produced data to develop new scientific understandings and knowledge (Irwin 2013).

In order to conduct the study, concepts and terms related to risk management and green finance are used. Like previous research on risk management with links to sustainability (e.g. Settembre-Blundo et al. 2021), this study is built on a hermeneutic research perspective. This approach is motivated by its potential to enable an in-depth understanding of certain phenomena that is needed for a subsequent interpretation of the theoretical frame of reference with empirical data rather than research strategies that encourage objectivity (Boell & Cecez-Kecmanovic 2014). The study also uses triangulation as it seeks a deeper understanding of banks' operational risk management of green corporate loans through a combination of

qualitative sources of empirical data. The method is useful for overcoming potential biases when only using a single source of information or observations (Noble & Heale 2019). Therefore, this study makes use of both interviews and reports, as a way to give more confidence to its findings. It also combines this data with theory to contextualise the findings. Carter and Bryant-Lukosius (2014) emphasise that triangulation in qualitative research provides the best opportunity for the understanding of a phenomenon. As such, this study combines interviews with information from sustainability reports to reach a wider representative sample, as it can be interpreted via different variables, which can help to unite various data points.

5.2. Data collection and motives of semi-structured interviews and sustainability reports

To provide the study with empirical material, primary data is collected via interviews with bankers with positions of insight in green financing and green corporate loans, and manually via respective banks' most recent sustainability reports from the year 2021. Interviews are a common data collection method in qualitative research and can bring insight into a study through thoughts and perceptions (Fossey et al. 2002; Yin 2011). According to Denscombe (2018), interviews are appropriate when the purpose is to understand complexities where opinions are relevant to get the desired depth. Similarly, written text in a report format is more permanent and can therefore reveal things that otherwise are not immediately apparent (Denscombe 2014). This is needed to understand how banks are working with risk management of green corporate loans and the role of other sources of information when assessing risks. Although sustainability reports, as explained in 3.4, have been criticised, they are a forum in which companies provide their stakeholders with sustainability-related information. Thus, this study uses these to get concrete information, but also combines these findings with interviews to get a fuller picture of the operational work that goes on inside banks regarding the area of interest.

To continue, the purpose of the study is divided into two research questions to clarify and introduce the division of the themes, risk management of green loans and risk assessment relative to ESG rating and sustainability reporting. Therefore, when reviewing the banks' sustainability reports, I am actively searching for those themes. The findings from the reports are collected from respective banks' websites. The interviews are organised in a corresponding way depending on the themes and performed with a semi-structured character with support from an interview guide. It is prepared with questions of an open nature with room for follow-

up questions or supplementary thoughts as a guide to facilitate a focused exploration of certain topics as it can guide an interview in a certain direction to follow the purpose (Fossey et al. 2002; Hox & Boeije 2005; Ahrne & Svensson 2015). Open questions provide open and interpretable answers as semi-structured interviews are characterised by flexibility (Ahrne & Svensson 2015). Thereof, "yes" and "no" -questions are avoided in this context to let the respondents reflect on the topics. To create further space, I divide the questions into themes that correspond with the two research questions: *green corporate loans, the role of ESG rating, the role of sustainability reporting, risks, and other reflections*. The decision of thematically dividing the guide is because it allows me to adjust the questions to what the interviewee is telling me and delve into subjects that seem more or less of interest. Also, the division gives me the possibility of getting nuanced answers from different points of view.

As interviews are designed with the ambition to elicit each participant's philosophy regarding the research topic, it is important to purposely select each interviewee for this study. This occurs with a non-probability technique, meaning the selected interviewees possess relevant knowledge to fully grasp the research area (Boell & Cecez-Kecmanovic 2014; Fossey et al. 2002). Regardless, the degree of insight varies among the participants, as they are from different operating areas in their individual banks and have diverse experiences in risk management of green corporate loans. This variation is, however, interesting as it provides the study with a scope similar to real-life within the banking sector. Still, this variation and limitation of respondents initiate the relevance of using additional sources of data from the participating bank's sustainability reports to supplement the interview findings by getting a more profound understanding of the area of research. The collected empirical material is later used as a base for discussion.

5.2.1. Implementation of the interviews and sample selection

The concept of green financing and risk management is generally relatively undefined with limited knowledge of its long-term aspects for sustainable development (Möllersten & Ejlertsson 2021; Stojanovic & Ilic 2018; Cibulskienė & Rumbauskaitė 2012). This ambiguity is also notable regarding bankers' knowledge, which becomes visible in the initial phases of the data collection process. Some contacted people do not want to participate in an interview because they do not consider themselves sufficiently knowledgeable in the field of research. From an outsider's perspective, there are also difficulties with grasping which people within different banks are working with green financing. Hence, I accept the spread level of insight

that I face and decide to have a more general approach to the interviews and their themes. It allows bankers of various operating areas to participate and provides the study with deviation and a larger room for further interpretations.

In the process of finding candidates for the interviews, I begin to navigate to websites of Swedish banks' that present they offer green corporate loans. There I found the information to contact centres for each bank which allows me to reach out to bankers via phone or email with the ambition to be forwarded to people keen on participating in the study. I even reach out directly to some bankers via personally recommended connections. This is also done by phone or email as it is considered the most efficient. Consequently, this study employs a purposeful sample (e.g. Suri 2011), as it reaches out to candidates that fulfils the criteria necessary to be of use in this study, like work with green corporate loans. Still, this process appears to be a time-consuming phase and demands patience as many declines or decide not to respond to the request to participate in the study. Similarly, some contacted people do not want to participate if another colleague in the same bank has agreed to be interviewed, expressing a belief they will respond uniformly. This limits the possibility to capture different nuances in the responses of people within the same bank and divisions. Consequently, this study also employs a convenience sample, wherein it uses respondents that have been willing to participate. Thus, the study also uses triangulation in this aspect. The risk with a convenience sample is that it may be too convenient (Sousa & Zauszniewski 2004). The study lacks the opinions of the people who declined to participate and may have a different view of the issues at hand.

There is a total of five people that get interviewed that are working at five of the major banks in Sweden, see Table 2. Therefore, five sustainability reports are sampled from the respective interviewees' banks. In accordance with Boell and Cecez-Kecmanovic (2014) and, Fossey et al. (2002), in a sample selection, it is more important to get sufficient information to be able to fully describe the studied phenomena, rather than relying on a certain fixed number of participants. I perceive the study to have sufficient information when there is saturation in the sample and no new attitudes and perceptions seem to appear in relation to the time horizon of the investigation. When this point is reached, no further interviews are performed.

Table 2. Sample selection and categorisation

Bank	Sustainability report (SR)	Respondent (R)	Operating area	Language	Duration
1	1	1	Sustainable finance	Swedish	50 min
2	2	2	Financial advisory	Swedish	40 min
3	3	3	Sustainability strategy	Swedish	45 min
4	4	4	Sustainable banking	Swedish	45 min
5	5	5	Sustainable banking	English	35 min

The table names each bank, sustainability report, and respondent for the study, presents the interviewee's operating area at the respective bank and the language that was spoken during each interview, as well as their duration of time.

The interviews are conducted via Teams in a video format. This decision is discussed and mutually agreed upon with each participant. It creates flexibility and time efficiency but still brings characteristics of having a natural conversation, seeing facial expressions, and some body language. The interviews are also audio-recorded upon approval by the participant. They last from 35 to 50 minutes. In line with Denscombe (2014), recordings facilitate the flow of the interviews as it directs the researchers to focus on absorbing nuances in the answers rather than taking notes. Worthwhile to add, that there is a need to translate four of the interviews as they are held in Swedish. In some cases, there is a need to reformulate sentences and paragraphs. This is made when the Swedish spoken language becomes too specific for direct translation. This risk of translation errors is, however, evident as the study is taking place in Sweden and regards Swedish banks.

