Business Models in the E-Commerce

Integrating Credit Risk Management to Business Models

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Abstract

The development and complexity of the e-commerce sector has increased the demand for companies to grasp and develop their business models, as well their credit risk management functions, in order be profitable and create value. This thesis examines how credit risk management can be integrated in a business model, in terms of a customer value proposition, profit formula, key processes and key resources. Theories about business models state that a business model should give a holistic view of the company and how it operates. Features for a successful model should include functions that create value and increase competitiveness, as well as generating valuable cost and risk structures to ensure the company's profitability. The empirical data was collected through interviews and secondary data at Klarna, a company that operates with payment solutions in the e-commerce, a market where the risk of credit losses is high and to have proper credit risk functions is a necessity. The result revealed that credit risk management is a fundamental part of a business model in the e-commerce, since effective credit risk management functions ensure that the elements of a business model are functional and complement each other. The study further found that there are certain prominent functions in each one of the four elements that enable the integration of credit risk management in the business model.

Keywords: Business model, value creation, credit risk management, e-commerce, customer value proposition (CVP), profit formula, key processes, key resources.

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1. Business Models in the E-commerce

"Without a well-developed business model, innovators will fail to either deliver – or to capture – value from their innovation. This is particularly true of Internet companies ... "

(Teece, 2010, p. 172)

The development in the communications and computing technology during the recent years has caused a change in the balance between the consumer and supplier, resulting in consumers having more choices. This change implies that it is of utmost importance for businesses to have a customer-oriented focus and to re-evaluate their value propositions. However, to create and capture value requires a well-developed business model. (Teece, 2010) The concept of business models is one of the most discussed terms within the area of e-commerce, and the scarce resources of the digital economy have brought along a shift from production to communication, which essentially has caused challenges to the entire design of the value creation for a company (Alt & Zimmermann, 2001).

Furthermore, factors such as the economic slowdown in the 2000's, as well as the competitive nature of the low-cost technology based market, have put a requirement on companies to modify existing business models or create completely new ones in order create value (Casadesus-Masanell & Ricart, 2011). In short, a business model can be explained as a story that explains how all the elements of an organisation work, and how they make money as well as create value for the customer. To have a good business model is recognised as an essential part of a successful organisation (Magretta, 2002). However, even though it can be known as a crucial aspect, there seems to be a lack of understanding of the concept (Alt & Zimmermann, 2001), and to grasp it can therefore be necessary for organisations within the e-commerce sector (Dubosson-Torbay et al, 2002).

The concept has only in the last decade risen into public awareness (Teece, 2010), and the use and acceptance of business models can be interrelated with the Internet boom in the year of 2000, which developed the complexity of the business environment. Furthermore, the Internet boom has opened new ways for companies to conduct and manage their business, and further on it has also brought along new means of the constructing and reframing of the business model in order to sustain competitiveness on the market and create value in the e-commerce. By that companies start to realise the importance of the concept. (Sako, 2012)

However, to develop a successful business model is not always that straightforward, there are several different elements that must be considered and fit together. A good model should include compelling value propositions to the customers, and achieve valuable cost and risk structures. It should also enable the company to deliver products and services in line with the captured value. Nonetheless, a proper adjustment of technology; products; people; as well as management, are known as critical features of the profitability of a company´s model and to be able to create value. (Teece, 2010) Likewise, to create value and be profitable, a crucial aspect is to identify and understand the specific processes and resources that facilitate them to deliver value to the customer, and also how it can be captured. (Johnson, 2010; Dubosson-Torbay et al, 2002) Based on that, Johnson (2010) states that a business model should incorporate a *Four Box model* consisting of four different elements: a *customer value proposition*, *a profit formula, key resources* and *key processes*, in order to be successful and both create and capture value.

Nevertheless, at the same time as the e-commerce has revolutionised the concept of business models in order to produce value, it has also put new demands on companies operating in the e-commerce. The anonymity of the transactions in e-commerce require a re-evaluation of traditional value chains, and therefore companies need to think innovatively and identify the risks that are involved in the transactions and also how those risks should be managed. (Manchala, 2000) In fact, Svenska Dagbladet (24 October 2012) reported that the growth of the e-commerce and possibilities of part payments and invoicing when buying online has led to an increased level of debt errands and insolvencies for customers. Also, buying online often means that customers must provide personal information to the merchant, which can in some cases contain a risk of that information being abused or give an opportunity for fraudulent behaviour (IIS, 2009). In addition, Lowry et al. (2006) state that potential payment fraud is 30 times bigger in the e-commerce than in the physical world. Consequently, the requirement for secure online payment systems is increasing, which in turn has evolved the role of the online payment solution provider. Due to the circumstances above, a critical challenge for the online payment solution provider is stated to be their ability to deal with credit risks. However, despite the development of the importance of online payment solutions there is a lack of research about how it is managed. (Lowry et al., 2006)

Further on, the nature of the e-commerce means that companies must re-evaluate their credit risk management functions in order to stay profitable (Manchala, 2000), while at the same time ensuring that the value creation stays intact (Teece, 2010; Johnson, 2010). Albeit there are previous studies on the subject of managing credit risks in the e-commerce, the integration of

credit risk management in a business model is yet an area that requires more studies. Also, the literature on business model innovation remains so far on a rather theoretical level, and therefore more empirical research is needed (Zott et al, 2011).

1.2 Research question and purpose

The research question in this study is: *How can credit risk management be integrated in a business model?*

The purpose of this study is to provide an understanding of how credit risk management functions can be integrated in a business model. The emergence and complexity of doing business in the e-commerce has evidently had an impact on the business models and value creation for companies operating in the sector, and consequently it is a necessity to identify the different elements in the model in order to gain value and develop a successful model. Therefore the purpose of this research is to study *how credit risk management can be integrated in an organisation´s business model in terms of the four elements: customer value proposition (CVP), profit formula, key resources and key processes.* Previous academic research on the subject is lacking, and therefore the aim is to contribute with an understanding on how credit risk management can be incorporated in the four elements.

2. Literature Review

2.1 A Description and Definition of a Business Model

The initial definition, and perhaps the most cited definition of a business model is given by Timmers (1998) (Petrovic et.al., 2001; Pateli & Giaglis, 2004; Alt & Zimmermann, 2001), who defined a business model as following:

"An architecture for the product, service and information flows, including a description of the various business actors and their roles; and
A description of the potential benefits for the various business actors; and
A description of the sources of revenues." (Timmers, 1998, p. 2)

The term business model is widely used within the e-commerce sector, both in academia and practice. Nevertheless, the term is lacking a common understanding of the essence and purpose of a business model. The lack of consensus has caused researchers to propose several definitions of the term business model, and several authors also choose to leave the definition out. To have a sound business model is recognised as an important aspect for an organisation since it can influence the revenues and future success of the company. (Alt & Zimmermann, 2001) Although there is a common understanding of what a business model, it can be stated that a shared consideration of the term is that a business model is describing how a company earns a profit and how they provide the customers with more value than their competitors. (Petrovic et.al., 2001). Magretta (2002) states that:

"A good business model answers Peter Drucker´s age-old questions: Who is the customer? And what does the customer value". It also answers two fundamental questions every manager must ask: How do we make money in this business? What is the underlying economic logic that explains how we can deliver value to the customers at an appropriate cost?" (Magretta, 2002, p. 4)

A model describes how the business elements of a business fit together, which can identify a business model as a clarification of how an organisation works (Magretta, 2002). It can also be a leading document for a company since it maintains a complete view of a company and how the business should work (Abrahamsson & Karlöf, 2011, p. 30). Even though it can be a leading document, an early stage business model needs to be flexible in order to support the model to create value (Johnson et.al., 2008)

2.2 The Logic and Value Creation of a Business Model

To create, deliver and capture value is recognised as the core of a business model. *Value* and *logic* are two generally used words when talking about business models. One central role of a business model can be stated to be an architecture of a promising business concept, which consisting of several different elements that together express the logic and value creation of the company (Osterwalder et al., 2005). In addition, the logic of a firm´s value creation should include the firm´s core activity and approaches that support the success of the model. This means that the activities that are included in the value creation of a company are the core components of its business. (Linder & Cantrell, 2000) The creation of value from the model can be generated by the activities that a firm does in order to satisfy the customers, and by that it creates net value. Once a company has created value they also have to capture value from their activities. Without capturing value, a company cannot be sustainable over time. (Chesbrough, 2007) Further, Chesbrough states, *"a better business model often will beat a better idea or technology"* (2007, p. 12).

Recent changes in the information and communication technology is acknowledged to have brought more choices for customers and supply alternatives have become more varied. This implies that companies need to develop their businesses into more customer-oriented and re-evaluate their value propositions they present to customers. A business model explains how value is created and delivered to the customer and further how payments received are converted into profits. The essence of a business model is to embody the financial and organisational architecture of a business and is in its simplicity a conceptual, rather than financial, model of business. However, further on, an established business model might very well be embedded in a company's business plan or income statements. A good business model should be value creating, but it should also enable achievement of beneficial cost and risk structures. The design of a business model is a critical success factor for the organisation, and therefore it is important to continuously make it practical to keep the model successful. A crucial aspect to making the business model sustainable is to adapt the model to the competitive environment. (Teece, 2010)

Furthermore, the logic of a business can be argued to involve three different hierarchical stages: *the business model*; *the business processes*; and *information- and technology (ICT) (*Petrovic et al., 2001). The business model makes sense to the business processes of a company because it is the model that is describing and designs the processes. Nonetheless, there is a dynamic relationship between the two stages: business processes and ICT. Even though the business model is on a higher level in the hierarchy, and should have more impact on the business, it does not

decrease the possibility that ICT can affect or modify the processes of a business model. Although, when the model is changed it likely affects the process and ICT, but to make a successful implementation both the process and ICT need to be appropriate for the model. (Petrovic et al., 2001)

While the business model executes the logic and data of the company and holds to some extent the competitive advantage of the company, a successful business model may become transparent and easily imitated within a few years – or months. Therefore, it is vital to implement systems, processes and assets that are hard to replicate into the business model. Having a level of opacity, or "uncertain imitability" in a business can make it harder for competitors to understand how a business model is implemented and which elements benefit to the model. (Teece, 2010)

2.3 Elements of a Business Model

A business model consists of several different elements that together create a holistic view of the company, which are assumed to generate value for the organisation (Osterwalder et al., 2005). However, to create value with a business model a company needs to identify those specific elements in the model. Johnson et al. (2008) state that a model consists of four interlocking elements – also called the *Four Box model* (Johnson, 2010) - in order to generate value: customer value proposition (CVP), a profit formula, key resources and key processes. CVP and profit formula are stated as elements that define the value, while the key resources and processes are describing the value. Depending on the interlocking between the elements, a change in one element may affect the other. One key to having a successful business model is to have consistent elements that complement one another. (Johnson, 2010; Johnson et al. 2008)

