CHALMERS

FinTech Start-up

-The Value of Better Credit Evaluation

Bachelor Thesis at Industrial Engineering and Management

LINUS ADOLFSSON
ERIC BONFRE
HENRIK IVARSSON
FELIX LISSÅKER
GUSTAV MALMBERG
PETER MÖLLER

The Department of *Technology Management and Economics*
Division of Entrepreneurship and Strategy
CHALMERS UNIVERSITY OF TECHNOLOGY
Gothenburg, Sweden 2017
Bachelor Thesis TEKX04-17-03

Acknowledgements

This bachelor thesis was conducted during the spring of 2017 at the institution for Technology Management and Economics at Chalmers University of Technology. The project was written under supervision and guidance by Marouane Boufisha.

We would like to pay tribute to our supervisor Marouane and to our assisting company *Evispot* that has shared their progress and collected data. We would also like to thank all companies that have agreed to help us by participating in interviews.

Abstract

The credit market has lately grown larger and new actors have entered the market. This is a result of the credit market being considered a lucrative market. Credit evaluation is a highly essential part of crediting and determines whether a person is creditworthy or not. *Creditors* invest large resources in developing software that, based on customer data, executes the evaluation. Within *E-commerce* the crediting is carried out through invoice and it is that area that the bachelor thesis will address.

The purpose of this bachelor thesis is to identify the value of a better credit evaluation model. The value will be assessed for the different segments that are connected to the credit market within *E-commerce* as well as for society. To enable this, an analysis was made of the different types of segments active in the identified *Credit chain* and their relation to each other. This was done mainly through interviews and with help from the internet, which resulted in a mapping of the segments and the companies within them. To identify the value of a better evaluation model, data were used from semi structured interviews in the result, providing information and knowledge that made it possible to conduct an analysis.

The identified segments are *E-commerce actors, Creditors, Invoice service providers, Payment service providers, Credit report providers, Debt portfolio buyers and Debt collectors*. The conclusion disclosed that implementing a better evaluation model were most beneficial for *Creditors*, *E-commerce actors* and *Credit report providers*. It stipulates the most suitable offerings strategy and what company parameters to consider. A better evaluation model would result in fewer people ending up in personal economic crisis, reduced credit losses for *Creditors* and reduced indirect costs for society. The value of various credit evaluation models will be affected by the new regulatory frameworks: PSD2, GDPR and KALP-analysis. Hence, the value of the *Credit chain* ought to grow as a result of the new frameworks.

Sammanfattning
På senare tid har kreditmarknaden växt sig allt större och fler aktörer har gått in på marknaden. Detta är ett resultat av att kreditmarknaden fortfarande anses ha höga marginaler. Kreditvärdering är en högst essentiell del kreditgivning, vilken avgör vem som är kreditvärdig och inte. Kreditgivare lägger idag stora resurser på att utveckla mjukvara som baserat på kunddata utför evalueringen. Inom e-handel sker kreditgivning i form av att kunden betalar med faktura och det är det här området som detta kandidatarbete kommer behandla.

Syftet med arbetet är att identifiera värdet av en bättre evalueringsmetod för samhälle och för de olika typer av aktörer som är kopplade till kreditkedjan inom e-handel. För att möjliggöra detta gjordes en undersökning av vilka olika typer av aktörer som är aktiva på den identifierade kreditmarknaden samt deras relation till varandra. Detta gjordes framförallt genom intervjuer och med hjälp av internet, vilket resulterade i en kartläggning av aktörerna. För att identifiera värdet av en bättre evalueringsmetod användes data från semistrukturerade intervjuer, vilket gav information och kunskap som gjorde det möjligt att utföra en analys.

De identifierade typer av aktörer är *e-handlare, kreditgivare, fakturaservice, betalväxlar, kreditupplysningsföretag, skuldportfölj köpare* och *skuldindrivare*. Studien resulterade i ett fastställande att implementera en bättre evalueringsmetod var mest fördelaktigt för kreditgivare, e-handlare och kreditupplysningsföretag. Det mest lämpliga tillvägagångssättet för att sälja modellen och vilka företagsspecifika faktorer som bör beaktas är också inkluderade. En bättre evalueringsmetod hade lett till att färre personer hade hamnat i personlig ekonomisk kris, minskade kreditförluster och minskade indirekta kostnader för samhället. Värdet av kreditevalueringsmodeller, och därmed kreditkedjan, torde öka till följd av den summerade effekten av kommande reglering, det vill säga PSD2, GDPR och KALP.