5.3. Compilation of the data analytical method

It is of significance to understand themes and differentiations in the communication of both the written content in the bank's sustainability reports and the interviews to get a deeper understanding of the research area. The recorded interviews are therefore transcribed and structured in an encoding scheme to organise and enable the discovery of variations and similarities in themes, quotes, and keywords. Graneheim and Lundman (2004) and Aronson (1995) state that encoding schemes can help to reveal emerging subjects that can be used for further discussions as it facilitates interpretations of communication. The empirical findings from the bank's sustainability reports are gathered in a similar way as the encoding schemes are structured and organised within the encoding scheme through similar themes and keywords to complete the thematic compilation of data. This is later used in the analysis to get a fuller

picture, like if there was a subject a respondent did not have a lot to say on or if the report in some ways contradicts the respondent.

The empirical findings are then divided relative to the research questions and sectioned by how banks are working with risk management of green corporate loans, the role of organisations' ESG rating respective the role of sustainability reporting when assessing risks. The empirical findings are structured according to the research questions. However, the findings also present other perspectives of the research phenomena through individual examples and the banker's own worldview, which is later used for the discussion of the results.

The data from both the interviews and the banks' sustainability reports are discussed in a content analysis as Granheim and Lundman (2004) argue it can help to grasp the nuances of compiled data and its variations. This is made to further grasp the bankers' perceptions of risk management of green corporate loans and the utilisation of other sources of information when assessing risks. Also, to perceive how banks in writing are working with different concepts. This brings the opportunity for comparison and contrasting of mixed variations of data of the studied area. Whereon discussions arise into new themes and develop further understandings (Irwin 2013). For example, the discussion emerges into interpretations of the importance of relationships as a way for banks to work with risks, that there is avoidance of certain industries due to societal pressure, and concerns about the quality of ESG rating and sustainability reporting due to lack of audits.

5.4. Methodological discussion

A qualitative study with a hermeneutic perspective is according to research (e.g. Boell & Cecez-Kecmanovic 2014; Settembre-Blundo et al. 2021) subjective. Although this study is made to, for example, deepen the understanding of green financing and related risk management, it reveals a limited side to the whole phenomenon. Thus, it is a pragmatic line when a research area is complete. As similar, it is important to be aware that the inductive approach demands a critical attitude as one cannot draw definitive conclusions from individual studies (Patton 2002), consequently, the study has limited generalisability. Like with hermeneutic research (e.g. Boell & Cecez-Kecmanovic 2014), this study does not take what the respondents say as the ultimate truth, they may be a bit vague at times or unsure on issues but interpret it together with the sustainability reports and previous research to get a fuller picture. Similarly, at times, it validates previous research findings.

In order to create a solid basis for analysis, the bankers are purposefully selected from banks that offer green corporate loans and bankers with knowledge regarding green financing. This is relevant for the quality of the study since it is based on perceptions of concepts and terms, to reduce the risk of answers without truth or of a speculative character about how risk management of green corporate loans actually works in different banks. Still, the findings from the respondent's answers may not be applicable to all in the banking sector which limits the study's generalisability. If the study has other respondents or occurs in a different period of time, the findings can be somewhat different. Similarly, if there are more participants, there can be a greater variety in the triangulation of perspectives and thoughts providing more substance to the content analysis. The number of participants should not be seen as an obstacle as the study is more of an indication of how risk management green corporate loans work and the role of ESG ratings and sustainability reporting in the same context, rather than the whole truth.

To further state the quality of the study, elements such as the interview guide and the operating area of all respondents have been incorporated to enable its replicability. To further increase the credibility of the working process of the study, the empirical data from the interviews are therefore supplemented with information from the represented banks' sustainability reports to better grasp the combined material. This has been considered to bring an understanding of the habits of bankers but also of the rules and routines presented in the reports. Other reservations are the risk of translation errors. Also, the limited absorption of the banker’s body language during the video-based interviews is worth noting which might have taken away certain aspects of their expressions.

5.4.1. Specific banks and their representatives’ confidentiality

To agree to participate, some of the respondents express a desire to be kept anonymous together with their workplace. Therefore, I keep all banks and respondents concealed in this paper. Offering anonymity can let the interviewees be more honest in their responses regarding the green lending practices and how they are working with risks within their individual banks. Also, it can avoid response biases, such as social desirability bias, wherein the responses are influenced by how the respondents believe they will be viewed by others instead of truthfully (Tan et al. 2021). The confidentiality of their names and employers may limit this. The reports also remain anonymous to ensure the confidentiality of all participants throughout the whole

study. This is achieved by concealing the names of the banks as well as not using quotes but rephrasing information.

It is noteworthy that there can be recall biases in the responses, as the interviewees may misremember instances that they provide examples of (Everson & Marsit 2020). However, mentioned examples in the interviews are given more as visualisation for my sake of how things may occur, hence, the specific details or circumstances are not of main importance. Still, there can be an issue with interviewer bias due to, for example, misunderstanding of certain questions or similar (Fowler & Mangione 1990). I let the respondents talk freely in relation to themes which should prevent any unclear responses or replies. Furthermore, integrity is beheld as the recorded interviews are deleted upon finishing this study. They are neither shared with any outside parties. As similar, the documents of transcriptions and the encoding schemes are later erased to ensure the respondents' confidentiality.

5.4.2. Utilisation of the banks' sustainability reports

The collected data in this study is supplemented with information from the represented banks' sustainability reports from 2021. This is closest in time to the interviews, also, as risks are constantly evolving, it is important to investigate current data in this study. Previous years' reports may provide insufficient information concerning the bankers' perceived worldview. The decision to complement the interviews with report-based data is to get a profound understanding of how the banks are practically working with green corporate loans and various related risks and to grasp other variations or nuances that the interviews might have missed.

Documents, like reports, assist the work of creating a clearer understanding of a subject (Saunders, Lewis & Thornhill 2019). Also, it allows the researcher to conduct relevant information at a fast speed (Hox & Boeije 2005). However, it is important to be aware of potential biases in sustainability reports and note that they originally have a different aim, established to demonstrate organisational sustainability performance over time (Diouf & Boiral 2017). This entails there are risks of unbalanced disclosure of positive and negative sustainability information in each report which needs to be beheld when discussing the findings.

6. Empirical findings

The following chapter presents empirical findings from the conducted interviews with the bankers. It also presents associated thematic information collected from respective banks' sustainability reports for the year 2021. The material is divided in accordance with the research questions of the study and is initially focusing on perspectives of how banks are working with risk management of green corporate loans. Following are perceptions of the role of organisations' ESG rating and sustainability reporting when assessing risks demonstrated. Thus, the themes are jointly compiled based on congruence to show nuances and emerging themes that have been found. For simplicity, the respondents from the interviews are recalled as "R" followed by the named bank. Similarly, the sustainability reports are referred to as "SR" followed by the named bank.

6.1. Perspectives of banks work with risk management of green corporate loans

The empirical findings present variations and similarities in the results of how banks are working with risk management of green corporate loans. For example, in unity, all banks' sustainability reports reveal the banks have developed their own individual frameworks. They act as a base for green lending decisions to assess the variation of data they receive. Therefore, to be granted a green loan, all respondents that participates in the interviews emphasise that organisations need to present their own corporate data to the bank for evaluation of risks, in terms of internal project descriptions and financial performance. R4 describes the initial process of green loans and demands a detailed description of the project that desires funding. The proposal must meet all the banks' criteria and needs to be tested internally with the banks' own frameworks. Moreover, according to R1, the bank demands to know precisely what it is financing. The respondent adds that solely general descriptions of projects do not work as green loans are very strict. However, R1 stresses that if all criteria are met and the organisation presents the correct data it is a very easy process for both parties. R5 and each bank's sustainability report expressed themselves in similar terms.