2.3.1 Customer Value Proposition (CVP)
Generating value for the customers can be stated as the most vital element of the value creation of a business model (Johnson et.al., 2008; Osterwalder & Pigneur, 2010). CVP is about a getting a "job" done for the customers by helping them with a problem, or fulfil the need, in a given situation, which demands a solution. When the problem or need is defined, and the complete process, that will be needed to provide a solution, are understood, the company can design the offering that makes the customer buy from a specific company. (Johnson et al., 2008) However, in order for being able to give value to the customers and to make the business model work, the company must have identified who their customers are. Some additional aspects of the value creating for the customer, is to reduce potential risks in the purchase, and to offer a product/service that is accessible by making it available for the customer, and also to make it

functional through making it easy to use. (Osterwalder & Pigneur, 2010) When it comes to the e-commerce sector, finding a suitable customer value proposition involves often measurements of customer risk. Companies in this market need therefore to analyse what implications risk has on the customer value proposition. (Ruch & Sackmann, 2010)

2.3.2 Profit Formula

This element identifies how a company is creating value for themselves while at the same time providing value for the customers. The formula consists of a revenue model, a cost structure, marginal model, and resource velocity. (Johnson et al. 2008) Essentially, the profit formula is an economic blueprint that expresses how the company creates value for both itself and its stakeholders. The revenue model and cost structure stipulates the assets and fixed cost structures, while the marginal model and resource velocity specify what is required to cover them. (Abraham, 2013) What is more, the resource velocity is not about how much money is flowing into the company but rather how quickly it turns over. Therefore a high resource velocity is considered something to strive for. (Johnson et al. 2008)

Moreover, the revenues are dependent on how much the customers are willing to pay for the product or service. In addition, a business model can include two different streams; transaction cost (one-time customer payment), or by recurring revenues (on-going payments that deliver value to the customers, or providing customer support after the purchase). (Osterwalder & Pigneur, 2010)

2.3.3 Key Resources

Each business needs to have key resource to create value (Osterwalder & Pigneur, 2010). This element consists of company´s assets such as people, technology, products, facilities, equipment, channels and the brand. The resources are needed to deliver the value proposition (CVP) to the customer. The central part of this element is that it creates value for both the company and customers, and also to have those key elements interacting with each other. (Johnson et al. 2008; Abraham, 2013) Furthermore, a company´s key resources can either be owned by themselves, leased, or be acquired from their key partners and the importance of different resources varies depending on the company's business model. The key resources can be categorised into *physical, intellectual, human* and *financial* resources. *Physical resources* include mainly physical assets, such as facilities, buildings and machines, but intangible resources such as systems and distribution networks are also put under this category. *Intellectual resources* can be brands, patents and copyrights and customer databases. These resources can be difficult to develop but contain

significant value when successfully created. *Human resources* comprise of the human workforce and are especially important in knowledge-intensive and creative industries. Finally, *financial resources* are used in some business models that require financial resources or financial guarantees, such as cash or lines of credit and may be used in situations that need, e.g. bank loans for funding vendor financing. (Osterwalder & Pigneur, 2010)

2.3.4 Key Processes

This element consists of managerial and operational processes that make the value creation possible, and it involves processes, rules and metrics, and norms. The processes are involving aspects such as product development, IT, sourcing, and marketing and additionally, rules and metrics such as credit terms and margin requirements for investment and supplier terms. The foundation of a company's norms is consisting of size needed for investment, approaches to customers as well as channels. However, to create value, it is always needed to integrate the key processes and key resources in a unique way to make the job even better for the customer. Moreover, when there is synergy between these two elements the company can create an enduring competitive advantage. (Johnson et al. 2008; Johnson, 2010) Overall, the key processes express how a company delivers on the CVP in a sustainable, repeatable, scalable and manageable manner. (Abraham, 2013) Moreover, the key processes can be comprehended as the link to day-to-day operations, and also be acknowledged as a vital part of keeping the business model in a proper balance (Johnson, 2010).

2.4 The Interconnection of the Elements in a Business Model

The elements of a business model are interrelated with each other, and changes in one element in a business model can affect the entire model and the outcome of the company´s business operations (Johnson et.al., 2008; Abraham, 2013). Nevertheless, a change in one element, that doesn't require changes in other elements is fully possible and does not entail a new business model. However, when a change in one element affects other elements it requires a change in the business model. Moreover, if a company's model declines in its ability to create, capture, or deliver value, a change in the elements is required. Additionally, a reason for business model innovation failures can be dependent on too many small modifications in the model when actually a radical change would be demanded. (Abraham, 2013) However, even though the four elements can help executives to design and evaluate a business model, the elements can also hold a preconception of how a business model should look like and thereby limit the development and innovation of the

model. Consequently executives should choose the components of business models in accordance with how the organisation should operate. (Casadesus-Masanell & Ricart, 2011)

To accomplish the work in a different way from competitors can also be known as a vital part of how the company creates and captures value (Teece, 2010). The core competence can be the foundation of a company´s work activities in order to differentiate from competitors. Furthermore, a company can also develop a unique method of how they secure their capital that is demanded for monitoring their core competencies. Although a business model can have a great influence and serve as strategic tool for an organisation, it can also cause some issues considering the creation and use of the model. These potential issues can be related to inadequate assumptions of the organisational core logic, value creation, value capturing and value network, as well as act as a limitation of strategic choices. (Shafer et al., 2005)

2.5 Integrating Credit Risk Management to a Business Model

While creating value and adding competitive advantage are the most essential factors of business models, rethinking an old business model will make the firm fit for the future and to create value. It is therefore crucial for companies in the e-commerce to rethink their business models to facilitate risk management. (Amit & Zott, 2001)

The emergence of e-commerce has accelerated the trend of risk management and analysis in organisations and has forced companies to identify potential threats and losses of their operations. One way to meet these requirements is to use a business model that can provide a rigorous framework for identifying and evaluating potential risks. To manage risks the organisations need to structure their business functions in the business model. Also, since the business model is developed after these functions, the employees who are working at the risk department should be well aware of the business functions. (Suh & Han, 2003)

Payment fraud and customer migration are recognised as some of the most significant customer risks for e-commerce. In order to reduce these risks, the "traditional" model of risk management needs an additional dimension to automatically manage risks concerning both the customer and the payment solution. Tools for managing risks and insecurity have to evaluate the customer risk in real time, automatically, and each transaction has to be made separately. (Ruch & Sackmann, 2012) One means of calculating and evaluating potential risks is to apply analytics. The increase of competition and the vast production of data mean that organisations need to apply analytics in a larger extent. By applying new ways to collect data and conduct analysis, companies can obtain

value from their data in a larger extent and thereby gain competitive advantages. New technology is capable of collecting more data than ever before, but organisations need to learn how to analyse the data in order to gain all its value. When companies learn how to use their analytical capabilities to the fullest extent, it can be used to achieve advantages in a long run. Leaders and executives have stated that they want data-driven decisions to be incorporated in the decision-making processes of businesses and to involve analytics to be able to exploit their data and computational power in order to *"get smart, and get ahead, in ways they never could before"* (MIT Sloan, 2010, p. 4). Also, organisations with advanced usage of analytics in their daily operations are often found to be performing better and thereby able to gain competitive value from their data. (MIT Sloan, 2010)

2.6 The Process of Managing Risks

A study conducted by PwC reveals that shifts made to the business model can have implications to how risk is managed. The study therefore suggests that risk management should be implemented in business models in order to provide more stability to not only risk functions, but also to business model changes. (PwC, 2011) In the e-commerce sector it is important to manage potential customer risks, and to be able to decrease these risks several organisations respond by introducing risk management. (Ruch & Sackmann, 2012) Risk management can be described as a process consisting of planning, monitoring and controlling of activities and is higly dependent on the risk analysis activities. Risk analysis consists of an identification, estimation and evaluation of the risk. Identification consists primarily of risk analysis, since the organisation needs to identify risks of assets and threats and detect vulnerabilities. Once the risks are identified the next step is to estimate the risks, which entails an estimation of the probability and potential consequences if the risk should occur. This risk estimation can further on be seen as an indication of a company´s acceptability of risk. Then the risk should be evaluated, which means that the risk is calculated based on values from the risk estimation. These stages of the risk analysis are supposed to ensure the decision-making process of risk management, which has the primary function of identifying and implementing proper security controls to minimising risks, and this is based on the risk analysis. However, even though security controls have been made there will still be risks left and due to this the process of managing risks for an organisation is a continuous process, which is highly dependent on both internal and external changes. (Gerber & Von Solms, 2004)

The competitive business environment today means that risk managers are confronted with more challenges. Risk managers should monitor and decrease credit risks by selecting and granting

credit to the "right" customer. It is demanded to find a proper strategy where customers with negative behaviour (non-payment, fraud) can be identified, which in turn should help the company to minimise further credit losses. (Siddiqi, 2005, p. 1) The risk departments are commonly advised whenever new strategies will cause changes to the company´s credit risk portfolio, and based on that the risk managers ensure that the credit risk guidelines are followed, and also that the company has appropriate capital for their risk profile. (Siddiqi, 2005, p. 16)

2.7 Credit Risk Management

Credit risk can be defined as the "potential losses from refusal or inability of credit customers to pay what is owed in full and on time". Furthermore, credit risk occurs when a customer purchases a product or service without immediately paying for it. In other words, credit risk represents an amount of money that will be paid in the future. A reason for the existence of credit risk is because the expected payment might not occur. When an organisation decides whether to grant the customer credit or not, a trade-off is made between the credit risk and the return of revenue for the credit provider. (Graham, 2000, p. 1)

The credit management manage the credit risk and has the responsibility to insure that the company´s given credit will not jeopardise the cash flow, and the mainly concern is to manage debtors and financial debts. Another function of credit management is to manage and apply appropriate credit terms (policies and procedures) to the risks, which then is the foundation of how credit management collects the debts. Furthermore, a necessary task is credit control, and the simple reason is because it will reflect the organisational profitability. (Graham, 2000, p. 23) There are several ways to achieve credit control that can be useful for an organisation to practice (Graham, 2000, p. 26):

- Establish principles to use when taking decisions about granted credit.
- Formulate and execute policies for credit terms.
- Credit assessment for each individual customer when taking decision about granting credit.
- Build up an operational management to the whole credit cycle (e.g. invoicing, collection procedures).
- Manage credit limits of customers and their creditworthiness.
- Offer a secure payment method.
- Frequently monitor debtors and bad debts.
- Establish an organisation that can manage credit control.