Acronyms

GDPR	General Data Protection Regulation
HDI	Human development index
KALP	Kvar att leva på (left to spend)
KPI	Key performance indicator
PSD	Payment Service Directive
PSP	Payment service provider
QE	Quantitative easing

Table of Contents

1 Introduction

1.1 Background

1.1.1 The credit market

In the last couple of years there has been a rapid growth of actors in the credit market. The credit market has been considered a lucrative market with low transparency. Since there is low transparency there is also shortage on information about the details in the credit market. After doing interviews with actors in the market, it can be determined that the shortage of information is mainly because it is the way they compete. If the companies would have full transparency, then they would lose all their competitiveness against the competitors within the credit market.

The thesis will focus on the invoice niche of the credit market and the concerned segments. The segments concerned will be referred to as the *Credit chain* and includes those segments that are involved when invoice is used by *E-commerce actors*. The segments are *Creditors, Invoice service providers, Payment service provider, E-commerce actors, Debt collectors, Debt portfolio buyers* and *Credit report providers.*

1.1.2 Invoice niche of the credit market

The rapid expansion of the internet has changed consumers' buying behaviour distinctly where consumers are moving towards e-commerce from the traditional in-store purchases (Statista, 2016). The e-commerce market, consisting of online sales, in Sweden has grown by 43% over the last five years and the size of the market is 100 billion SEK as of 2016 (Dibs, 2016). As the market has increased, associated payment methods have done the same. During 2016, 54% of e-commerce consumers paid by invoice at least once which implies a large market for consumer credits. Invoicing is a kind of credit where the products are delivered but the invoice can be paid sometime within a given time frame. This simplifies the return since no financial transaction has to be made if the customer decides to return the product. Furthermore, the consumer can buy products or services without having any cash at the specific moment, hence they do not have to wait for the salary. Due to simplicity, minimized risk and better liquidity; companies today, especially in Sweden, use third parties to outsource their invoice services. This has become an almost standard procedure between start-ups and companies expanding to e-commerce.

Lately there has popped up more actors in the credit market due to large margins and low interest rates for lending in general. One of these actors is the *Debt portfolio buyer*, whose business is purchasing large debt portfolios at a discounted price and later on collect the debt to make profit. The debt portfolios often consist of thousands of unpaid invoices and is a consequence of people/companies that are not able to afford what they have purchased. One could say that the increase in both number of actors and money in the invoice market is partly due to that the credit evaluations are not working correctly.

1.1.3 The transparency of the credit market

With a continuously growing and ever changing credit market there is a constant need for mapping the market to identify new actors, competition and potential customers. The general understanding and transparency of the credit market is low (McVey, 2012); the invoicing part of the market is no exception. The academic value of this report is therefore seen as the added information about this market, which the result is intended to do.

1.1.4 Importance of an accurate credit evaluation model

Since the consumer does not need any cash at the given point of purchase there are certain risks for both the retailer's *Creditor* and the potential customer when using invoice as a payment solution. *Creditors* face risks in gaining credit losses due to customers that do not pay their invoices. Customers that are not able to pay their invoices on the other hand get a record for payment default (*betalningsanmärkning*) which indicates that they are not creditworthy. Records for payment default for a private person remains for three years (Kronofogden, 2017) and significantly affects all types of external private financing for the person in question. Once a person is considered not creditworthy their future life becomes therefore substantially more complicated. As more people end up in this vicious cycle this also affect the society. To minimize the risk on both sides of the deal it is obvious that the credit risk evaluation model plays a vital role when using invoices as payment solution. The analysis will identify the value of a more accurate credit evaluation model based on the research in the result.

1.1.5 Evispot

Evispot is a financial technology start-up company which was founded in spring 2017 by three students at Chalmers School of Entrepreneurship. The idea behind the start-up is that the credit evaluation algorithms used today lack accuracy when determining if a potential customer is creditworthy. The founders of *Evispot* believes that the current credit risk evaluation models might be generating excessive amounts of false-negatives and false-positives. If the stated null hypothesis is "The person asking for credit is creditworthy" then false-negatives occur when potential customers, that can pay, are denied an invoice credit due to a poor credit score; false-positives is the opposite and occurs when a non-creditworthy individual is granted a credit on the invoice (Siddiqi, N., 2006). These statistical misclassifications are due to lack of parameters or parameters not being combined and interpreted optimally. Improvement of the evaluation models could therefore lead to both increasing revenues for *Creditors* as well as reduced credit losses due to bad credits.