"The framework makes it fairly straightforward to decide what green loans we can emit, not always but it is very clear as we have defined what is green and what is not green, and we simply need to follow that when we are making the decisions." (R5)

These frameworks follow the same or similar legislative directives and principles (SR1-5). Sustainability experts within the lending units evaluate potential green loans through the frameworks and their compliance with the implication of a green loan and its environmental benefits (SR3). Still, the interviews make it clear that the banks have variations in their definitions of what is environmentally friendly and what falls under the category of a green loan. For example, R3 perceived it is interesting that banks can interpret the official standards differently. However, according to R1, the differences are more of variations in nuances and nothing major. R1 continues to emphasize it would be advantageous if all banks followed the same exact definitions interpreting the requirements unitedly. To continue, companies can have a very green profile and low emissions which can contribute to a whole industry getting green (R4). Still, that does not mean it necessarily has low credit risk and is something that the bank feels comfortable with supporting or being "bankable". SR2 reveal that bankers identify and assess a wide range of risks as they are built on several layers.

6.1.1. Identification and assessment of risks

Several risks are mentioned during the interviews within the operational risk management and are presented in the sustainability reports. Hence there are complexities for banks as they must manage in terms of climate-related risks to understand their customers (SR2). Otherwise, it can bring threats to the bank in terms of increased credit losses or cost of capital due to a deteriorating financial position among customers. Therefore, SR2 expresses a broad understanding of the wide variety of risks ranging from the environment to technological risks and general credit risks. To identify and assess the different risks, SR4 reveals that the bank first makes an overall assessment of an organisation that is applying for a green loan. This risk identification in terms of sustainability aspects depends on the operating country and industry. If a company directly is perceived as risky, it will get extended assessments.

"It is not like everything that is green from an impact perspective does bring a low credit risk. There may, for example, be major technological risks that are not yet mature." (R4)

If the assessment of risks so requires, R3 adds that they might ask for additional information, such as environmental impact assessments or a life cycle analysis. The bank may also ask clients to sign a side letter specifying the purpose of the financing if it would be unclear. To continue, the process of identifying risks for green corporate loans is divided into different stages (SR3). The sustainability report mentions that Bank 3 works to evaluate, nominate, and

thereafter approve or reject organisations' requests. It also mentions a general belief that there is no common valuation approach that is tailored to banks which forces them to develop individual concepts to manage risks. Thus, to ensure banks take the environment and climate aspects into consideration when financing a green loan, they have their own technical criteria that need to be fulfilled (SR2; R4). However, R2 stress they are putting a high value on companies' environmental certifications and see it as a standard among organisations. No other respondent or sustainability report mentions this aspect of risk assessment. Still, according to R2, the certifications facilitate their green lending decisions, and they see it as a facilitating tool.

Some of the bankers in the interviews argue that the assessment in the context of green loans works in the same way as regular loans. For example, during the second interview, R2 mentions the requirements to get a regular loan and a green loan is equivalent to the banks' main purpose is to finance and invest. R2 reasons the equivalent assessments are a result of the limited scale green financing still is located in.

6.1.2. Reduction of risks

SR2 for example emphasises there are bigger demands on bigger credits. This entails certain industries are excluded from the risk assessment such as coal mining or fossil fuels, as they already are seen as risky. R2 describes this as an action to eliminate all organisations that are incompatible with the bank's ambition to be a responsible citizen, as there are industries today that are not manageable in terms of sustainability. These sectors are referred to as "dirty industries" (R3). During the interview with Bank 3, it is argued that these are the industries that truly need the biggest support in terms of green corporate loans to be able to transform.

However, SR3 states that the bank is not funding high-risk industries for now as they have forecasted that their activities will vanish anyway. Meaning the bank believes that some industries will not be compatible with the implications of a sustainable future. According to SR3, sustainable investments that are made today in those industries therefore will not have any value anyway later on. Instead, the report stresses that some other investments or fundings are more valuable from a green perspective.

Another implication regarding the bank's refusal of doing business with the dirty industries is that it may create bad headlines in the press (R3; R5). R3 and R5 argue that the loan primarily

is based on an organisation's creditworthiness (R3). Secondly, it can be decided whether it can be green or not. If an organisation does not seem to make the fit, it will be rejected. The process of evaluating risks therefore takes time and must be something that the bank has belief in or stands for (R4; R5).

“It is mostly about the banks’ willingness to finance green loans rather than market pressure.” (R5)

“We do not emit green loans to customers we otherwise would not finance either, that is very important. A bank's first and foremost job is to take risks, but it must be balanced, it has to be priced right, and fit into the risk patterns that we have as a bank.” (R3)

Similarly, it is visible in SR4 that the bank does not emit green loans to any organisation. R4 claims the bank avoids certain companies or industries as a way to minimise risks. For example, they have a restrictive approach to certain sectors that generally are seen with a risk of corruption, contribute to inequalities and are seen as environmentally damaging. However, SR4 mentions that the bank does do business with some environmentally hazardous companies. This is not motivated nor commented.

6.1.3. Changes in risks

In unity, all of the respondents and sustainability reports stress that the respective banks are doing regular follow-up work, but that it depends on the circumstances. For example, depending on the intentional purpose of the loan and the current availability for the bank to control its usage, some projects are difficult to manage from an outsider’s perspective (R2). Another approach to follow up organisations that have been emitted green loans is through environmental certifications. It is mentioned as a way of ensuring sustainability by monitoring the certificates and their dynamics over time (R2; R1). Nevertheless, the monitoring commonly seems to occur on a yearly basis. R1 argues that it is still are legally binding agreements we are talking about. Meaning that these terms must be followed. But due to external pressure, the bank is still monitoring.

” We follow up continuously but do not stand and guard our clients’ operations”. (R1)

In the risk assessment, R4 indicates that they seek to evaluate their customers' transition journeys from having large emissions to a prominent reduction when providing different credits. R3 argues that the bank itself does not follow up on anything related to risks. Instead, it is the borrowers that report to the bank. The reported material gets reviewed, and feedback is sent back and forth if anything is needed to be supplemented. R1 also requires documentation as evidence to ensure the emitted green loan continues to fulfil the lending terms and other new potential regulatory demands. Moreover, the bank is careful with monitoring potential changes and ensuring the funding has served the agreed purpose (R4). During the interview, it is mentioned that this occurs only as long as the client has an active portfolio with the bank, but sometimes longer to ensure stability.

As soon as the bank is no longer involved in financing, for example, a particular project, the bank does not carry out any further monitoring. So, as long as the money is not repaid, the bank does analyses of the project." (R4)

"I would say the loans are being monitored as long as the duration of the loan, but it could also be that we have a slightly longer time perspective, maybe up to five or seven years longer." (R3)

6.1.4. Uncertainties in the risks assessment

If there are uncertainties regarding an organisation such as if they meet the requirements for a green loan or not, the bank have specialists to turn to for further discussions (R2). There are also sustainability experts that are working with credit analysis to evaluate and assess dynamics in risks (SR4). R2, however, stresses that other colleagues can be brought in for further discussion if there are any uncertainties with a client. Bank 3 has even created a new job role that specifically works with sustainability issues and sustainability indicators, to grasp and find different sustainability-related risks (SR3). The interviews do however not reveal any cases of uncertainties where these services have been needed, as downward-sloping changes or insecurities are described by several of the respondents as not too common.

"At this time, we have not really encountered any uncertainties or any difficult organisations over time." (R5)

Nevertheless, SR2 states sustainability risks will occur if they are not identified, managed, and prevented in an organised way. According to SR2, sustainability risks must be managed and follow individual banks' policies and guidelines. It can otherwise bring negative economic consequences for the bank or damage its reputation. R4, therefore, highlights that they are doing thoughtful and regular analyses of all the data they receive and collect from organisations when evaluating risks in the context of green financing, but also in general. They want to ensure the data is serious and that the inquiry must fulfil all the banks' demands for credit over time. Thus, R4 underlines the bank must feel comfortable with all aspects of a client and its projects.

"We make careful analysis to see if the data is serious, the client must tick all the other boxes for lending and remain a customer. So, it is not only about the green criteria. We as a bank must be comfortable with the client and do an analysis of the client and their projects, so there are quite big requirements to get into green lending." (R4)

However, according to R3 the sustainability perspective in finance is complex. The respondent thereby stresses that it is important to distinguish a bank's main purpose from the environment as banks cannot become industry experts and measure emissions for the sake of their customers. Instead, R3 highlights the bank knows finance and financial services and are not environmental experts and does not have to be that either.