According to Thomas et al. (2000, p. 1), a well-known method that organisations are using to manage credit risk is credit scoring. Credit scoring is nowadays used in almost every form of consumer lending. Moreover, the main purpose of using credit scoring is because it is a way to forecast the financial risk and future bad debts. Credit scoring is based upon statistical or operational research methods. Furthermore, credit scoring can be recognised as a decision-making tool with several technical components that support the creditors when deciding to grant the customer credit or not. (Thomas et al., 2002, p. 1)

2.8 Credit Risk Control Mechanisms

The faceless and anonymous way of conducting business over the Internet has different characteristics from physical commerce and has been associated with risk perception. In a study conducted about attitudes towards online shopping it was found that the participants were almost unanimously apprehensive towards purchasing online because of the perceived risks connected. Trust is a fundamental ingredient in the relationship between the buyer and seller and is a critical substance whenever risks, uncertainties and interdependencies exist and therefore appropriate risk mechanisms need to be installed. (Palvia, 2009)

To be able to get an overview of how credit risks can be analysed and managed during a transaction within e-commerce, Manchala (2000) has created a practical model for it. In order to control risks between a buyer, a merchant and a possible transaction intermediary, certain metrics need to be established to verify online transactions and thus decrease potential credit risks. The traditional models used for transaction verifications are often based on credit-card systems and measure risks as a function of credit history. However, in the modern times of online payments credit risks need to be measured in a more theoretical way in order to facilitate online payment verifications better suited for today's electronic commerce. Metrics have therefore been categorised into Variables, Variable Parameters and Actions in order to present a more contemporary method of risk control mechanisms in online transactions. The variables include transaction costs, transaction history and spending patterns. Transaction costs refer to the risk of revenue loss established from the amount of transaction, meaning that low-amount transactions have a decreased risk of revenue loss, while high-amount transaction costs bring forth an increased risk of revenue loss. Also multiple low-amount transactions made by a customer require attention against potential revenue losses. Transaction history shows the customer's previous credit history and is used to evaluate the customer's credit worthiness and level of risk. For e-commerce the transaction history can include the customer's buying patterns of previous purchases and

transactions. Spending patterns are much alike the customer's transaction history and changes in a customer's spending patterns should send warning signals for fraudulent behaviour and thus alert for an increased level of risk. (Manchala, 2000)

The variable parameters include time and location of the transaction. If multiple transactions are conducted within a short period of time, it might indicate a breach in security and should thus be seen as an alarm for increased level of risk, as would also a transaction routed through an intermediary with a compromised state of security. Lastly, the action taken to minimising risks is verification of the customer. Verification should always include a review of the customer's background information, such as transaction history, payment information and ability to purchase goods. A successful verification is supposed to eliminate the possibility of an anonymous person or a stolen identity behind a purchase. (Manchala, 2000)

2.9 Concluding the Literature Review

The literature review expresses that business models can be considered as a way to describe how an organisation works, and can be known as a building block for a company's competitiveness. The evolution of the information and communication technology and the advent of the e-commerce have brought attention to business models, and how companies need to develop their businesses to accommodate the customers' demands. Essential characteristics of a business model are to create value, generate profit, as well as possessing recourses and process to enable execution of the model. Besides, a good business model should achieve beneficial risk and cost structures. In relation to this, the credit risk management has the responsibility to insure and control that the company´s given credit will not jeopardise the cash flow, which in turn will be reflected in the profitability. Furthermore, the innovations in technology and e-commerce have created new opportunities for analysing data and building of new models to be used for handling of credit risks.

Nonetheless, to identify the different features that create value becomes therefore crucial for an organisation. Johnson (2010) and Johnson et al. (2008) present the *Four Box model*, consisting of the four interlocking elements: *customer value proposition (CVP), profit formula, key resources* and *key processes*. CVP and profit formula are acknowledged as elements that define what the value is, while the key resources and processes are describing how the value is created. The authors intend therefore to use these four elements to investigate how credit risk management can be integrated in a company's business model, in terms of these elements. Due to the uncertainty in

the e-commerce it can be expected to find that the managing and controlling of risks becomes essential, and also to be a contributor to a company's value creation. Since the empirical material in this study will be based on a payment solution provider in the e-commerce, the authors have expectations to find that credit risk management is a vital function for the case company. At the same time, the four elements stated above explain how value is generated and essentially how the business works to generating value. Due to this and due to the nature of the case company, the expectations are that credit risk management is a supporting function in the elements.

3. Methodology

3.1 Research Design

This paper is based on a case study on one organisation that is operating with payment solutions in the e-commerce market. A case study is often used when there are few theories about the phenomena, or if there is inadequate knowledge about the topic (Collis & Hussey, 2003). Since the aim of this study is to describe a unique topic, a case study is suitable. Moreover, the choice of doing a exploratory case study, on one specific company, is also because it is most applicable for subjects were the boundaries for the studied phenomenon are not clearly understood, and when only few have studied the phenomena before (Saunders et al., 2009), which is the circumstance in this case. Therefore this study contributes with knowledge about the process of how credit risk management can be integrated in an organisation's business model.

It could be argued that using multiple cases can provide a more generalised form of findings. However, when conducting a single case study it generates the possibility of using an embedded case study, which means that even though the study is focusing on one organisation as a whole, examinations will be made on different departments and sub-groups (Saunders et al., 2009), which builds more depth to the findings. Therefore, in order to be able to answer the research question this study has been conducted at three different departments at the case company. Moreover, the focus of this study is to conduct an exploratory study to seek new insights to a phenomenon, i.e. a study that has its emphasis on finding an explanation to a phenomenon and clarify an understanding of a problem (Collis & Hussey, 2003).

3.2 Case Selection

The case company, Klarna, was selected by sampling secondary data of companies operating with payment solutions in the e-commerce market. Klarna is a young company founded in 2005 and is today the market leader at the Nordic region and also one of fastest growing companies in Europe of payment solutions for the e-commerce. Right from the initial research on possible companies to study, Klarna was distinguished due to their skilled techniques when it comes to credit risk management and also for their unique business model. The fact that they are such a young company and still characterised as a start-up company, yet they have managed to grow and establish an eminent place in the market, means also that Klarna can be seen as an outlier within the companies operating with payment solutions, which makes them a highly interesting subject to

study. Moreover, the payment solution industry was chosen because of the services offered, that results in a complex business model where credit risks are highly essential. Again, Klarna was selected because of their vast growth and expansion in the latest years, and this growth puts higher pressure on the company´s risk management.

Moreover, within the e-commerce sector there is always a risk that the customers are not going to pay for their received products. Therefore, this study is contributing with an understanding of how credit risk can be integrated in the business model. Klarna's business is based on the circumstances that they take the credit and fraud risk for the merchant by handling the whole invoice process, and at the same time ensure the merchant's payment, whether the customer pays or not. Klarna has the vision to make the e-commerce payment transactions "simpler, safer and more fun". (Kreutzer & Meissner, 2011) Due to the risk management being such an essential part of Klarna's business, it makes Klarna an intriguing subject to study on how to integrate risk management into a business model in terms of a CVP, a profit formula, key resources and key processes.

Klarna was chosen after a review of secondary data were it became evident that the case company has the studied variables - i.e. credit risk management as a part of their business model - to be able to conduct a research on the causalities between business model and credit risk management. Further, at Klarna it is essential that concerned employees are well aware of Klarna´s business model, and the processes of risk management are reflected in their business model. (Klarna Annual Information about Capital Coverage and Risk Management, 2011) After discovering that, Klarna was contacted to enquire if they would be interested in cooperation. The contact person at Klarna has been the manager at the Independent Risk Department. However, to be able to get more information about how the credit risk process looks at Klarna, a short conversation was conducted with the manager at the Independent risk department. After that, the selection of department was made. Moreover, the selected departments are the ones working with credit risk management and are therefore best suited for explaining how credit risk is managed and how it can be integrated into the business model.

3.3 Data Collection

3.3.1 Data Gathering for the Empirical Part
The primary method of data collection for the empirical part of this case study consists largely of interviews conducted at Klarna but also secondary data has been used. Since this is an exploratory study of a specific process both of these types of data gathering have been influential and the use

of secondary data has enabled the authors to cross- check the data in order to find regularities in the data. The triangulation of secondary data and interviews has enabled the authors to develop an understanding of the credit risks process at Klarna and how this is integrated into the business model. Below both kinds of data collection will be presented.

Interviews

As the study is taking a qualitative exploratory approach and aiming at explaining and understanding a specific phenomenon, interviews are known to be a useful way to collect information about the situation to get a deeper knowledge about the topic (Cassell & Symon, 2004, ch. 2). The interviews were conducted at three different departments: Independent Risk Control (IRC); Risk department; and Customer Service (CS). The responsibilities of the IRC department is to control the credit risk management activities on an overall level and ensure that laws, rules and policies are followed, while the Risk department is responsible for taking the credit decisions on each transaction and managing the credit risks on a daily basis and controlling the credit models used for credit assessment. The CS department is handling customers' errands and the sub-team Contestations is responsible for errands concerning contested invoices. This department makes decisions about whether the customer should pay or not. In this manner this department is the one that makes judgments of eventual credit losses that the contested invoices can result in. The interviews were conducted following:

Department	Role of the interviewee	Date of interview	Type	Duration
IRC	Manager	April 4th 2013	Face-to-face	88 minutes
Risk department	Team leader	April 15th 2013	Face- to-face	79 minutes
Risk department	Analyst	July 11th 2013	Telephone	46 minutes
CS Contestations	Team leader	April 29th 2013	Face-to-face	62 minutes
CS Contestations	Team leader	July 8th 2013	Telephone	54 minutes
CS	Agent	July 10th 2013	Face-to-face	49 minutes

However, as this study is a about a complex phenomenon the interview sample was restricted, and the selected respondents had to have specific knowledge and information about the phenomenon. The interview respondents were selected because they could give an explanation of the credit risks process and how the business model looks like, as well as how the company has integrated credit risk management into the business model. The interview respondent in a case study is usually well-circumscribed for specific aim in order to enable a more in-depth research (Brewerton &

Millward, 2001, ch. 6). Nevertheless, the focus in each interview varied depending on the respondent's responsibility and works task.

Additionally, when conducting a case study, the selected number of interviews has to be enough to be able to answer the research question and accomplish the purpose. Another essential aspect when deciding the number of respondents is time and recourses. (Cassell & Symon, 2004, ch. 2) However, during the data gathering some issues were occurred. The fact that credit risk management is one the core processes of Klarna's business and therefore is a highly sensitive topic, there has therefore been some limited access to interviews and the interview respondents' information provided. Moreover, since Klarna´s credit models are recognised as business secret it could be a risk for the company if this kind of information was presented in public as it then could be handled wrongly, for example fraudulently.

The interviews in this study were of non-standardised character that built on a semi-structured interview framework, which is recognised as beneficial interview technique when the study is taking a qualitative approach (Brewerton & Millward, 2001, ch. 6). Besides, semi-structured interviews in a qualitative study enable the understanding of the relationship between variables, (Saunders et al., 2009), which therefore is suitable for this study. Moreover, semi-structured interviews consist of a framework that covers relevant questions and themes built on the theoretical chapter (Collis & Hussey, 2003). The interview questions for the empirical data were covering relevant variables of the researched topic and were organised to investigate the relation between the studied variables. The table below presents which interview questions are related to a specific theoretical variable.

Framework Interview Questions	Independent Risk Control	Risk Department	Customer Service
Business Model	**Appendix 1.1** Questions: 1-11 A 12-16	**Appendix 1.2** Questions: 1-3 **Appendix 1.5** Questions: 1-10	**Appendix 1.3** Questions: 1-6 **Appendix 1.4** Questions: 1-12

Credit Risk Management	Questions: 11 B, 17	**Appendix 1.2** Questions: 4-17 **Appendix 1.5** Questions: 11-14	**Appendix 1.3** Questions: 7-12 **Appendix 1.4** Questions: 13-14

Furthermore, as each respondent has different responsibility and information, there have been different interview questions for each of them (see Appendices). The main focus of the interview questions for the IRC department was to achieve information about the company´s business model and also how credit risk management has been integrated into their business model. Further, the vital part of the interviews at the Risk department was to cover the functions of the credit risk process and what recourses that is needed, whereas the focus of the interviews at the Customer service was to capture information about the customers, the process after the purchase has been approved and when the invoice gets contested by the customer, which in turn effects the company's credit losses.