1.2 Purpose

The purpose of this thesis is to evaluate the value of a more accurate credit evaluation model and to examine different ways to construct the offering considering company parameters. In addition, present a lucid overview of the current market situation and analyse the effects a more accurate credit evaluation model has on the society. Analysis of the market structure and dynamics, will give an overview of the credit market and the actors within it.

The market research will include relevant actors within the invoice niche of credit market, which is approximately 50 companies. The idea is to map the *Credit chain*, illustrate company relations and categorize which companies that are active in which of the following segments:

- *E-commerce actors* - Online actors that conduct sales and services over the internet
- *Payment service providers* - Providers of software for the electronic payment window for credit cards, invoices, bank transfers and other payment solutions.
- *Invoice service provider* - Provide administrative management of invoices for companies.
- *Creditors* - Take the credit risk associated with an invoice payment from for instance a retailer, for instance an online retailer.
- *Credit report providers* - Provide information about previous payment defaults, income, taxation et cetera.
- *Debt collectors* - Offers collection of defaulted debts to *Creditors*.
- *Debt portfolio buyers* - Actors that purchase large debt portfolios at a discounted price compared to the debt value. The discount is due to high default risk, administrative burden for the creditor as well as for inciting accounting technicalities from banking regulation.

1.3 Delimitations

The study will only cover the Swedish credit market for e-commerce, it will not cover mortgages or other kinds of larger credits. The credit market is only viewed as the seven separate segments mentioned above. Possible other parts of the credit market will not be evaluated in the same extent. The study might include, but not primarily focus on, the larger banks of Sweden. That is due to their absence from e-commerce.

1.4 Research questions

The focus of the report is to answer the following three research questions. However, additional factors that came up at the interviews and that affect both the credit market and society, will also be taken into consideration and be analysed.

1. What is the value of a more accurate credit risk evaluation model within each one of the seven segments in the identified *Credit chain*?
2. What is the optimal offering for a new credit risk evaluation model and what company parameters are relevant to consider for the target customer?
3. What is the value of a more accurate credit risk evaluation model for society?

1.5 Disposition

The report will consist of five main parts. The first is the *Literature Review* with the purpose to enlighten the reader about the actors in the credit market, but also give the reader enough information to understand current limitations, social effects and regulations within the market. The method and procedure used throughout the project is presented in Chapter 3. The mapping of companies and the data collected from the interviews will be presented and

summarized in Chapter 4. In Chapter 5, all information from both *Literature Review* and *Results* will be analysed through our three primary issues which are presented in *Questions*. The conclusions of the analysis will then be summarised in the end, followed by a short comment and discussion of the future development of crediting.

2 Literature Review

This chapter is meant to give the reader a solid theoretical background of the identified *Credit chain* as well as each of the seven segments. Regulatory authorities will also be treated as well as planned legislation that will affect the Credit chain. The chapter ends with a section about sustainability connected to the *Credit chain*.

2.1 The seven segments of the Credit chain

To make it easier for the reader to visualize how the segments in the *Credit chain* interact with each other, each process will be described with an example throughout the Literature Review. When the segment is described, an example will be presented with it for concretization.

2.1.1 E-commerce

Imagine you are going to purchase a pair of shoes and instead of going to the physical store you decide to purchase them using the internet.

E-commerce has grown rapidly the last couple of years. Becoming such a common way of doing business, it is rather strange to separate e-commerce from traditional commerce. Adam D Smith (2008) define e-commerce as "any business done electronically*"* and the growth of e-commerce has led to an increase in demand for various payment solutions. One of these payment solutions are invoices which is the credit associated with e-commerce.

Sweden is on the frontier when it comes to technological adaptation (Nyteknik, 2013), with the growth of e-commerce not being an exception. The last five years, 2012-2016, the e-commerce market has increased by 43 percent and had by 2016 a market size of approximately 100,5 billion SEK (Dibs, 2016). To put this in perspective, the revenues coming from e-commerce is approximately the same size as the total revenues coming from all Swedish restaurants combined.