"Banking is about doing good business with customers where they and we make money. We cannot turn into some charity that is all green and lovely. ... The financial infrastructure is incredibly important as the basis of society." (R3)

6.1.5. Additional benefits with green corporate loans

When working with green corporate loans, some interviewees mention it is not only tangible risks that are considered. According to SR2 and R4, it is also about generating profits and making the bank greener. The benefit of emitting green loans returns to the bank through a mutual exchange of increased sustainability performance (R2). Moreover, the bank becomes more sustainable through its financing of other organisations with green purposes, in line with its own sustainability policies and goals, which are for the benefit of society and its customers. SR2 even mentions the bank has evolved in the area of green finance to be able to support more organisations in their transition towards sustainability. Therefore, when it comes to emitting green loans, R3 says it is about supporting their customers to become more sustainable which

in the long run makes the bank more sustainable itself. Green financing improves the profile of the banks simultaneously as it helps other actors to transform (R4). If the bank does not have financial stability by making money and doing good business, then it is neither a good citizen of society (R3). Therefore, the focus must be on what is best for the customers as it creates added value back to the bank.

Sustainable investing and green financing are the bank's major contributors to sustainable development and the SDGs (SR1; SR3). It may therefore be advantageous for the banks to offer lower interest rates to attract more customers thus contributing more. R1 explains there are variations in how beneficial a green loan can be due to different approaches in different banks. However, according to R4, all pricing is done individually as they want to emit loans that return good revenue. They do not see benefits like lower interest for green loans as a matter of course.

"Giving a slightly lower interest rate may be a good option but it is also important to have a margin. Then you can do a price premium by setting aside as much capital as possible. For a certain credit risk, we have a certain credit margin that the customer must be able to pay. If you don't want to reduce the rate, you have to be ready to play with equity, and do an internal price premium because you still want to do that kind of business. For example, if a customer really should have gotten 15% interest, the bank might choose to premium the interest to 12% because there is a big equity you want to do business with. In the long run, we think it will be a way to future-proof our business and be more proactive." (R4)

Both R4 and R5 continue to underline there are no theoretical arguments for green loans to have lower margins and state green loans can be seen as an advantage by themselves since it allows organisations to report and communicate green projects and the good work they are doing. Even if the customer does not always get price discounts, there are other positive aspects. Still, R2 thinks green financing and its favourable interest rate suit well the society we have today and sees it as a good start of something that will grow much bigger in the future. R3 and R4 follow the same argumentation but mention that the benefits in rates will also be reflected through the risks and repayment capacity, whereof the pricing of green loans diverges among banks.

"All green corporate loans do not cost 15 points, regardless of which customer you are. We have never had uniform pricing for corporate loans. It always depends on the risk taken by the

bank in terms of credit quality and maturity, mostly the credit quality and so it will always be." (R3)

"We would never emit a green loan to a customer that we do not think has the repayment capacity, whether it is green or not." (R4)

SR2 however adds that green loans bring further investment opportunities for banks which leads to greater revenues. Thus, it is explained in most of the interviews that several organisations are or are about to transform towards sustainability in need of financial support. Moreover, SR3 stress that is one of the reasons the bank also accepts exposure to certain environmentally damaging industries, as transition companies can be accepted green loans.

6.1.6. Good relationships in risk management

To follow up and ensure identified risks are stable, the respondents underline the relevance of having good relations when working with green corporate loans. In SR2 it is possible to read that the relationships between the bank and its clients create an improved mutual understanding of expectations of sustainability work. The long-term dialogues allow bankers to partake in both good and bad times which creates an understanding of a particular business and its operations (R3). It can facilitate interpretations of a weaker period and its reasons. SR2 also mentions it as a way to increase the engagement for both parties which has been seen to improve the sustainability work.

"Good relationships are important in the context of green financing as it gets the bank closer to each customer. This facilitates understanding and the possibility of following up organisations' practices to ensure a transformation towards sustainability through its projects." (R3)

Continuously, R3 talks about good relationships as a way for the bank to proactively work with future risks. This information is also to be retrieved in SR3 and SR4. However, in the reports, it is mentioned how Bank 3 and Bank 4 have developed a tool specifically for customer relationships that are based on structured contact and analysis. Thus, they have criteria including environmental and social aspects. To ensure the tool provides stability from the bank's perspective, SR3 and SR4 cite the implementation of an internal recruitment system

based on tests to match the right person with an appropriate client and green loan. They are using this as a technique to improve the dialogue by placing local experts in certain regions.

For the development of working with risks, there is a desire for more standardisations to give all banks the same prerequisites to work with sustainable financing (R5). Also, to be able to work with green loans at a larger scale. Several of the respondents and sustainability reports express similar desires and stress they are working on permanent improvements to processes and routines. SR2 highlights that the bank always must develop to be able to develop their clients.

6.2. The role of ESG rating and sustainability reporting to assess risks

To further understand organisations and their sustainability ambitions, there are additional sources of information that can be used when assessing risks in the context of green loans. Based on the interviews, it is revealed that there is a spread in the extent to which companies use external information sources, such as sustainability reports and ESG ratings when emitting green corporate loans. For example, R3 expresses sustainability reports act as informal support and is lacking credibility. According to the other interviewees, this is not as black or white. Most of the respondents give indications that external information is used as a tool to monitor and assess risks related to sustainability, although it does not act as any decision-making document. For example, the interviewees highlight that the banks are using several sources of information to create an understanding of an organisation and how they are working with different elements or seen in the eyes of society.

To reduce potential uncertainties in external sources of information, R1 tend to reach out to those particular clients and ask for clarifications or other proof as support. In SR2 and SR5 it is also visible that the bank is having an ongoing dialogue with regulators, central banks, and the government. To continue, R4 brings up that there are large external agencies that provide credit ratings for the use of banks. The extent of usage of official or other public sustainability information in terms of risk assessment is ambiguous among banks. Several of the respondents express they use them, and that they serve a role, but limited and with precautions.

6.2.1. ESG rating in risk management

R4 indicates that own ESG analysis is important to help understand the impact of sustainability-related risks, their effect on the credit, and in what time horizon. The respondent means the

bank is creating its own ESG rating to be able to quantify organisations through their creditworthiness and risks. R3 claims they are doing their own ESG risk rating on all customers to get a measure to understand its dynamics. For this reason, according to SR3 and SR4, the bank further educates their employees to be able to understand the perspectives of ESG and changing regulatory frameworks. R5 informs about ongoing work to standardise ESG assessments within its bank to be able to be more concrete in the evaluations of risks. Thus, according to for example R1, R2, and SR3, the bank is considering ESG factors when an organisation is applying for a green loan and seems to be one of many parts of the total risk assessment. SR2 emphasise that environmental and social risks are considered when issuing credits. The bank states that they want to identify all ESG related risks to be able to get an idea of how sustainable an organisation is.

The course of how ESG efforts are being evaluated is however ambiguous among the banks. Although the continuous rating of sustainability-related risks further allows the bank to quickly impose extraordinary actions to understand the reasons why and help the customer get back on track. Similarly, R5 stress their own ESG rating is a part of evaluations and the work of assessment. This sort of internal rating system appears in several of the banks. Still, there are official organisational ratings of ESG that are mentioned during some of the interviews. R1 feels the official ratings have too much variety which makes them unreliable.

"There is great variation between different rating providers that have flaws in the analyses which is imposing that we cannot fully rely on what official ratings or companies' own ratings say. Instead, we embrace what rating providers say, but only use them as one of many sources of information. We draw our own conclusions based on broader material. That is why we have set up an ESG risk rating analysis within our own team. Because in the current situation there is no monitoring nor standards if you want to do a proper job of assessing risks you cannot just rely on external ratings." (R1)

However, R4 argues that ESG ratings do not have any decision-based significance in their lending practices at all. R4 says that a measure does not possess enough information for the bank in assessments as the ratings do not capture sufficient organisational complexity.