The open form of interview technique in this study was to facilitate the opportunity to ask in-depth follow-up questions during the interviews, which is essential to achieving a deeper knowledge and understanding of the phenomena of the study (Collis & Hussey, 2003; Struwig & Stead, 2001, ch. 1). Moreover, as a semi-structured approach was used, the interviews were carried on depending on the flow of the conversation. However, this implies that the interviews did not look exactly the same and each interview is therefore unique. Nevertheless, semi-structured interviews can vary from interview to interview, and can also be flexible by modifying the questions (Brewerton & Millward, 2001, ch. 6; Cassell & Symon, 2004, ch. 2).

The interviews were gathered either face-to-face or by telephone and were all recorded. The locations for the face-to-face interviews were taking place at Klarna´s office located in Stockholm. At the same time there was an opportunity to get an interpretation about Klarna. Before the interviews took place an e-mail was sent out to the respondents, where the topic of the research was presented and what specific subjects the interview was going to be about. After the interviews had taking place it was transcribed. The researchers chose to transcribe the complete recorded interviews to create transparency even though it is time costly. Furthermore, before the interviews took place information from secondary data about the company was gathered. By having knowledge about the company before the interviews the authors could create creditability and

obtain confidence from the interview respondents, which is essential when conducting a research that is complex and sensitive (Brewerton & Millward, 2001, ch. 6).

However, even though the semi-structured interviews are beneficial in several ways for gathering empirical data, there can be data quality issues with the technique. The reliability of the study needs to be considered, which is about the concern of standardisation of the interviews and that means that the interviews cannot be repeated. However, since this is a case study about a complex topic, it is needed to collect non-standardised interviews to ensure the qualitative nature of the data. Except the issue of reliability there are several biases that need to be taken into consideration when conducting an interview, such as interview style, speech, and expectations. (Brewerton & Millward, 2001, ch. 6)

Secondary data

Secondary data has been gathered during the whole process of the study. However, an extensive data gathering was made before the interviews took place in order to get more knowledge and also to ensure the usefulness of information from the interview respondents. Having prior knowledge of these areas allowed the authors to focus on more in-depth and specific interviews, thereby building more structure and depth to the study.

This study consists of a collection of numerous articles that have been written about the case company and a case study written about the company. Also, Klarna's annual reports from 2011 and 2012 as well as yearly information about capital and risk management, together with information about the case company found on their Internet pages was used. The gathered secondary data has been collected mainly from Google were different keywords has been used, e.g.: Klarna (+), risk, credit risk, management, business model, credit models, core value, development, growth, and financial institution. However, what needs to be considered when collecting secondary data is that the authors have to be sure that the source for the data is reliable, which has been done in the gathering for this study.

Furthermore, by building an empirical material consisting of both secondary data and interviews, it enables comparison and contextualising the findings from the interviews. In addition, secondary data facilitates unforeseen discoveries, as it enables the research to re-analyse the findings in a way that is benefitting the research at hand. However, the disadvantages of using secondary data include factors, such as, the data has been collected for another purpose than the research in question; the access to the data could be costly or difficult to acquire; or that the definitions of the

data variables might not be best suitable for the research objectives in question, and therefore it is required to ensure that the data is carefully gathered (Struwig & Stead, 2001, ch. 3).

3.4 Data Analysis

An inductive approach may prove to be time constraining and resource intensive to be successful. Therefore it is common that inductive studies combine some elements of a deductive approach in order to develop a theoretical position and test its applicability through data collection and analysis. (Saunders et al., 2009) While this study has had an inductive approach from the beginning, there are many elements of a deductive approach in the way the data has been analysed. Due to the exploratory nature of this study, the authors have developed a framework that has its base on a mixture of theory and their own expectations, according to recommendations by Saunders et al. (2009). This framework has then been used for directing the analysis.

The analysis of the empirical material started with categorising the empirical transcribed data into the four elements explained in the literature review – CVP, profit formula, key resources and key processes. Categorising helps to recognise relationships and illustrate themes of the gathered data (Brewerton & Millward, 2001, ch. 9). The empirical data was then compared to the theories of the four elements, as well as the remaining literature review to be able to find similarities and dissimilarities between the theory and empirical findings.

The purpose of this study is to understand how credit risk management can be integrated in a business model. The exploratory framework that the authors have based their study on builds on an expectation that credit risk management can be integrated to a business model and can assist in the value creation of a company through the use of the *Four Box model*. The analysis is therefore structured around the theories presented in the literature review and the empirical findings are compared and analysed from the theoretical perspective.

3.5 Limitations

There have been some limitations to this study, of which the most significant one is the lack of theory in how credit risk management can be integrated in a business model and what impact it has on the business model. Some studies and reports have touched upon the subject, such as PwC (2011) and MIT Sloan (2010), which has proven to be a valuable source of inspiration for this study. The theories used for this study have carefully been reviewed and adapted to fit the purpose of creating an understanding on integrating credit risk management to a business models.

Another limitation that has come across this study is access issues. Since credit risk management is a highly sensitive subject, there was a limited access granted for studying the specific methods of how Klarna handles credit risks on an operative level.

Since this is a case study on one specific company, the research result cannot be generalised to a large extent. Another company that operates in another market may not identify credit risk management as such a critical subject, but the findings from this research may be adapted to show that innovations in business models can be valuable for the value creation process.

4. Empirical Findings

4.1 Company Background

Klarna, previous Kreditor, was founded in 2005 by Sebastian Siemiatkowski, Niklas Adalberth and Victor Jacobsson with the idea of providing a safer and simpler payment solutions within the e-commerce sector. Klarna is providing invoicing and part-payment solutions for merchants and end-customers. The idea is simply to let consumers receive their purchases first and pay later, and at the same time Klarna assumes the credit and fraud risk for merchants. Since founding the company in 2005, Klarna has grown to 745 employees operating in seven European countries (Sweden, Finland, Norway, Denmark, Germany, Netherlands and Austria) with over 9 million consumers and 15 000 merchants using Klarna, which also makes Klarna one of Europe's fastest growing companies. (Klarna, 2013a) In 2012, Klarna's transaction volume reached 1,8 billion Euro. (Klarna, 2013d)

Klarna's business model has from the start revolved around two areas: safety and simplicity. For customers this means that they do not need to pay upfront on the merchant's platform, instead they only provide basic personal details and will receive the goods before paying. In that manner, the online purchasing is less risky both for end-customers (FT, December 9th 2011), but also for the merchants, as Klarna will assume the risks and the merchant will get paid (Klarna 2013b). To protect themselves from risks connected to credit losses, Klarna has developed technology that analyses data for each purchase from hundreds of variables – ranging from data from credit-rating companies to even evaluating the reliability of the end-customer's e-mail address – to be able to keep the credit losses to a minimum (FT, December 9th 2011; Pandodaily, November 13th 2012)

Risk management is something Klarna takes pride in, and especially credit risk management is something Klarna wants to be best at (IVA, 2011). Klarna´s risk department is divided into two sub-departments; Risk and Credit - whose sole area of responsibility is to minimise credit and fraud losses. The sub-department Risk is responsible for running the daily activities of controlling the risks and understanding the fundamental customer behaviours connected to credit risks as well as monitoring existing merchants and assessing risks connected to them. Credit is responsible for developing the models used for credit risk assessment and consists of a mixture of mathematicians, physicists, developers and statisticians. By using data, this sub-department creates then models that evaluate whether customers will be granted credit and essentially selects

"good" customers from "bad" customers. Fundamentally the risk assessment models that are developed are the key to Klarna's business model. (Klarna, 2013c)

4.2 Klarna's Business Model

From the very beginning Klarna has been an innovator on the Scandinavian market for payment solutions, and it has always been on their agenda to establish an uncommon business model. When Klarna was founded, the founders where keen on communicate and establish the yet unknown and uncommon business model in a quick manner, in order to prevent other actors from entering the market and to be able to gain attention and become more attractive. (Kreutzer & Meissner, 2011)

"Klarna has taken a traditional business model of invoicing and made it to contemporary, easy, safe and fun new product through modern technology and innovative thinking. We have three lead words in our business model: simpler, safer and more fun.
But in order to fulfil those words we need to build up whole organisation that are capable to manage the risks that follows with our services."
(Interview, July 8th)

Nevertheless, until now the extensive growth that Klarna has experienced within a short period of time has affected the business model in a sense that all parts have not been 100% clear and structured, but due to Klarna's growth the complexity has increased and therefore they have come to realise the necessity to structuring and formulate strategies of the model. One reason is because the business model needs to create a common view, and establish a clearer decision-making lower down in the organisation. (Interview, April 4th; Interview, April 15th) The vision and mission has always been the same of their operations, which is to make online purchasing "Simpler, safer and more fun". (Interview April 4th; Interview, April 15th) However, these keywords do not just represent the business model, they are fundamental part of the organisational culture, and is highly imprinted at the working processes (Interview, April 29th). Another reason to why the business model has been rather unspoken is because Klarna´s founders are truly entrepreneurs and have followed the stream and "jumped on the train" when the chances have emerged (Interview, April 4th). As of the spring of 2013, the management at Klarna has set a written business model and code of conduct, in order to create a common understanding and vision for all employees of the business model and Klarna's strategic goals for the future. (Interview, July 8th)

4.2.1 Customer Value Proposition (CVP) of the Business Model

Klarna has two customer groups: merchants and end-customers, with the aim of creating value for both segments (Interview, April 4th; Interview, July 8th). Klarna is highly customer oriented and the primary foundation of the whole model is to create value to the customer by offering a safe, simple and fun shopping experience at the e-commerce. Those three lead words are the centre for how the business is made and how value is generated at Klarna. (Interview, July 10th) In essence, Klarna's business model is adapted to a factoring model to fit the e-commerce, by offering customers the opportunity to receive their goods first and pay later on an invoice or a payment plan. Besides, Klarna offers a quick and thorough credit risk assessment, which fundamentally is the heart and core of their business model. (Whiteboardmag, 2013) Klarna offering four different services: Klarna Invoice, Klarna Account, Klarna Mobile and Klarna Checkout, where the Klarna Invoice is by far still the most popular choice. The common aspect for all services is that the customers can buy a product directly, and have the order received to their home before they have to pay for it. Klarna Mobile and Klarna Checkout are newly launched and are today only available for the Swedish market, but the aim is to offer these in other countries as well. (Interview, July 10th)

Additionally, as the notion of Klarna´s business is to handle the entire invoice and debt collection process for the merchants, they take over the risk and ownership of the invoices, and by that Klarna is creating value for the merchant by offering a safe way to get paid, and at the same time it is simple since Klarna takes care of all the administration. (Interview, July 8th) However, due to the circumstances of Klarna´s product offerings demands that they take a credit risk, puts a requirement to have exceptional resources that can predicted potential credit losses in order to minimise the credit losses of the end-customers. (Interview, July 11th). Klarna makes online purchasing easier for the customers, and by that removes the friction and decreases the risk that the customers do not complete their purchases, which moreover can lead to increased sales for the merchant. (Interview, April, 4th)