According to *Dibs* (2016) the customers' behaviour and perception of e-commerce has changed over the years. A couple of years ago the main reason to purchase something online was because of price differences. Due to the digitalization, e-commerce has become a safe environment for the customers and the benefits of purchasing something online are much greater than they were a couple of years ago (Dibs, 2016). The environment let consumers do research, compare prices, get access to a wider range of products/services, share/read reviews and they are no longer dependent on location.

2.1.2 Payment service providers

Once you have decided which shoes you want to purchase you go to the checkout option on the website. In the checkout page, you are given several different payment options.

Payment service providers, henceforth *PSP*, is an efficient tool that enables secure financial transactions through different payment solutions (Alan D. Smith, 2008). In e-commerce, the retailer uses a *PSP* to provide an electronic payment window for the customer. The *PSP* usually combine different payment solutions to provide the most attractive solution to the retailer. The electronic payment window lets the customer choose through which payment method they prefer to perform the financial transaction. The most preferred payment solutions in Sweden last year, according to *Dibs* (2016), are credit card (40%), invoices (23%), bank transfers (18%) and then other solutions such as *PayPal*, *Payson* among others (12%).

For a retailer to implement a *PSP* solution means certain requirements and costs. The costs related to a certain *PSP* is often transaction costs plus a fixed monthly fee (Ehandel, n.d). Payment solutions such as credit cards are often associated with fixed transaction costs, credit invoice solutions in turn often means both fixed costs and a percentage of the total volume (E-butik Norden AB, 2013).

2.1.3 Invoice Services Providers

Since you are not able to afford the shoes until the end of the month when you get your salary, you decide to purchase the shoes using the invoice service. The invoice service offered from this Swedish shoe retailer is by the company *Klarna*. Since you have not used their services before you have to fill in all your personal information.

Invoice services includes administration of invoices, billing and data registration (Arvato, 2016). Motives for outsourcing of these services are the same as any other services, to relieve the company of administrative staffing costs. The outsourcing enables the company to turn fixed costs of staffing and data storage into variable costs, which especially attracts small companies in need of liquidity and unable to achieve economies of scale. The third party to whom the services are outsourced also generally handles the communication with the client, including reminders for overdue payments and contact with authorities (Arvato, 2016). These invoice services are often combined with crediting.

2.1.4 Creditors

The company that offers the invoice service is not always the same as the one taking the risk. However, in this case the shoe retailer uses Klarna which is both an *Invoice Service Providers* and a *Creditor*. As soon the potential customer is granted credit, the risk is transferred instantaneously from the shoe retailer to the *Creditor*.

Creditors in the invoice credit industry pays the purchase made by the consumer to the retailer, gives the consumer an invoice and thereby has provided a credit (Klarna, n.d.). Through this, the *Creditor* provides the retailer with liquidity and unburdens the retailer from the credit default risk associated with the loan. Before buying the credit, *Creditors* make an evaluation of the consumer's creditworthiness. If the consumer is deemed worthy of a credit, the *Creditor* will pay the retailer for the consumer’s purchase and then awaits the payment for the merchandise from the consumer. If the consumer on the other hand has a previous default

on a debt, a large deficit of capital or no income, the *Creditor* will most likely deny the consumer a credit (Upplysningscentralen, 2017). These factors are chosen and weighted differently by different *Creditors*, which is considered the area where competitive advantages are achieved. The *Creditor* is willing to take over the risks for a fee from the retailer.

2.1.5 Credit Report Providers

If you have not used *Klarna* before they have no data on whether you are creditworthy or not. Almost all *Creditors* then use external credit evaluation when they decide if they shall or shall not take the credit risk which in this case means letting you purchase the shoes through invoicing.

Credit reports contains historical financial and personal data of an individual or a company. The data includes information such as employment history, current debt and bill payment history (United States Government, 2017). The credit reports facilitate lending for *Creditors* by assessing the possibilities of repayment considering several parameters as well as synergies from combinations of these parameters.

The *Credit report providers* in Sweden are regulated by the credit reporting law under *The Swedish Data Protection Authority* (*Datainspektionen*) and are required to attain a permit (Datainspektionen, 2017). Currently several companies have permission to conduct operations in Sweden. The *Credit report providers* compile data from different authorities and institutions including the *Swedish tax agency* (*Skatteverket*), Swedish courts and banks (Upplysningscentralen, 2017). *Credit report providers* are regulated by the credit reporting law under *The Swedish Data Protection Authority* to protect integrity of personal data, but also to contribute to an effective crediting in society (Datainspektionen, 2017). The law therefore demands a legitimate cause for using the information, for instance evaluating a consumer credit.