"We think ESG ratings simply do not capture sufficient organisational complexity. Therefore, we never look at external ESG ratings when giving loans, it is uninteresting. What we do look

at is our own analysis. We do not care if companies or external rating agencies say, "this looks great", it is not a requirement in our lending. We reason with our clients and hopefully understand what they are doing to look beyond this." (R4)

According to SR2, the bank is taking a stand on sectors depending on their ESG ratings. This indicates that the bank is valuing different ratings when it comes to certain investment decisions. Still, it is not written to what extent. Nonetheless, there is an expressed sight and belief that public ESG ratings are getting better and better but also starting from a low level (R4). With this, R4 stresses that if a company has good policies and reports its emissions and its status within its active sector, there are still insecurities about its true contribution to sustainable development. This entails unfamiliarity with how much each sector contributes to the environment and for example the SDGs. R1 also adds the fact that all organisations are not provided with a public rating. This can depend on the size of the corporation.

6.2.2. Sustainability reporting to assess risks

R1 and R2 put a high value on sustainability reports and see them as useful tools when evaluating risks and collecting relevant information. Similarly, most of the respondents express that they review sustainability reports to at least grasp an overall profile of an organisation to be able to reflect on various sustainability aspects. R5 and R4 even express sustainability reports are the main source of information when analysing a company.

"Reviewing sustainability reports allows us at the bank to get an overview of customers and their activities, different strategies, what transitions they currently are working on ... which helps the bank to create an own image of different companies. The information the bank absorbs is later used in the bank's own analysis." (R4)

However, SR2 mentions that Bank 2 does not review sustainability reports to assess risks for now but shows awareness that it is an emerging phenomenon that will be incorporated more to understand a complete organisation. SR2, therefore, stresses the bank tries to prepare their customers for stricter information and reporting requirements that will appear with time. Likewise, R2 comments that it will be more important to use organisations' sustainability reports in terms of green loans to get information about for example collaborative partners and their sustainability activities and plans for the future.

Although most banks express a high level of usage of sustainability reports for assessing organisations and their risks, there are concerns mentioned in audits. According to R3, Bank 3 show high consciousness that sustainability reports are not always audited, which decreases their trustworthiness with the knowledge that all information necessarily is not correct. Still, R3 stress the report is very much used, but with precaution. To reduce any gaps of uncertainty in the content of reports, R1 highlights how they are working with a continuous customer dialogue and asks questions are follow up directly if uncertainties arise from the reviews. Thus, the respondent stresses it can even out the balance of unrestrained sustainability information that otherwise can be difficult to interpret.

"As a rule, if a sustainability report is available, we use it in risk analyses such as of ESG. Meanwhile, we are trying to have a dialogue with the company to get more insight and clear out any uncertainties to understand the information in the report with enough depth" (R1)

"Sustainability reports are our main source of information in analysing a company, it is the core as it is where companies put all information together and then publish. In the best case, it is also audited which makes the information more trustworthy." (R5)

All respondents are united about the difficulties with grasping genuine content from sustainability reports. For example, because of partial audits of third parties and hence limited assurance. Still, the report is highly valued in the assessment work within the different banks. However, R3 does not agree with the advantages that others emphasised. According to R3, sustainability reports are lacking any significance in today's society and equate the report with nonsense. This inadequacy is blamed on the auditing industry as the interviewee feels they are having a self-explanatory role in auditing reports, where annual reports often contain sustainability reports.

6.3. Continuous development of risk management tools

All banks give the impression during the interviews and in respective sustainability reports of having continuous work on the development of new internal systems to manage risks when assessing and emitting green corporate loans. According to SR3 and R4, these new systems are based on trends in society and other regulatory developments that need to be followed. The framework they have within the bank is continuously developed in line with new laws and regulations (R4). During this interview, a belief was mentioned that the green lending market

will grow larger in the next coming year which also demands the bank to grow simultaneously. Nonetheless, it is time-consuming for banks to adjust to all new laws and regulations as well as it is for companies applying for financial support (R1). This concern is discussed in SR2 which says they already have started to prepare corporate customers for stricter demands on reporting.

R5 mentions an ongoing reconstruction of their framework to be able to meet a broader market of actors. Similarly, SR1 and SR2 emphasise the need to evolve existing routines and processes for a more efficient way to identify and measure organisations' sustainability work. However, R1 expresses a belief that the different frameworks existing today will become unified eventually.

"The development will lead to stricter requirements, so the variations seen today among the banks will disappear as everyone instead will have the same rules and definitions." (R1)

To meet the uncertainties of external sources of information as tools to assess risks, SR4 argues the bank has constructed its own rating tool to create a fundamental understanding of companies' sustainability performance. It is also stated in SR4 that they intend to continue innovating and creating new financial services. SR3 reveals they will continue to utilise their expertise and size regarding sustainability aspects. Moreover, SR3 mentions that the work of monitoring emitted green corporate loans support the banks positioning by delivering on a net-zero ambition.

R4 continues and feels that the importance of having good relationships with customers will increase as there will be more organizational complexities that the bank must be able to capture. On the contrary, R3 thinks green loans will fade with time and expresses a belief that all lending practices instead will be green. As the respondent feels that everyone must act all the time if we want our future to be green.

7. Discussion

The following chapter analyses the empirical findings from the five interviews and the respective banks' sustainability reports. The material discussed is based on concepts and terms from the theoretical frame of reference and follows the themes of the research questions. As such, the chapter initially discusses the perspectives and implications of risk management of green corporate loans using the emerging themes found to provide a deeper understanding of these matters. Following, the discussion similarly approaches ESG rating and sustainability reporting to understand their role when assessing risks.

7.1. Risk management of green corporate loans

The respondents in the study point out that risk management is an important part of working with green corporate loans. Thus, the ongoing effort of managing risks is mentioned together with complexities, for example, in terms of environmental impact. Brown and Moles (2014) however indicate that risk management not only revolves around how the different risks that are being managed but how potential consequences are being controlled. The authors suggest this occurs through the stages of identification, evaluation, and subsequent management. Similarly, Weber, Fenchel, and Scholz (2008) highlight that credit risk should follow the phases of rating, costing, pricing, and monitoring, in order to, for instance, grasp their minimum level of capital, net worth, and default risk (Francis, Harper & Kumar 2016). Identification is perceived as the basis for the level of management of continuous assessments. As Weber, Fenchel, and Scholz (2008), emphasise initial risk management also should seek to evaluate the borrowers' default risk which is suggested to be used as a base for emitting credits. Nevertheless, the empirical findings state the bank makes an overall assessment of all customers, which also covers factors like default risks to avoid credit losses.

To be able to follow the different phases of risks, the finding shows a trend that banks have individual frameworks that act as a base for green lending decisions. This is similar to the findings of Finansinspektionen (2018). These frameworks follow the same directives and principles and make it, according to some respondents, easy to decide on what loan to emit as it facilitates the understanding of the material they receive from clients in terms of risks. This is however difficult to comprehend as there are fundamental actions that the bank makes, and demand from its customers to align an agreement. The respondents stress this process requires effort and takes time. Still, the quite large differences between the banks' risk management of

green corporate loans could impact the loans' effect on sustainable development. Thus, some companies may have a more positive impact on sustainable development and others less, even though they both present their impact in the same way.

7.1.1. Differentiations in the risk assessment

The data reveals that the assessment of risks differs among banks as Finansispektionen (2018) has noted variations in the degrees of acceptance in loan granting. This also indicates that lending practices differ among banks although they follow the same principles (Hoegen, Steininger & Veit 2017). Even Möllersten and Ejlertsson (2021), Stojanovic and Ilic (2018), and Cibulskienė and Rumbauskaitė (2012) add that individual banks use their own techniques to perceive risks and the conditions they give their clients. This is validated by the empiricism as a result of their establishment of individual frameworks and interpretations of what can be recalled as green. Whereon organisations applying for green loans need security measures to contrast and mitigate the effects of the risk situation where banks have an important role when it comes to their reviewing and evaluating (Francis, Harper & Kumar 2016).