In the same way, the product gives the customers a safer transaction process, since the goods will be delivered to the customer before the payment. In that sense Klarna creates a simple and safe payment transaction for both the merchant and customer. This is a central part of Klarna´s business model. (Interview, April 4th; Interview, July 8th) Moreover, the business model of being a payment-solution provider is not advanced in itself; it is rather the advanced technique that has made them differ from their competitors (Interview, July 11th). Anyway, *"In short it is all about*

giving the customers safety by offering the most valuable payment solution where they can feel trust when they shop online"(Interview, July 10th)

Additionally, as Klarna focuses on the e-commerce, they offer the end-customers their services day and night (Interview, July 8th). The buying process is explained as following: the customer comes to the checkout and chooses the payment method, and is then verifying themselves with their personal number, and in some cases (or markets) also other information are required such as address and e-mail. (Interview, April 29th; Interview, July 8th) Based on data from that information, a decision of "yes", "no" or "maybe" is taken. At this stage the "hard" decision for denial is taken, for example if the customer is under 18 years old or if the person has protected identity and in all of these cases the purchase will never be accepted. Customers that receive a "maybe" (i.e. are neither accepted nor declined) in the first stage will move on to the stage two, which includes the "risk estimators" that involve models such as scorecards and decision trees. Those models analyse the transaction details as well as customer details, for example how other customer have been acting. When the analysis is completed, the decision of accepting or declining the purchase is made. However, if the risks are not completely clear, for example if the purchases is of a high amount, Klarna continues the credit risk process by gathering data about for example income and record of payment defaults, and then a new analysis is done. This whole process takes about 0,5-3 seconds and the customers get to know directly if their purchases are approved or not. (Interview, April 15th)

4.2.2 Profit Formula of the Business Model

Klarna makes profit on both the merchant and the end-customers. The cost for merchant for using Klarna´s services is: entering fee of the arrangement, which is dependent on the amount of services the merchant buys. In addition, while using the services, the merchant pays a sum for each transaction that is made. (Interview, July 11th) The fee to the merchant is decided upon the expected credit losses on specific merchant. This means that Klarna is evaluating the risks of an arrangement with a merchant, and different merchants have different kinds of risks. (Interview, April 4th) The growth Klarna has experienced can also be reflected in the comparative advantages that they have on the market and the fact that the development of their credit risk activities means that they are better at pricing their services. When Klarna evaluates and calculates the risks for each purpose, it saves time and effort for the e-stores and they are provided with more safety. This essentially means also that merchants are willing to pay a slightly higher price for using Klarna's services. (Interview, April 15th; Interview, July 11th)

Since Klarna has grown so extensively it has also had an effect on the company to being more willing to take risks in the selection of merchants. This willingness of risks is much dependent on the fact that Klarna´s business model is highly oriented on growth, and that is something that is visible in the decision-making. (Interview, April 4th) Klarna's growth and the willingness to take risks can also be seen in their annual report, where their operating income grew from 384 816 MSEK in 2010 to 750 286 MSEK in 2011, and in 2012 the income was 1 170 172 MSEK, while their credit losses also increased from -52 906 MSEK in 2010 to -126 658 MSEK in 2011, and in 2012 -157 275 MSEK. (Klarna Holding AB Annual Report, 2011; 2012)

Furthermore, the profit from the end-customers is earned from reminder fees, penalty interests, administration fees, and interests for the taken credits. Due to that, the design of Klarna´s business model dictates that credit risk management is the core competence, and the simple reason is because it is critical part of the growth and profit generation of the company. (Interview, July 10th) Moreover, *"our aim is to accept as many purchases as possible in order to maximise our profit, as well the merchant, but this means that Klarna is accepting credit losses to some extent. However, that is a part of our business model, and the consequence of it is that it becomes highly crucial for us to find a balance between the acceptance rate of accepted credit and the credit losses"* (Interview, April 4th).

Klarna does not grant vast, long-term loans, but instead the model is based upon granting several small-amount, short-term credits (Klarna Invoice 14-30 days; Klarna Account maximum 36 months), and from that aspect the turnover differs from other financial institutions. This means furthermore that Klarna´s renewing of the capital is high, and as long as the relationship between incomes and credit losses are stable the credit risks are accepted as low. (Klarna Holding AB Annual Report, 2011) This means that Klarna´s credit risk management must differentiate from others in order for managing the credit risk. (Interview, April 15th; Interview, July 11th) Further, due to the circumstances of credit giving, the potential losses that occurs *today*, is from purchases that have been made 6-24 months ago, and therefore is becomes a necessity for the Risk department to acknowledge the management's goals and visions (Interview, July 11th). The Risk department and Customer Service department have a close collaboration, and the reason is because the Customer Service handles potential losses of the contested invoices. The contestation can depend on that the product has never arrived or that it has been return, which then is investigated if the customer should pay it, or if it is the merchant that has done something wrong. If Klarna cannot determine this, in some cases they take the credit loss. (Interview, April 29th)

Moreover, how credit risk is managed is highly influencing the profit of Klarna. (Interview, July 11th), and this is managed based on three different fundamentals. The first essential aspect is the *credit giving*, which is considering Klarna´s acceptance grade, their credit assessment, and how they manage potential fraud. Secondly, the *credit portfolio* has to be under constant control to guarantee their acceptance grade. Lastly it's Klarna´s *capital*, which requires that Klarna is calculating the amount of money they need in order to accept purchases. However, these three foundations are highly dependent on the circumstances that Klarna is a financial institution and by that they follow FSA´s (Finansinspektionen) rules and regulations and thereby they need to set polices to follow these regulations. However, Klarna's business model is such a unique one for FSA, as well as external consultants, so they do not really know how they should handle Klarna. (Interview, April 4th)

4.2.3 Key Resources of the Business model

There are fundamental pieces of Klarna´s business model that stretch beyond the company´s vision and their services; the model demands that Klarna borrows money through bank loans and transactions, and also through lending from private persons. (Interview, April 4th). Beside, since it is the merchant who is providing Klarna´s services, Klarna's business model is built upon the collaboration with the merchants (Interview, July 8th; Interview, July 10th), and a basic foundation of Klarna´s business model is to co-create value with the merchants and other partners through minimising credit and fraud risks and also to reduce poor collaborative performance. (Kreutzer & Meissner, 2011) At the top of this, the investors that have invested in Klarna are without no doubt a critical part of Klarna´s growth, for example Seqouia Capital (Interview, July 11th). In 2007 Klarna changed their name, from Kreditor to Klarna, and in 2012 Klarna also changed the logotype. Both these changes were strategic decisions in order to create a more serious and creditable image when entering new markets (Interview, 8th).

As mentioned earlier, Klarna offers four different services, where *Klarna Invoice* is characterised as a short-term credit without using a credit card. The customer will have the product delivered and then receive the invoice with the product. If a customer has chosen *invoice* instead of *account*, there is still the opportunity to make the order into a part-payment. This is done by only paying the "lowest accepted" payment that can be found on the invoice, and when doing that the invoice will automatically become *Klarna Account*, which means that the customer has an account which is a part-payment up to 36 months, and receives a collective invoice each month of all the purchases. If the customer chooses to pay the whole debt, the account is automatically ended. *Klarna Mobile* offers the customer to pay with their mobile phones by only verifying him-/herself with the mobile

number. *Klarna Checkout* is a holistic solution that is offering all the different payment solution under the same roof: invoice, account or with their Internet bank or card payment. The verification is at the minimum for the customer to fill in, and the primary idea is to make the purchases as frictionless as possible. (Interview, July 10th)

As Klarna´s services are a financial- and technical oriented, the value creation and the whole credit process are therefore relying on the IT. *"Our credit models and our services are considerable resources in the business model, the IT-system is the element that enables us to deliver value to the customer."* (Interview, July 8th; Interview, July 11th). Klarna´s IT-system and credit risk models are developed and built in-house, and are therefore custom-made for their services. However, as Klarna is highly dependent on their IT-system, it can in some cases be seen as a risk (Interview, April 4th) The IT-system, called Klarna Online, is a system that everyone at Klarna, as well as the merchants, are working in. (Interview, April 29th) Due to the rapid growth in purchases, especially during the Christmas season in 2012, the system did experience some quite heavy malfunctions where it went down almost entirely for short periods of time. (Interview, April 4th; Interview July 11th)

However, during the time Klarna´s IT-system has become more and more advanced, and the complexity of the credit risk models has increased, which also has led to that Klarna hiring more engineers that build and develop the system. (Interview, July 11th). The credit risk model consists of hundreds of different parameters and variables, which are recognised as a key to the company´s value creation, but to secure this Klarna must control, evaluate and developed their credit risk model continuously (Interview, April 4th). However, company policies as well as FSA laws and regulations are significant factors in the construction of the credit models (Interview, April 15th). Conversely, Klarna´s visions has stayed the same during the years, creating a "simpler, safer and more fun" payment solution for the environment, but the credit risk management has been going through changes because of own initiatives as well as external laws and regulations. Although, this has been needed as credit risk is the engine at Klarna (Interview, April 4th).

Moreover, the competence of the employees is a central part of the model, Klarna has several analytics that try to find a pattern of the credit risks, and if they find a segment where the credit risk is high Klarna can easily adjust the variables to decline purchases in a greater extent and build a new credit model. Smaller variable changes are nevertheless done on daily basis in order to have a model that represent as much *real-time* as possible. (Interview, April 15th; Interview, July 11th) Due to the circumstances that Klarna has been handling over 20 million purchases they have been

able to create one of Europe's biggest transaction databases for the e-commerce, which means that Klarna has acquired invaluable data that allows them to base their credit assessments (Nordisk e-handel, 2013). Though, as Klarna cannot attain the same information in all countries, the variables in the model differ from country to country. (Interview, April 15th) Likewise, Klarna does have more credit losses in newer markets where they have less information to make a credit risk model (Interview, April 4th).