Parameters in credit reports include debt balance with the *Swedish Enforcement Authority* (*Kronofogden*), income, property, records of payment default among other things (Datainspektionen, 2017). At *Creditsafe*, a well-known *Credit report provider*, the information is boiled down to a scoring value between 0-100 which represent how creditworthy the person in question is.

2.1.6 Debt Collectors

You are accepted by *Klarna* since you have a full-time employment and no record of payment default. Time goes by and you realize that you will not be able to pay the invoice before the expiry date of the invoice. *Klarna* sends reminders of the invoice but you still cannot afford to pay the invoice. After a certain number of reminders *Klarna* realize that you will not pay the invoice. Since they are the ones exposed to the credit risk they are eager to retrieve the money. In this case *Creditors* often use external *Debt collectors*.

When a person does not pay an invoice, the *Creditor* that granted the credit sends reminders to the person. If the debtor still does not pay, then the *Creditor* will most likely hire a third-party *Debt collector*. This is a company that specialise in collecting unpaid debts. The *Debt*

collector reminds the debtor about the unpaid debt with a more serious tone which acts like an incentive for the debtor (Intrum, n.d). If the debtor is still not able to pay the debt plus eventual interest the matter could be passed to the *Swedish Enforcement Authority* (Kronofogden, n.d). *Debt collectors* also offer legal advice for the *Creditors* in questions regarding disputes about debts. The *Debt collector* charge the *Creditor* by taking a fixed fee or percentage of the debt (Investopedia, 2017).

2.1.7 Debt portfolio buyers

Imagine you have now lost your job and sold most of your belongings just to survive but you still have not paid the invoice for your shoes. The external *Debt collector* that *Klarna* used was therefore not successful. Now *Klarna* has understood that you cannot afford to pay the invoice and therefore the invoice is no longer looked upon as an asset. *Klarna* chooses to sell off your invoice combined with thousands other invoices with similar cases like yours, a so-called debt portfolio. *Klarna* sells these to a discounted price to an external actor, a *Debt portfolio buyer,* who think that they will be able to collect enough debts to make a profit.

If the debt collection has been unsuccessful the *Creditor* could sell the debts to a *Debt portfolio buyer* at a much lower price than what they are originally worth (Leibowitz, 2013). The *Creditor* agrees to this due to the high uncertainty of getting any money back and it also provides instant liquidity. The *Debt portfolio buyer* then has the same options as the *Creditor* had at first; collect the debt themselves, hire *Debt collectors*, do a depreciation or sell the debt.

When trading with debts, the debts are not sold in singular. Instead they are packaged together in portfolios (Leibowitz, 2013). The portfolios can be repackaged by the next buyer and sold again. The debts are packaged based on certain aspects (Fortuna Auctioneers, 2017). This can be things like the age of the debt, the type of the debt, the amount et cetera. The *Debt portfolio buyer* gets access to some information of the debts in the portfolio so she can analyse the content and decide if she wants to buy, and if so, to what price (Leibowitz, 2013). The *Debt portfolio buyer* reduces the losses of the *Creditor* by buying debts that the *Creditor* cannot collect. This allows the *Creditor* to lower the interest rate and lend out to more borrowers.

2.2 Authorities

There are several authorities regulating the markets where the segments in the *Credit chain* is present. This report will cover the two most relevant ones: *Sweden's Financial Supervisory Authority* (*Finansinspektionen*) and *The Swedish Consumer Agency* (*Konsumentverket*).

2.2.1 Sweden's Financial Supervisory Authority

The Financial Supervisory Authority in Sweden is a state-owned agency whose purpose is to oversee the financial market and protect the society from non-serious financial actors (Finansinspektionen, 2017). It controls the actors within the financial market by developing regulations and make sure the companies follow them. Companies that offer certain financial services in Sweden must be approved by *the Financial Supervisory Authority* which forces the

companies to keep a certain level of quality. Once they have been approved the companies are obligated to continuously report their financial information (Finansinspektionen, 2017).