For example, Šotić and Rajić (2015) argue risk is a term of variation and is based on perceptions. Although the interviews confirm this reasoning, the variation in assessments initiates that risk management is used to a different extent in different banks. Thus, some of the respondents themselves show awareness of variations in definitions of what is green and what falls under the category of a green loan and raise the fact that banks differ in how they interpret official standards. Some of the interviewees continue to argue that green loans work in the same way as regular loans. Some of the banks' sustainability reports stress the requirements are equivalent to the bank's main purpose, which is financial, although green financing extends the concept and combines money and business with environmentally friendly behaviour (Hoshen et al. 2017). According to, for example, Li et al. (2018), the concept of green loans is yet undefined. The banks show variations in definitions and demonstrates the possibility that banks has to interpret official standards differently. Respondents said that within their bank, they have made their own definition of what they refer to as green, which unites the banks' work when making decisions. Finansinspektionen (2018) have found a connection between the lack of universally accepted definitions with variations in the assessment of sustainability-related risks for green corporate loans. Likewise, Möllersten and Ejlertsson (2021) argue that banks' different frameworks will imply they are dealing with green financial investments

differently. One interviewee responds to this by explaining it is more about small differences and nothing major.

Cibulskienė and Rumbauskaitė's (2012) research indicates that there is no consistent risk management among banks. They suggest the spread level of acceptance can create a negative influence on the financial sector as risks fundamentally are based on perceptions. So even if there are respondents saying the differences are rather small and nothing major, it would be advantageous if all banks used the same definitions in the same way. Horcher (2011) and Settembre-Blundo et al. (2021) state risk management is and should remain a dynamic and flexible process. Thus, some companies have a very green profile but still do not by default indicate low credit risk. In other words, just because something is seen as green, does not mean it has to be bankable or low risk, hence the banks' sustainability reports stress risks to occur at several layers. Despite this, it is not possible to eliminate all risks, which is the source of the opportunity arising because of exposure (Horcher 2011). It brings the possibility of loss and the opportunity for profit which needs to be managed.

Regardless, all reported material is being reviewed in accordance with Weber, Fenchel, and & Scholz (2008) which stress systematic updates on risks and development. That requires variations in the risk management process in terms of skills and techniques (ibid). This fact may be the reason why the interviewees ask clients for supplementary material or documentation for the bank to carefully monitor green corporate loans to ensure they are serving the agreed purpose.

Additionally, Leo, Sharma, and Maddulety (2019) see inadequate internal processes as a risk in itself. They also emphasise this risk can be based on the banks' people or systems. So, to reduce the risk of having inadequate processes of assessment within the bank, some of the bank's sustainability reports stress they have implemented an internal recruitment system to match the right person with the appropriate client, for example, by matching local experts with green lending requests from certain regions. Likewise, the findings indicate that relationships also work as a way for the bank to proactively manage risks through a tool that is based on structured contact and analysis. This may motivate why some credits can still be emitted, even if an increased sustainability risk has been seen (Finansinspektionen 2018). Strong relationships create a mutual understanding which allows bankers to partake in both good and bad times. This facilitates the interpretations of a weaker period and its reasons, which in turn

leads to the ability to follow up on organisations' practices to ensure transformation towards sustainability.

7.1.2. Monitoring of risks

To continue, Weber, Fenchel, and Scholz (2008) stress that emitted loans should be assessed throughout their whole active period, as risks are dynamic and can change with time. An interview suggests that there is no common valuation approach tailored to individual banks which forces them to develop individual concepts to manage risks which increases the complexity of green finance. Accordingly, the respondents and the banks' sustainability reports state that they all follow up on their clients on a regular basis. One banker however note that this may differ depending on the loan's intended purpose and the current ability of the bank to control its usage, as an outsider may have difficulties grasping details. Weber, Fenchel, and Scholz (2008) emphasise the relevance of grasping organisational details for the possibility of rapid actions in cases of elevated risks or similar. But as this work only seems to occur yearly it is ambiguous how deep an understanding the bank possesses of its customers. Some respondents argue green loans should not require additional efforts of monitoring, as loans are emitted through legally binding agreements.

Nonetheless, it is not possible to eliminate all risks even if they are being monitored (Horcher 2011). Witzany (2017) argues this can be attributed to the fact banks cannot always have the capacity to assess all aspects of credits. Hence banks must ask themselves whether they will be able to assess the credit in question over time. This work still seems to be conducted within the banks for the duration of a green loan, or until it is fully repaid. The interviewees stress it is not possible to look too far ahead. Instead, the level of monitoring should depend on the risk (Witzany 2017). Furthermore, there is a need to incorporate more environmental perspectives in risk management (Weber, Fenchel & Scholz 2008). On the contrary, the bank itself does not follow up on risks in the context of green corporate loans. The respondent points out it is up to the borrower to report progress, as bankers know finance and are not environmental experts. The financial infrastructure alone is an important base for the function of the society which requires full focus. Still, Sharfman and Fernando (2008), argue that environmental performers also are better financial performers. For example, it creates resource efficiency. Thus, Weber, Diaz, and Schwegler (2014) and Jeucken and Bouma (1999) discuss how banks act as a link between the financial sector and sustainable development through their lending practices.

7.1.3. Variations in risks

Some respondents emphasise that the bank has bigger demands on bigger credits. This entails that risk management also will vary in relation to the loan. Leo, Sharma, and Maddulety (2019) and Power et al. (2009) however mention that it will be determined by other factors as well, such as movements in interest rates as well as in risks concerning the market, technology, operations, and reputations. For example, the external pressure is revealed as one of the main reason green corporate loans are being emitted and monitored. Risk management will aso vary because of upcoming risks related to the environment (Settembre-Blundo et al. 2021; Jeucken & Bouma 1999). This entail that certain industries and organisation are being excluded from the possibility of getting a green loan. The empirical findings refer to these industries as ”dirty” hence they are not manageable in terms of sustainability or as an action to ensure the bank remains a responsible citizen. Accordingly, some banks do not do business with the dirty industries since it can lead to bad headlines in the press. This suggests a strong emphasis on specifically reputational risks when it comes to risk management of green corporate loans and a fine line of supporting environmentally damaging industries and helping them transform for the long-term aspect. Although, all risks are related to each other and are based on the banker’s own perception of a company.

Apart from declining industries because they are seen as environmentally damaging, there are also guidelines that the World Bank (2021) provides for other banks' assessment of sustainability-related risks (Weber, Fenchel & Scholz 2008). This also explains why banks that incorporate official guidelines are not funding high-risk industries. Likewise, the Disclosure regulation (2019/2088/EU) emphasises any sort of sustainable investment must encounter social, environmental, and economic considerations. Supporting certain industries thereof prohibits its mission as the guarantees of sustainable development are not certain (Weber, Diaz & Schwegler 2014). However, some of the bank’s sustainability reports mention that the bank does business with some environmentally hazardous companies. It can be interpreted as a way to bring in more revenue as they see green loans as a further investment opportunity. Nevertheless, a respondent argues that such investments will not add value, as they believe the companies within the dirty industries will eventually vanish due to not being compatible with a sustainable future.

However, during interviews, it is argued that these industries need the most support in terms of green loans to be able to transform. The integration of environmental risks into credit risk

management validates that the bank does not cause negative environmental impacts and acts as a responsible corporate citizen (Weber, Fenchel & Scholz 2008). If the bank does not have financial stability by making money and doing good business, then it is not a responsible citizen of society either. Therefore, the focus must be on what is best for the customers, since it adds value to the bank.

Still, Leo, Sharma, and Madduelty (2019) suggest credit risks will continually be the largest risk banks face although there will always be environmental concerns. Green loans at Bank 3 are primarily based on organisations' creditworthiness. This is because if a borrower fails to meet its financial obligations, there is a risk of losses to the bank (e.g. Leo, Sharma & Madduelty 2019). It can for example be interpreted that there is an awareness of uncertainties revolving around certain industries, but that the banks' primary agenda of collection is prioritied higher.