The Risk department are the one that have the responsibility of building and maintaining these models that credit assessment is based upon. Therefore, they are responsible for that the "right" decision is made in order to minimise credit losses. While the "right" decision can be a subjective term, in this sense "right" means that the credit risk models are taking the "right" decisions to follow the directives from the management. However, whole 99,5% of Klarna's credit decisions are automated and the remaining 0,5 % of the credit decisions are made manually. (Interview, April 15th) Further on, since Klarna's credit risk model and acceptance grade can be changed in accordance to the company's strategic changes it is important for employees that working with the credit risk to be familiar with the company´s vision and goals. The employees at the Risk department have set goals, called key performance indicators (KPI), which are used daily. The main goals in this is that they are; grant credit to as many as possible; to have as low losses as possible; and also to do it as cheaply as possible. (Interview, April 15th; Interview, July 11th), which is follow-up on a monthly basis (Interview, July 11th). Both the employees at the Risk department who are the ones working with credit assessment, and the employees at the Customer Service who handling potential losses, are working with steering document that is settled by the management. Moreover, the communication and collaboration between different departments is needed in order to be as valuable as possible. (Interview, April 29th; Interview, July 10th)

4.2.4 Key Processes of the Business Model
Klarna's extensive growth during the years has also affected their IT-systems in the sense that they have become more complex and advanced. In a sense, this complexity has also had its part in the development and moulding of Klarna's business model (Interview, July 10th) Beside the development of the IT-system Klarna has had an extensive expansion of the services that they offer. From the very start Klarna's services included only the invoice, and in 2007 the account was established, and also in 2010 Klarna launched their mobile payment solution. Klarna Checkout was launched in 2012 and is the latest addition to Klarna´s offerings. Furthermore, in the development of Klarna Checkout, Klarna patented a concept called "incremental identification". (Interview, July 10th) Nevertheless, this growth is much dependent on the engineers that have

developed the products. Due to that, Klarna has engineers placed at three different offices: Stockholm, Uppsala and Israel (Interview, July 11th) Moreover, from the beginning Klarna was looking at conventional credit scores, but found soon that the behaviour of customers has more predictive power (e.g. time, e-mail address). By using these kinds of algorithms it enables Klarna to find patterns very easily and detect risks effectively. If the purchase, for example, is made at 3am it has a 20% higher chance of being rejected than during daytime, which is all thanks to the behaviours that the algorithms have detected (Interview, April 15th; The Economist, 2011), and due to the fact that Klarna is looking at the behaviors of customer, which must be in real-time, Klarna continuously needs to develop the different algorithms (the measurement of credit risk) and also the parameters of what is measured (Interview, July 11th)

A significant part of Klarna's key processes lies also in their credit terms. As already mentioned earlier, a person under 18 years or with a protected identity is never accepted for credit. Depending on the market, also the level of income, previous payment defaults or even an inconsistency in the customer's address may lead to being rejected for the credit. These credit terms ensure that the credit risks are kept to a minimum and thereby are a vital process in Klarna's business model. (Interview April 15th; Interview July 8th)

Considering the fact that Klarna is a financial organisation and therefore required to follow FSA's laws and regulations (Klarna Holding AB Annual Report, 2011) puts several demands on how the credit risk is managed, which in turn also affecting the whole business model. Firstly, the credit risk management has to be stable, which means that the management has to evaluate their credit portfolio to see how much capital is demanded to have in the capital portfolio, and also set credit risk restrictions to Klarna's credit portfolio. This is calculated on a yearly basis based on the financial model Basel II. It is this capital calculation that the management bases the company´s credit risk limits on. However, these restrictions are quite new, approximately six month and it mean that Klarna must show FSA that they have control of their credit portfolio. (Interview, April 4th)

To follow FSA's rules implies that Klarna is required to construct an organisation with policies, instructions and a working manner that aligns with FSA´s laws and regulations, and beside Klarna, by themselves, must continuously control how the company manages credit risk. Additional aspect of FSA´s regulations is that Klarna is obliged to handle the credit risks and not contribute to social problems where people end up having too much debt. External laws and regulations, in regard to the fact that Klarna does not assess economic credit information for each individual customer, can

come to be established as an obligation. Further this means that Klarna´s business model has to be changed in order to meet the credit demands. (Interview, April 4th) Therefore, it is needed that the Risk department communicate with the management and the Legal department to ensure that credit risk is managed properly. (Interview, April 15th)

Furthermore, as the credit assessment is the engine of the value creation it becomes a vital part of all the management decisions. The management sets policy document for how credit risk is managed, but they also set strategies, goals, and people needed for the business. (Interview, April 4th) Klarna has built up an origination that can manage risk, and it can be explained as a defence model consisting of first line, second line and a third line. (Klarna Annual Information about Capital Coverage and Risk Management, 2011) When it comes to financial risk factors and management of risk, there are both compliance functions and the department of independent risk control that support these activities together with the policies and instructions set by the management and board (Klarna Holding AB Annual Report, 2011) and these two functions represent the second and third line of defence. Then there is the first line of defence, credit risk management, that handle the practical work with credit risk. The decision-making on how to develop the credit risk models is also done in the first line. (Interview, April 4th) Further on, when practical manage risks it becomes crucial to acknowledge the business model and the risks that the model resulting in (Klarna Annual Information about Capital Coverage and Risk Management, 2011).

5. Analysis

According to the literature, the expansion and changeable environment in the information and communication technology has generated a requirement for re-thinking the design of business models (Casadesus-Masanell & Ricart, 2011). The purpose of this study has been to understand how credit risk management can be integrated in a business model, in terms of a: customer value proposition, profit formula, key resource, and key processes. The research conducted for this thesis has enabled findings on the construction of Klarna's business model as well as the credit risk management functions, and whether they are interconnected in the value creation. What has become evident from the research is that Klarna's business model has been from the very start to capture a risk factor and create a secure environment for both the merchant and the end-customer in the e-commerce, by building a business model with the mission of creating a "simpler, safe and more fun" payment solution.

5.1 Formulating the Business Model

It has become evident from the empirical material that the importance of Klarna's business model has grown during the recent years. The findings show that while it has always been on Klarna's agenda to establish an uncommon business model, the founders were keen on communicating and establishing the business model in a quick manner, which seems to have had an effect on their business model being unclear and unstructured to some extent. Johnson et al. (2008) have argued though, that a business model in its early stages needs to be flexible in order for it to create value, and due to that it can be said that this flexibility has helped establish what Klarna's business model is today.

The result show that Klarna has not only put more focus on creating a clearer and more defined business model, also their credit risk management functions have gone through several changes over the years. The empirics further expressed that credit risk management is a necessary activity in Klarna's business model, since it ensures the functions needed for Klarna's products, which can be argued to have had a large part in the development of their model. Likewise, activities that are included in the value creation of the company are essentially the core components of its business (Linder & Cantrell, 2000) and the empirical findings show that credit risk management is a vital part of value creation – and by that a core component - since it makes sure that using Klarna's products is always *"simpler, safer and more fun"*.

Due to the circumstances that a business model should be viewed as a holistic concept consisting of several elements that together expresses the logic of the company (Osterwalder et al. 2005), can from the empirical findings be explained by Klarna having several interlocking elements, such as competent employees (resources) and product development (processes), providing a simple payment solution (CVP) and generating an income (profit formula), that together create a holistic and logic concept of their operations. Johnson et al. (2008) further state that these elements should complement each other, and the empirics show that the supplement of all the four elements is demanded to making the credit risk management appropriate: the business vision of creating value to the customers by offering a frictionless purchase process requires that Klarna has excellent resources to support this vision. The resources are however affected by policies and rules in order to have an appropriate credit risk model, which consequently will affect the profitability and potential credit losses.

5.2 Customer Value Proposition (CVP)

To have a business model that generates CVP is recognised as the most vital element of the business model (Johnson et al., 2008; Osterwalder & Pigneur, 2010), which at Klarna can be recognised due to the fact that the value creation, by offering a safe and simple shopping experience for the customer, is the primary foundation for their business operations. Further, to identify who the customers segments, is known to be an essential part in the value creation (Osterwalder & Pigneur, 2010), and at Klarna the customer is recognised as both the merchant and the end-customers and therefore they are creating a CVP to both customer segments. Further on, in essence the value creation in both segments means that Klarna makes the whole purchase process frictionless by reduce the risk, and therefore it can be argued that Klarna encapture value from their customer-oriented focus, which according to Teece (2010) is acknowledged as an essential factor of a company´s business model.

Furthermore, CVP is about how a company gets the "job" done by helping the customer with a specific problem or need (Johnson et al., 2008), and from the empirical material this can be recognised from the circumstances that the primary purpose of Klarna´s business model is to create a simple and safe purchase process for both the merchant and the end-customer. For the end-customers this is recognised in the fact that they do not need to provide any sensitive personal information when they buy the product and they get the product delivered before they pay, which decreases the risk and creates safeness. At the same time, the merchants can increase their sales without taking any credit risks, and ensure to get paid. Based on this it can be argued that Klarna

solves a problem, or fulfils a need, for both the merchant and the end-customer. To offer risk reduction can further be explained as an essential feature of the value creation to customer (Osterwalder & Pigneur, 2010). However, to offer value through risk reduction also implicate that Klarna must develop a proper organisation with resources that can manage the credit risk that the business model implies.

Moreover, to have a unique approach to accomplish the work can be argued to be a vital part of the creation and capturing of value (Shafer et al., 2005), which from the empirics can be comprehended due to the fact that even though invoicing and payment solutions in the e-commerce is not perhaps that unique, Klarna stands out from the crowd centred in their unique take on credit risk assessment, and credit risk is something that Klarna want to be best at (IVA, 2011). The empirics further express that the way Klarna measuring the customer risk can be stated as the engine of their businesses, and this is done by a "quick and through credit risk assessment" (Whiteboardmag, 2013). Nevertheless, to find an appropriate customer value proposition (CVP) it is common that companies is demanded to measure the customer risk (Ruch & Sackmann, 2010). Therefore it can be stated that, by measuring the customer credit risk Klarna both creates and captures value.

5.3 Profit Formula

Another essential element of the business model is the profit formula, which defines how value is created for the company while at the same time providing it for the customers (Johnson, et. al., 2008). As becomes evident from the research, Klarna makes a profit from both merchants that are using Klarna's services and the end-customers. Profit is generated on fees from merchants using Klarna, as well as administrative fees, reminder fees, and interest fees from end-customers. These different income generations can be viewed as Klarna´s profit formula. Further on, the business model should also embody the financial and organisational architecture of the business, and can be embedded in an organisations business plans or income statement (Teece, 2010). As the empirics show, Klarna is making profit by taking credit risks and due to that they need to ensure that their business model is protecting and helping them to minimise the credit losses. Therefore it could be argued that Klarna´s business model is embedded in their income statement, as well as their business plans. Also, since the construction of Klarna´s business model is based on their credit portfolio, the credit risk management will affect the credit losses. Therefore it can be argued that credit risk management is highly integrated in the company´s financial and organisational construction in order to be profitable.

Palvia (2009) states that when risks, uncertainties and interdependencies exist between the buyer and seller, the company needs to rethink how they control risks and create value, as well as develop a competitive advantage, and as the empirical evidence states that the handling of credit risks is the core of Klarna´s business model, it is therefore imperative to have an appropriate risk control in order to create value and be profitable. Nevertheless, since Klarna also wants to ensure that profit maximisation is reached, they are more willing to take credit risks. This means that they need to ensure that the credit losses stay stable, which sets restrictions to their credit portfolio. However, restriction of the portfolio is recognised as a crucial aspect for a company´s risk profile (Siddiqi, 2005, p. 16), which thereby can be related to Klarna´s way of handling their portfolio, and these restrictions is further highly dependent on FSA regulations.

According to Shafer et al. (2005) a company should develop a unique method that assists in securing the capital that is demanded for monitoring their core competencies, which becomes clear from the research in the fact that Klarna evaluates and calculates the risks associated with each purchase. This does not only benefit Klarna in terms of unexpected losses, but it also benefits the merchant and provides a safe knowledge for them that they will get paid no matter what. This method of ensuring the transactions could be argued to be one of Klarna's core competencies and by that also a unique method of securing the capital and maximising profits, since merchants are keen to pay a slightly higher price for Klarna's offerings.