2.2.2 The Swedish Consumer Agency

The Swedish Consumer Agency (*Konsumentverket*) has the task to protect consumer interests (Konsumentverket, 2017). That includes ensuring that companies providing short term credits, that are not under the regulation of *Sweden's Financial Supervisory Authority,* follow the law and "good crediting standards" which is essentially vaguely formulated guidelines for companies that provide short term credits for consumer goods (Konsumentverket, 2017). Invoice credits are one sort of credit that goes under this definition, which is considerably less strict than the regulation of *Sweden's Financial Supervisory Authority.*

2.3 Laws

There are upcoming regulatory changes that will impact the invoice credit industry. These new legal frameworks will affect the dynamics and structure of the industry by increasing obligations for certain companies within the market.

2.3.1 PSD2

PSD2 refers to a fundamental piece of payment related legislation which entered into force in January 2016 (The Second Payment Services Directive (PSD2), 2016). This legislation requires all member states in the EU to implement the related rules as national law by 13th of January 2018. PSD2 aims towards increasing the already competitive payment industry by further extending the range of competitors to not only banks but also, for example, other *PSPs*, Fintechs and customers. The first Payment Service Directive (PSD) was established as a European legal framework for payment services with the same intentions as PSD2.

The legislation will make bank's monopoly on their customers' information disappear, hence, enabling third party providers to manage private finance. In the near future, a private consumer could purchase goods or transfer money directly via *Google* or *Facebook* whilst keeping their money in the bank. The third-party providers will be able to build their offerings on top of bank's infrastructure and data (EVRY, 2017).

2.3.2 H&M court case

The Swedish Consumer Agency recently accused *H&M* of using insufficient data in their credit scoring models. According to the agency, *H&M* have no possibility of assessing the consumers' ability to repay their credit from the current parameters (Förvaltningsrätten i Karlstad, 2015). *H&M* lost in *the Administrative Court* (*Förvaltningsrätten*) and thereafter appealed to *the Administrative Court of appeal* (*Kammarrätten*) where they won the case. *The Swedish Consumer agency* has now appealed to *the Supreme Administrative Court* (*Högsta förvaltningsdomstolen*) where the market awaits the ultimate verdict of whether *H&M´*s models are sufficient or not (Konsumentverket, 2016).

There have been several cases regarding the models for credit scoring where the agency claims that, since parameters such as personal income and current credits are not considered, the evaluations are incomplete (Friberg, 2016). The most recent verdict in the *H&M* case debates that the law for consumer credits does not specify which parameters *Creditors* need to consider. *H&M* also points out that they only provide credits for cheap items from their own collections, the credit evaluation is also backed with an external report from *Bisnode*, a well-known *Credit report provider* (Förvaltningsrätten i Karlstad, 2016). *H&M* also claims to be within the given EU directives given for consumer credits (Kammarrätten Göteborg 2016).

The debate about increasing short term consumer credits for small items revolves around the risk for exaggerated indebtedness leading to losses for the society. If indebted consumers get registered payment defaults, the accessibility of credits and mortgages are heavily restricted as previously mentioned in the report. *The Swedish Consumer Agency* therefore claims that this is an important case that sets the benchmark for credit scoring models (Cederblad, J., 2016). The final verdict therefore presents a risk for stricter regulation of crediting and thereby stagnation of the growth of this market segment. The pressure on the industry is further increased due to the consumer agency currently debating whether to strictly require a "KALP"-analysis for crediting. KALP is an acronym for an economic analysis done by a *Creditor* assessing the funds left for the debtor to live on after amortization and interest payments (Kammarrätten Göteborg, 2016). Which would lead to increased requirements of financial data about the debtor.

2.3.3 General data protection regulation

General Data Protection Regulation (*Dataskyddsförordningen*), henceforth GDPR, is a new law that changes the current legislation and increases the demands on how companies handle personal information regarding their customers and staff. The law effectively replaces the previous *Personal Data Act* and becomes active 25th of May 2018. It will affect all the companies and organisations that in some way collect or handle sensitive information (PwC, 2017). The scope of what is considered sensitive information is also extended in the new framework as well as the geographical area; previously processing has been done in the US to circumvent the legislation in Europe in several previous cases (European Commission, 2017).

Companies that defies the new law risks to be punished. The punishment could be sanctions as high as 20 million euros or four percent of the company's global revenues (European Commission, 2017). The main purpose with GDPR is higher transparency for the customers and employees by preventing companies from hiding the inquiry for consent in long legal texts in the terms and agreements. GDPR requires the organisation to clearly state an inquiry

for consent from the user to be allowed to use that person's sensitive data (European Commission, 2017).