As we know from Finansinspektionen (2018), there are variations in banks risk assessment of green corporate loans, however, this study contributes to the research field by identifying what these variations are and their potential consequences. For instance, that some banks use ESG rating combined with sustainability reporting, whereas others only make use of the sustainability reporting even when believing it does to fully represent the client.

7.2. Green financing and legitimisation of banks

Weber, Fenchel, and Scholz (2008) argue that the integration of environmental aspects in risk management facilitates an understanding of risks, meanwhile, it can legitimise a bank's business activities. Thus, well-developed sustainability performance is a factor itself that can reduce the risk (Francis, Harper & Kumar 2016; Weber, Fenchel & Scholz 2008). Having environmental concerns within the banking sector can show external stakeholders that the bank does not cause negative environmental impact, by itself or its clients. Francis, Harper, and Kumar (2016) reveal banks usually reward this with favourable interest rates. Therefore, some banks' sustainability reports state that lower interest rates can be a way for the bank to attract more customers, which creates a mutual gain. Banks have high use in emitting green loans as it is the banks' major contributor to sustainable development and the SDGs. Likewise, respondents highlight that green financing improves the banks' sustainability profiles and simultaneously helps other actors to transform green financing makes the bank more

sustainable in itself in the long run. The benefit of emitting green loans returns to the bank through a mutual exchange of increased sustainability performance.

Few respondents, however, stress that the bank does not have any sort of uniform pricing for green corporate loans. It is rather assessments of the creditworthiness of a borrower that will determine interest rates, as the costing of credits should therefore be based on the rating which demonstrates the level of security an organisation can offer (Weber, Fenchel & Scholz 2008). Interpreted from the empirical findings, this means that if a company has a higher credit risk it will pay more to compensate for the risk. Thus, it is said the price will depend on the risk the bank takes, mostly in terms of credit quality. As there are respondents that do not see benefits such as lower interest rates as a matter of course. This again emphasises the important role that Francis, Harper, and Kumar’s (2016) research states banks have in reviewing and evaluating risks to ensure security measures. The findings underline there are no theoretical arguments for green loans to have lower margins. Instead, they see the possibility for an organisation to get a green loan as an advantage itself as it allows further communication of all the good work they are doing, only by fulfilling the requirements of a green loan. For example, the commitments underlying green corporate loans to some extent contributes to the preservation of the planet (Stojanovic & Ilic 2018). Despite this, some respondents stress a belief that favourable interest rates suit well in today’s society while others mention that the benefits in rates must be reflected through the risks and repayment capacity, which is why the pricing of green loans will diverge among banks.

7.3. Different information sources when assessing risks

The respondents in the study express a spread range of the use of other organisational information sources when emitting green corporate loans, to monitor and assess risks. For example, there are respondents that perceive some sources as more uncertain than others yet tend to use them in green financing. In consensus, Weber, Fenchel, and Scholz (2008) state it can depend on the limitations there generally are in regulated tools to ensure lending terms are being fulfilled. Meanwhile, there are several sources of information available for banks in terms of organisations’ own established and published sustainability reports and official ESG ratings. Nevertheless, most of the interviewees indicate the use of any external information does not act as the basis for decisions. Instead, they highlight that banks tend to use multiple sources of information to create an understanding of an organisation in terms of taking environmental, social, and governance criteria. In the bank's sustainability reports it is also visible that the bank

dialogues with regulators, central banks, and the government to ensure they are on track in their way of working. Similarly, the respondents reach out to clients if there is a need for clarifications. Therefore, banks have incorporated their own strategies for credit risk management regarding the environment as they have been struggling to integrate environmental risks into their credit decisions, which aligns the banks' business model further with sustainability (Weber, Fenchel & Scholz 2008; World bank 2021).

7.3.1. The role of ESG rating

For example, Horcher (2011) emphasises the use of quantifiable ratings as it creates the possibility to grasp the full risk profile of an organisation and limit variations. Whereof the concept of ESG should help to break down the complexity of sustainability (World Bank 2021). To do so, the collected empirical data show that banks have constructed their own rating tools to understand companies' sustainability performance and ESG related risks which makes it easier for the banks to make assessments. Thus, this sort of rating system appears at several of the banks. The interviewees see it as a facilitator to understanding dynamics.

However, the positive tone is not as obvious in the empirical data when relating the advantages of ratings to the official ESG ratings that external agencies establish for the use of banks. According to the World Bank (2021), an official ESG rating further demonstrates the overall organisational performance in measurable values, whereof the level of risk can be interpreted via a low rating or high rating. For example, some respondents feel they bring too much variety to results which makes them unreliable. Other respondents do not either see the value and stress that a measure does not capture sufficient organisational complexity that is needed to be able to make lending decisions as the respondent believes public ESG ratings are getting better but starting from a low level. Still, there are official providers of both frameworks and policies created by regulatory bodies such as the World Bank (2021) that can legitimise ratings. This creates diffusion about the purpose of having official ratings if they are not used. For example, a respondent understands the usage of the standards as an unguarded field. Therefore, the respondent feels it is better to assess risks by yourself than to rely on external ratings. The combined empiricism also adds the fact that not all organisations are provided with a public rating. This can depend on the size of the corporation.

Still, SR2 states that they want to identify all ESG related risks to be able to get an idea of how sustainable an organisation is. Investment decisions can therefore be affected by corporations'

ESG ratings and are becoming more important in green financing (Li et al. 2018; Briand, Urwin & Chia 2011). It can therefore be assumed that the bank is taking ESG factors into consideration when an organisation is applying for a green loan, but not necessarily through ratings. The findings indicate ESG related aspects seem to be one of many parts of the total risk assessment when issuing credits. Weber, Fenchel, and Scholz's (2008) research show that the continuous rating allows the bank to quickly impose actions if fluctuations would be noted. Also, Briand, Urwin, and Chia (2011) point out that ESG ratings can be used by banks as a simplified way to select companies that mutually can reduce risks but also bring opportunities stemming from environmental and social concerns, which can be important when operating in a changing industry. To better understand ratings, the banks' sustainability reports state that the bank further educates its employees on perspectives of ESG and changing regulatory frameworks and risks. Regardless, it is not only about affirming individual situations, but also about taking a stand on whole sectors. This indicates that the bank is valuing different ratings when it comes to different levels of investment decisions and that ESG is a part of green loans, but not necessarily its ratings.

7.3.2. The role of sustainability reporting

To continue, the thoughts on the use of sustainability reports to get an overall understanding of organisations, are more united among the interviewees than the use of ESG ratings. For example, there are respondents that see the reports as useful tools when evaluating risks and collecting sustainability-related information. Other respondents even express sustainability reports as the main source of information when they are analysing companies. However, Chang, Amran, and Iranmanesh (2019) found that information in sustainability reporting tends to be enclosed solely if it leads to an improvement of the corporate image, which raises doubt about the imbalance of negative aspects. The combined emerging findings indicate that this creates difficulties in interpreting the enclosed data. Still, the respondents defend this concern by explaining the report allows the bank to get an overview of customers and their activities, different strategies, and what transitions they currently are working on as that is something that helps the bank create its own view. In accordance with Chang, Amran, and Iranmanesh (2019) this should be the case as sustainability reports are established to reflect organisations' financial, ethical, social, and environmental activities. The report has been seen as a tool for managing stakeholders' perceptions of a company's reputation and legitimacy by bringing transparency through a balance of disclosure of positive and negative information (Moses, Che-Ahmad & Abdulmalik 2020).

However, one respondent does not see sustainability reports as transparent and perceives them with awareness of possible disclosed errors. The respondent stresses this depends on the fact sustainability reports are not always audited and therefore of insignificance in lending decisions, seeing them as informal support that lacks credibility. Thus, credibility gaps in sustainability reporting have been seen to undermine its limited use in financial decisions (Diouf & Boiral 2017). Even though the reports are not always regulated, some banks still use them as one of the bank's main sources of information in analysing a company. This could be explained by the fact that more sustainability reports today are being verified by third parties (Boiral, Heras-Saizarbitoria & Brotherton 2019). Still, the respondents mention that it would be better if all reports were audited as they now take risks in the usage of the reports as it is known that the information is not always completely trustworthy. Hence the improvement of the quality of sustainability reporting, in terms of them being audited, enhances their usefulness in bankers' assessments, as it makes it easier for benchmarking between, for example, years (Diouf & Boiral 2017).