Finally, Johnson et al. (2008) state that a high resource velocity is considered to be good, since it explains how quickly money flows through the company. The empirical findings shows that the vast majority of purchases made through Klarna are made on invoices with 14-30 days payment terms or alternatively as credits with a maximum of 36 months payment terms on accounts, it means that Klarna has a rapid turnover for their proceeds and can be identified as a core ingredient in how Klarna delivers value for itself and its stakeholders. Furthermore, the high resource velocity combined with an increased acceptance rate due to Klarna's high determination on growth may have increased their operating incomes, but as can be seen in the annual reports (2011 and 2012), it has also lead to a steady increase in credit losses during the recent years.

5.4 Key Resources

In order to create value in a business model, certain key resources are required, that consist of a company's assets such as people, technology and products. (Johnson et al. 2008) From the research it becomes evident that the main key resources for Klarna are their services (Klarna Invoice, Klarna Account, Klarna Checkout and Klarna Mobile) and even more so, the technology

behind the services, which enable the value creation. Since the IT-system (Klarna Online) has been built by engineers in-house, it has been custom-made to suit Klarna's purposes. Further on, it is the engineers that possess the knowledge and abilities to develop and maintain the technology, and therefore it can be stated that the engineers behind the technology are very valuable resources in Klarna's business model. The IT-system in itself is also a valuable resource since all transactions are routed through it, which means that both merchants and employees at Klarna are working in the system. The system contains also the customer database, which means that it is an imperative working tool for, e.g. the Customer service and Risk department. However, relying on a single IT-system can also be considered a risk, which can be seen from the empirical evidence that also Klarna has had problems with system malfunctions.

Osterwalder & Pigneur (2010) state further that intellectual and human resources are crucial ingredients for the key resources. The findings indicate that Klarna seems to be excel in is analytics, which demands a great deal of intellectual and human resources. Further, the findings show that by using historical data gathered from earlier purchases, it has enable Klarna to build a highly complex model that predicts customers' behaviours and conducts risk assessments based on multiple varieties of data. These automated models identify the risk, estimate the risk and evaluate the risk, which according to Gerber & Von Solms (2004) are the most important activities in the credit risk management process. The risk assessment models that are used at Klarna have several similarities to the model presented by Manchala (2000). Manchala's (2000) model includes many significant variables, such as transaction history, spending patterns and time and location. However, compared to the whole credit risk assessment process at Klarna, the model is rather simplistic. Still, Manchala's (2000) model sets a good theoretical ground to how credit risks should be assessed and managed, and Klarna's credit risk methods show that the variables are important for assessing credit risks in the e-commerce. Beside, Klarna has developed their algorithms to a much greater extent and produced a smart and efficient model for assessing credit risks for online payments. Nonetheless, Klarna´s credit risk models is though affected by the regulations of FSA.

New technology is capable of collecting more data than ever before and organisations need to learn and come up with new ways to analyse and capture the value of the data. (MIT Sloan, 2010) From the empiric it can be stated that Klarna using complex models and algorithms built on an enormous amount of data in order to predict customer behaviour, and further it can stated that the findings show that they have the intellectual resources (Osterwalder & Pigneur, 2010) needed for

making the data they possess into a valuable component of their business model. From the interviews conducted and data collected for this study, it has become evident that the credit risk management of Klarna is an essential part of their business model. To be able to provide a simple and safe payment solution, it could be argued that the credit risk function is on the most important resources of the value delivery. Furthermore, since credit risk management is the engine that makes sure that Klarna's services work and generate profit; it can most certainly be argued that the credit risk management assists in the value creation process in Klarna's business model. What also becomes evident from the research is that by operating in several markets, Klarna has been able to gain a substantial transaction database to be used for credit risk assessments. This could be argued to give Klarna a significant competitive edge on the market.

Finally, a fundamental function that enables Klarna to conduct its business is their financial resources, which are known as a vital part for a business models (Osterwalder & Pigneur, 2010). From the empirical it can be realised that Klarna have had several investors involved, such as Sequoia Capital, that have enabled their growth. The resource velocity, described above in the profit formula, means further that Klarna is demanded to take small loans from banks and private persons in order to assist the turnover. It could therefore be argued that, while the financial resources are an essential key resource, they are at the same time tightly knit with the functions in the profit formula.

5.5 Key Processes

The empirics show that Klarna's processes behind the operations are enabling their work with credit assessment. A way to achieve control of credit risks and to reduce losses can be to establish an organisation that can manage the whole credit risk process (Graham, 2000, p. 26). From the empirical material this can be expressed in Klarna´s organisational structure with several functions that protects them from risk and thereby they have built up an organisation that can handle the entire credit risk cycle. Moreover, an organisation needs to structure their functions in their business model to being able to manage risks (Suh & Han, 2003), which therefore can be viewed from the empirical findings due to Klarna´s structuring of the organisation. Furthermore, the assessments about credit risk are based upon managerial decisions taken by Klarna´s management, which can be argued to be an essential part of a company's key processes (Johnson et al., 2008; Johnson, 2010).

Additionally, to manage credit risk it is required to have appropriate credit terms and policies (Graham, 2000, p 23), which also is known as a crucial element of an organisation´s rules, and

therefore the managerial policies are a vital part of the processes of a business model (Johnson et al., 2008; Johnson, 2010). At Klarna this can be explained in the circumstances that policies and rules are highly demanded in their business model, and the reason is because of the credit assessment and thereby they are demanded to also have proper credit terms. Further on, the management at Klarna formulates and sets policies and goals for the credit terms and the acceptance rates, in order to ensure that the credit risk is managed in a sustainable manner. Based on those directives, the practical work with credit assessments is monitored. However, this work can be explained as a way of keeping the business model in a proper balance (Johnson, 2010), and therefore it can be argued that the credit risk policies are obligatory in Klarna´s processes.

Furthermore, the process of managing risks is a continuous process, which is highly dependent on both internal and external changes. (Gerber & Von Solms, 2004), and a continuous adaption of the business model is therefore needed in order to make it successful (Teece, 2010), which from the empirics can be found in the sense that Klarna is demanded to follow the laws and rules of FSA, which can be argued to a dependency on external changes, while changes like the development of services and IT can be realised as internal changes. Additionally, due to the circumstances that FSA sets restrictions to Klarna´s credit portfolio, and "*further on this means that Klarna´s business model has to be changed in order to meet the credit demands. (Interview, April 4th).* It can therefore be argued that Klarna has to incessantly make changes to meet their credit risk, which moreover can be stated as an adaption of the business model to meet this requirement, which as mentioned above, is needed to make the model successful (Teece, 2010). However, a change in one of the elements does not have to cause changes in other elements and not need to entail a new business model (Abraham, 2013), which therefore can be argued to be the case at Klarna.

However, to make the changes in the business model successful, the processes and information and technology needs to be suitable for the model. Besides, information and technology can affect the process of modify the business model. (Petrovic et al., 2001) From the empirical findings it can be identified that IT has become more advanced during the years, and by that it has also modified Klarna´s business model. Further, the development of products and information and technology is known to be a vital part of a company´s processes within the business model (Johnson et al., 2008; Johnson, 2010), which from the study can be found based on Klarna´s development of their services and IT-system. From the literature review it can further be stated that, when designing a business model it is important to implement systems, processes and assets

that are difficult for the competitors to imitate, and also develop a model consisting of a level of opacity (Teece, 2010). The development of the IT-systems has put a requirement on Klarna to increase the amount of engineers that can develop the IT-system that the credit assessment is made on, to further increase their competitive advantage that Klarna has with their systems. Further it can be stated that Klarna´s unique method of measuring credit risks is an essential process in their business model. A well-known method of managing credit risks is credit scoring (Thomas et al., 2002 p.1), but instead Klarna started using their own unique method that bases the calculation of risks on the behaviour of customers, and therefore it can be argued that Klarna has developed a level of opacity in their business model.

Besides, it is also required that Klarna continuously controls and evaluates the credit risk models in order to ensure the risk credit risk assessment and reducing credit losses as well as being profitable. This can be argued as a process of monitoring bad debts. Further on, to plan, monitor and control the risks is a vital factor of the risk management, but to enable that they are dependent on the risk analysis (Gerber & Von Solms, 2004), which from the empirics can be comprehended due to the fact that it is the risk analysts that are developing the credit models that are needed to create value and ensure a proper credit assessment in their every-day business operations. This can further be explained as process that creates a sustainable and repeatable CVP, which is an essential feature of a company´s process in the business model (Johnson et al., 2008; Johnson, 2010).

6. Conclusion

The purpose of this research is to study *how credit risk management can be integrated in an organisation´s business model in terms of the four elements: customer value proposition (CVP), profit formula, key resources and key processes.* Previous academic research on the subject is lacking, and therefore the aim was to contribute with an understanding on how credit risk management can be incorporated in the four elements.

In accordance with preceding theories, the findings from this study show that is essential to identify the features of each four element that facilitates the creation and capturing of value. Nevertheless, a significant finding was that the case company creates value through a proper facilitation of credit risk management. Through the research it has been displayed that the integration of the core competence, *credit risk management*, into the business model can be a valid concept for value creation. Nevertheless, the study discovered that an integration of credit risks management in all the four elements has been a necessity in order to create the business idea of a "simpler, safer and more fun" purchasing experience. Credit risk management has been showed to be a consistent factor that holds together the elements, and thereby becomes a crucial part of the business model for the studied company.

The study expresses that there are certain prominent functions in each elements that enable the integration of credit risk management. One of the prominent finding is that *CVP* can be considered as one of the most important elements, as it contains functions that create value in the business model, and thereby can be considered as the cornerstone of the business model. Due to the business idea and services that the case company offers, it sets demands on the organisation to be able to facilitate credit risk management and have functions that support it in order to be profitable and serve their business idea. It can therefore be concluded that to "get the job done" sets the requirement for the case company to integrate credit risk management into the business model. This leads to the next noticeable finding, the integration of credit risk management in the business model initiated in the CVP element. However, evidence from this study shows further that CVP cannot be created without exceptional *key resources*. Functions such as the IT-systems, services as well as intellectual resources in credit risk, have assisted and enabled the case company to conduct the credit risk management activities in the way they do. These resources are thus necessary for the case company as their daily operations is highly supported by it, which in turn are the features

that enable the value creation in the CVP. It confirms the fact that *key resources* are mandatory to create *customer value propositions*.

Another major finding supporting the idea that credit risk management is required to assist in creating a *profit formula*. The study results show that that profitability is highly dependent on how the credit risk management functions create value, and a noticeable function that determine the integration of credit risk management is the outlook of the credit portfolio that ensure that losses stay at a stable level. Consequently, the *profit formula* allows the company to maximise profits while at the same time creating value for the customers by assuming credit risks. However, the study vivifies that the profit formula is however dependent on the *key processes*, such as policies and processes of credit risk, which was found to allow the case company to grant credit and take risks while still having a successful profit formula. Policy documents that are praxis throughout the company were found to be an important part of the integration of credit risk into the business model.

Nevertheless, another noticeable finding is that policy documents for credit risk were highly affected by FSA´s laws and rules. Consequently the FSA credit assessment laws have an effect on the whole business model in order to have a stable credit assessment. This finding is supported by the fact that a credit risk management can be affected by external pressure. However, the study further express that an important part of *key processes* is flexibility. Small changes in one elements, such as new products or IT- systems, is important for the sake of innovation and competitiveness and therefore the business model calls for a flexibility, which maintain the fact that small changes can be done without resulting in a new business model.

Finally, through the study it has become apparent that to manage the complexity and risks that occur in the e-commerce dictates that credit risk management is a vital and inevitable function, and therefore the integration of it into a business model becomes a necessity. This research has shown that credit risk management is a common factor found in all of the four elements, and that these four elements are complement each other. The findings further support the notion that the interconnection between the different elements is crucial for the value creation. Nonetheless, the findings imply that in order to have a successful integration it is necessary to have the capabilities and demand to do so. Due to the business idea of the case company, credit risk assessment is found to be the whole engine of the company, and consequently features in all the four elements have been found to contribute to the integration of credit risk management.

6.1 Managerial Implications

Our research on the integration of credit risk management into a business model can not only provide firms with an understanding on how to incorporate credit risk functions in their models, but also to show the importance of business model innovation. Managers in the e-commerce sector need to be aware of the key competences in their businesses to stand out from the competition, and this can be done by excelling in a certain function and integrating it throughout the business model. Through integrating that function into the elements of the business model, it will strengthen the interlocking between the elements and thus strengthen the value creation of the business model.

6.2 Further Research

This study has been focusing on only one actor in the e-commerce sector and thereby the results can also be considered to be on a smaller scale. A relevant further study would therefore be to extend the study and conduct an analysis on multiple companies to be able to find more evidence and methods of integrating credit risk management to a business model

A more extensive study would help to generalise the findings, because what can be clearly found in the empirical material is that Klarna is an outlier when it comes to managing credit risks in the e-commerce. While this serves the purposes of this study, a wider study could provide with knowledge on different methods managing credit risks and thus more evidence on the integration.

From the empirical material gathered for this study it is evident that Klarna's credit risk management is highly dependent on their algorithms and technical systems. An interesting area for further studies would therefore be to study IT systems and their importance for credit approvals as well as the many ways of using data analytics in building algorithms.

Additionally, this study has focused on how a company can manage the credit risks that they take when granting end-customers credit, but there are also some risks involved with cooperating with merchants in the e-commerce sector. It would therefore be interesting to study how these risks are met and what kind of requirements a company can put on the merchant in their agreement, as well as how the relationship between the company and the merchant looks like.

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8. Appendices

Appendix 1.1 Interview questions: Independent Risk Control

Titel:
Avdelning:
Antal år på Klarna:

1. Har Klarna en affärsmodell?

2. Hur ser Klarnas affärsmodell ut? Vad är det som utmärker Klarnas affärsmodell?

3. Har Klarna haft samma affärsmodell ända sedan början?

4. Utvärderar och utvecklar Klarna affärsmodellen kontinuerligt?

5. Vem är det som beslutar hur affärsmodellen ser ut/är?

6. Har medarbetarna på Klarna kännedom om affärsmodellen?

7. Bygger affärsmodellen på externa lagar och regler?

8. Har Klarna riskhantering implementerad i affärsmodellen?

9. Om ja, hur påverkar det Klarnas dagliga arbete?

10. A) Enligt teorin är affärsmodellens syfte att skapa och fånga värde, samt att affärsmodellen är en byggsten för företagets konkurrenskraft, tycker du att detta stämmer på Klarna?

    B) Vilken roll har riskhanteringen för värdeskapandet och konkurrensen?

11. A) I skapandet av en affärsmodell ingår det olika typer av val: policy, assets, governance. Dessa val sägs ha en inverkan på hur konkurrenssituationen kommer att se ut. Kan du relatera dessa olika val till uppbyggnaden utav Klarna´s affärsmodell? Om ja, vilken/vilka av dessa val påverkar riskhanteringen?

    B) Skiljer ni åt de olika typer utav risk i affärsmodellen? I villket/villka val påverkar kreditriskhanteringen?

12. Enligt teorin ska en affärsmodell bestå av; "a customer value proposition, a profit formula, key resources, and key processes", i modellen. Hur ter sig dessa I Klarna´s affärsmodell?

13. En viktig aspekt i en affärsmodell handlar om hur intäkterna är genererade. Har kreditriskhanteringen någon påverkan på hur Klarna arbetar med detta?

14. Vilka är Klarnas nyckelresurser för att möjliggöra affärsmodellen?

15. Vilka är nyckelaktiviteterna i Klarnas affärsmodellen?

16. Hur stor påverkan har riskhanteringen i affärsmodellens uppbyggnad?

17. Hur skulle du säga att riskhanteringen bidrar till skapandet av värde och konkurrensfördelar? (Affärsmodellens syfte är att skapa värde etc.)

Appendix 1.2 Interview questions: Risk Department

Titel:
Avdelning:
Antal år på Klarna:

1. Vad arbetar din avdelning med? Vilket ansvar har ni?

2. Vet du hur Klarnas affärsmodell ser ut? Känner du till Klarna´s mission?

3. Anser du att dina medarbetare har kunskap om Klarnas affärsmodell?

4. Hur påverkar affärsmodellen ert dagliga arbete? Är det några specifika funktioner som styrs av affärsmodellen?

5. Hur arbetar Klarna med kreditriskhantering?

6. Hur anser du att kreditriskhanteringen har påverkat Klarnas affärsmodell?

7. Vår teori talar om olika variabler för att bedömma risken för transaktionen:

    o Transaction cost, transaction history, indemnity (variabler)

    o Time, location (varibel parametrar)

    o Verification (action)

    Används dessa variabler vid kreditriskhantering på Klarna? Om ja, hur ter sig detta arbete?

8. Vilka olika metoder används för att arbeta med kreditrisk?

9. Vilken typ av teknik används för kreditriskhantering?

10. Hur analyseras risken i er arbete? Hur ser hela köp- och godkännandeprocessen ut?

11. Hur mycket av ert arbete är automatiserat? Hur mycket påverkar den individuella medarbetaren det slutgiltiga beslutet?

12. Vad är det som ligger till grund för de parametrar som Klarna använder vid credit scoring? Utvärderas och ändras dessa parametrar?

13. Hur påverkas det dagliga arbetet med kreditriskhantering av Finansinspektionens lagar och regler?

14. Utvärderar ni er egen kreditriskhantering samt de metoder som ni använder?

15. I en intervju vi hade med Jonas Björk sade han följande: "Riskhantering och transaktionerna är en stor del av affärsmodellen, att säga ja till så mycket som möjligt för att maximera vinsten" "Riskhanteringen är implementerad i affärsmodellen för att hitta vilka risker man har med affärsmodellen, om man vill växa på en viss marknad måste man tänka på vilken risk det innebär (både kreditrisk och operationell)"
Är dessa påstående något som ni tänker på i ert dagliga arbete?

16. Utvärderar ni era kreditriskhanteringsmetoder i samband med ändringar i Klarnas affärsmodell eller strategiska ändringar?

17. Vad är det som ni måste göra praktiskt för att följa regelverk satta av Finansinspektionen och Klarnas styrelse (policy choices)?

Appendix 1.3 Interview questions: Customer Service

Titel:
Avdelning:
Antal år på Klarna:

1. Vad arbetar din avdelning med? Vilket ansvar har ni för?

2. När vänder sig kunden till er avdelning? I vilket syfte vänder sig kunden till er?

3. Vet du hur Klarnas affärsmodell ser ut? Känner du till Klarna´s mission?

4. Anser du att dina medarbetare har kunskap om Klarnas affärsmodell?

5. Hur påverkar den ert dagliga arbete? Är det några specifika funktioner som styrs av

affärsmodellen?

6. Har ni styrdokument för ert arbete? Om ja, vad är för - och nackdelarna med det att det enligt dig?

7. Vad är Er roll vid kreditriskhanteringen? Hur påverkar kreditriskhanteringen (och dess bestämmelser) ert arbete?

8. Vilka metoder använder ni er utav i ert arbete, och vad styrs dessa av?

9. Hur ser en konsuments köpprocess ut?

10. Vilken del av köpprocessen är den mest kritiska?

11. Vad händer med kundförlusterna som uppkommer då kunder inte vill eller kan betala fakturan?

12. Hur behandlar Klarna kreditförluster?

Appendix 1.4 Interview questions: Customer Service

Titel:
Avdelning:
Antal år på Klarna:

1. Vet du hur Klarnas affärsmodell ser ut?

   Om ja, hur skulle du beskriva modellen?

2. Hur anser du att affärsmodellen påverkar ert dagliga arbete?

3. Vilka är Klarnas kunder?

4. Vad erbjuder Klarna för produkter/service?

5. Hur anser du att Klarnas affärsmodell skapar ett värde till kunderna? Vad är det möjliggör att Klarna kan skapa värde till kunderna?

6. Hur skiljer Klarna sig från sina konkurrenter?

7. Hur ser en konsuments köpprocess ut? Vilken del av köpprocessen är den mest kritiska?

8. Hur, och på vilka typ/typer av produkter/service, genererar Klarnas affärsmodell inkomst?

9. Vilka är Klarnas nyckelresurser i Klarna´s affärsmodell?

10. Vilka olika parter ingår i Klarnas nätverk? Hur påverkas Klarna´s affärsmodell av dessa?

11. Har Klarna´s produkter/service utvecklats? Om ja, hur har dessa utvecklats?

12. Vilka är Klarnas nyckelprocesser i Klarna´s affärsmodell?

13. Vad är Er roll vid kreditriskhanteringen? Hur påverkar kreditriskhanteringen (och dess bestämmelser) ert arbete?

14. Vad är det som gör Klarna´s kreditriskhantering unik?

Appendix 1.5 Interview questions: Risk Department

Titel:
Avdelning:
Antal år på Klarna:

1. Vet du hur Klarnas affärsmodell ser ut?

   Om ja, hur skulle du beskriva modellen?

2. Hur anser du att affärsmodellen påverkar ert dagliga arbete?

3. Hur ser en konsuments köpprocess ut? Vilken del av köpprocessen är den mest kritiska?

4. Hur genererar Klarnas affärsmodell inkomst?

5. Vilka är Klarnas nyckelresurser i Klarna´s affärsmodell?

6. Vilka är resurser krävs vid kreditriskhanteringen?

7. Hur påverkas Klarnas affärsmodell av IT?

8. Vilka är Klarnas nyckelprocesser i affärsmodellen?

9. Vad erbjuder Klarna för produkter/service?

10. Har dessa produkter/service utvecklats? Om ja, hur har dessa utvecklats?

11. Hur påverkar Risk avdelningen de produkter/service som Klarna erbjuder?

12. Hur skiljer Klarna sig från konkurrenterna? Vad gör kreditriskhanteringen unik?

13. Hur säkerställer Klarna att kreditriskhantering är sund?

14. Använder ni styrdokument i ert arbete? Hur påverkar Finansinspektionen ert arbete?