To reduce any gaps of uncertainty in the reports Moses, Che-Ahmad, and Abdulmalik highlight external auditing can be a solution hence it promotes accountability to companies' stakeholders which increases trust in the enclosed information. There have also been efforts to standardise sustainability reports, but this has not yet been successful due to inconsistencies limiting the information quality and credibility (Diouf & Boiral 2017). Diouf and Boiral (2017) stress, a balanced disclosure of information ensures the quality of reporting. The collected findings further highlight how the banks in alternative ways are working with a continuous customer dialogue and follow up if uncertainties arise from the reviews. Yet despite the quality of sustainability reports as a source of risk management, there is a belief that banks always will face sustainability risks. Thereby, it is also about the banks' ability to understand complexities in risk evaluation via for example sustainability reports and instead accept the concerns and identify, manage, and prevent risks in an organised way. Although, organisations' sustainability reports need to reflect several aspects of their sustainability activities to enable an overall assessment.

7.4. Continuous development of risk management

Overall, rating risks can occur in different ways but in terms of the environment, ESG in particular can have relevance to banks (Ziolo, Bak & Cheba 2021). The empirical material indicates that a bank must have specialists to be able to assess dynamics in risk uncertainties

with a client or its available sources of information as per ESG rating or sustainability reporting. However, new rules and laws continue to develop which affect current investments (Stojanovic & Ilic 2018). This can also be perceived as affecting the effort bank makes in terms of risk management of green corporate loans. The combined sources of empirical data give the impression of awareness of active changes in the lending market as they are having continuous work with the development of internal systems and frameworks to manage risks. As for banks to manage change in society, Möllersten and Ejlertsson (2021) and Leo, Sharma, and Maddulety (2019) argues that there simultaneously is a need for improved risk management to be able to assess emerging variations of risks. This creates additional work for the banks. Yet stricter demands within green financing and its development contribute to the reduction of risks of climate change (Hoshen et al. 2017; Stojanovic & Ilic (2018). A respondent stresses that the development with time will lead to stricter requirements and reduce the variations that today can be seen among banks in terms of rules and definitions. Which further can stimulate a more sustainable economy (Hoshen et al. 2017).

It is however noted that it is time-consuming for banks to adjust to all new laws and regulations. Stojanovic and Ilic (2018) reason this can be because the work of environmental protection is a long-term process. Still, an interviewee reveals an ongoing reconstruction of their framework to be able to meet a broader market of actors. Similarly, the banks' sustainability reports emphasise the need to evolve existing routines and processes for a more efficient way to identify and measure organisations' sustainability work and reveal they will continue to utilise their expertise and size regarding sustainability aspects.

8. Conclusion

The following chapter compiles the results of the study and concludes with theoretical insights. It also gives suggestions for further research within the field.

8.1. Theoretical insights

The purpose of this study is to contribute to a deeper understanding of banks' operational risk management of green corporate loans. The objective is also to perceive the role of different information sources, as per ESG rating and sustainability reporting to assess risks in the same context. The results confirm the implications that banks are working with risk management on all clients applying for green loans, but to varying degrees. Risk management is partially based on bankers' own perceptions of different companies, in accordance with the relationships with their clients. This indicates that even though, for example, Francis, Harper, and Kumar (2016) found that well-developed sustainability work can reduce risks, banks are more prone with their risk management if they have strong relationships with their clients rather than the necessity of them having low risk. Wherein there are banks that make use of various sources when assessing potential clients, consequently, they can make a more objective assessment of their clients and offer green loans to organisations who truly will use them for sustainability reasons. Thus, it is debateable if these loans actually achieve their intended goal. Furthermore, this entails the acceptance of risks is spread even though banks follow the same regulations, as Finansinspektionen (2018) has also stated. However, this study adds that variations may be the reason there are difficulties for regulatory bodies to establish official definitions and standardisations in the assessment of risks, which still makes it difficult for banks to grasp all complexities in organisations sustainability activities through risk management.

Assessments of risks are evidently made with banks' individual frameworks, which develop with societal development. Wherein it provides understanding and the ability for bankers to make adjustments in issued loans if factors such as new regulatory requirements appear. Therefore, banks are operationally working with monitoring to be able to act if a risk would increase or if the circumstances would change. However, the empirical findings reveal that one way for banks to manage risk is through avoidance of, for example, certain industries or companies to ensure their contribution to sustainable development. It also reveals that the variations are valid as this is not always true hence it is noted that banks' foremost risk and opportunity is financial.

To be able to grasp the risk profile of organisations, the study demonstrates that additional sources of data are important in the context of risk management. The results however provide an ambiguity regarding the role as per organisations' ESG rating and sustainability reporting when assessing risks. For example, measures in terms of official ESG ratings and sustainability reporting underline the value of the use for the holistic understanding of risks. Nevertheless, banks' perceptions of factors such as the quality of organisations' documentation are low, as the study notes concerns with the credibility and the lack of auditing. So, although Giese et al. (2019) and Li et al. (2018) have discovered a reciprocal relationship between a lower ESG rating and good risk management there are concerns that banks must consider. Ratings act as an implication of performance but lacks nuances. Likewise, there are credibility gaps in sustainability reporting (Moses, Che-Ahmad & Abdulmalik 2020) which this study confirms hence the empirical findings unitedly shows a high awareness of uneven disclosures. This indicates that the easy availability of public information may affect its high usage, even though it is made with precaution. Thus, there are implications that the use of external information is seen as more reliable if the bank puts the data from sustainability reports and ESG ratings in their own analyses and measures as it otherwise can imply that the loan does not have the full positive impact as it is intended to have. This however indicates that these sources of information have an important role in banks' assessment of risks but does not act as support for any final decisions at the present time.

8.2. Suggestions for further research

This study was carried out through five interviews with bankers of different operating areas within Swedish banks, and five related sustainability reports. The results provide a deeper understanding of banks' operational risk management of green corporate loans and the role of organisations' ESG rating and sustainability reporting to assess risks, but are only valid for the specific, and limited, context of Sweden. It does not bring a holistic understanding of a larger population. Therefore, it would be interesting to analyse perceptions in other countries and based on a larger sample, also through quantitative studies.

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Appendix 1: Interview Guide

Introductory questions

- What is sustainable development for you and/or the bank?

Green corporate loans

- How do you decide which businesses get approved for a green loan?
- What are the differences between getting a regular loan and a green loan?
- Do green loans always imply favourable interest rates?
- What (other) advantages do you see with sustainable financing like green lending practices, from the bank and the issuer's perspective?
- How do you reason if you get in contact with a business that brings insecurities regarding the assessment work if they meet the loan requirements or not? (e.g. uncertainties about whether the investment will contribute to sustainable development)
- Can you tell me about an occasion when you had to turn down a green loan? (If it has happened)
- How do you work to ensure the loan has served the agreed green purpose?

The role of ESG rating

- What role does ESG/rating have in the green lending practices?
- Has a company's ESG rating changed (for better/worse) during the duration of the loan?
- Is any other type of risk-assessment performed during the loan period?

The role of sustainability reporting

- What is your/the bank's view on sustainability reporting?
- What is the role of the sustainability report when you work with green corporate loans?
- How do you evaluate the sustainability report?

Risks/Monitoring

- How do you consider the future aspect of whether the loan in the end contributed to sustainable development?
- Has it happened that a company did not invest the money in green activities? (e.g. that the loan requirement did not get fulfilled)

Other reflections

- What do you see as most important when speaking about green loans?
- How do you think banks will have to work in the future with green loans and green finance (e.g. to ensure that green loans contribute to sustainable development)?

Closing questions

- Is there anything you would like to add? (e.g. recommendations)