2.4 Sustainability

Crediting is something that can have significant impact on the society and it is important that it is done in a sustainable way. Since crediting is mostly connected to social and economic sustainability, these are the areas that will be covered.

There are many definitions of the term sustainability. One of the most accepted definition is the Brundtland definition from 1987 and it describes sustainability as a "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (World Commission on Environment and Development, 1987). In other words, sustainability means that the way we live our lives today should not affect the future generations to fulfil their needs in a negative manner. Sustainability can be divided into three pillars: environmental, social and economic sustainability. Environmental sustainability will not be covered in this thesis since there is no clear connection to the subject.

A very simple definition of economic sustainability is "The business of staying in business" (Doane & MacGillivray, 2001). On a company level a common misconception of economic sustainability is that it is simply making a profit. This is not entirely wrong since economic sustainability is partly making a current profit, but especially being able to stay profitable over time. This means, among other things, that the companies continuously need to develop new business ideas and to maintain good relationships with their customers. For example, the oil industry can hardly be seen as economically sustainable since the fundamental resource of the industry is running out, so the oil companies will not be able to make a profit in the future. On a national level, the economic sustainability is often measured as having a positive and stable GDP year after year (KTH, 2015). This means that it is important for a country to give companies an environment where it is easy to create strong and lasting businesses.

Social sustainability is troublesome to specifically define and measure even though it is a well-used term (KTH, 2016). Essentially it is about the individual having a decent well-being and having its needs fulfilled. It also includes that the individual's rights are being respected and that the individual is not subject to abuse of power, meaning that society need to have a working judicial system where all individuals are judged equally regardless of income, race, gender et cetera. To measure social sustainability, it is common to use different indicator systems or KPIs (Key Performance Indicators). One example of this is the Human Development Index (HDI). HDI considers three indicators: life expectancy, expected length of education and welfare. An inevitable problem with measuring social sustainability with indicator systems is that the system only takes involved indicators into consideration. This might show a false picture of the social sustainability situation.

2.4.1 The financial crisis 2008

An example of when economic sustainability has failed, which also affected the social sustainability in a negative manner, is the financial crisis of 2008. The crisis was seen as the worst recession since the great depression during the 1930s (The Economist, 2013). It all began in 2001 when there was a small recession in the U.S. economy. To handle this situation, the *Federal Reserve* started buying government bonds to lower the interest rates.

The lower interest rates incited the banks to give out subprime loans to people with poor credit rating. Subprime loan is a loan which has a higher risk for the lender since the borrower has a poor credit rating due to a bad ability to pay back the loan because of, for example, limited assets, no job or low income (Investopedia, 2017).

The banks started to assemble the subprime loans in packages called collateralized debt obligations, or for short CDOs, and traded them with each other (The Economist, 2013). Trouble began in 2004 when the *Federal Reserve* raised the interest rate (Singh, n.d.). Subprime owners who had acquired their loans during the period of low interest rates were unable to make the payments during this new period of high interest rates. As the interest rates rose, demand for houses dropped and the price followed. When subprime borrowers began to sell their houses to repay their debts they received less than they paid for the house and so they were unable to give the lenders their money back. This caused several subprime lenders to file for bankruptcy.

Since many of the banks were international, the problem spread across the world (Singh, n.d.). Many central banks of different countries started to back up the troubled financial institutions as an attempt to manage the situation and prevent more bankruptcies. This led to interest rates dropping fast. Lower interest rates were not sufficient to stabilise the economy so in 2008 the U.S. government pushed in 700 billion dollars, a lot of which was taxpayers' money, to buy failing assets. Many other countries followed with actions similar to the U.S. government. The purpose of this was to try and stop the worldwide recession.

The consequences of the financial crisis were businesses filing for bankruptcy, people losing their homes and high unemployment rates (Begany, 2010). People across the world lost a lot of money through loss of income, falling stock prices as well as the billions of dollars in rescue packages that were paid by taxpayers through government funding.

2.4.2 Payment default's effects on social- and personal economic sustainability

As mentioned earlier, when buying a product or service by invoice the buyer will have a certain amount of time to pay the invoice (Hitta Lånet, n.d.). When this time has expired and the buyer has not paid the invoice, the buyer will receive a reminder. The reminder comes with a new last date for payment, sometimes along with a fee for the overdue payment. If the buyer still does not pay, she will be subjected to debt collection. The debt collection states that the buyer must pay and the duration of the payment is short, usually eight days. The debt collection also comes with a fee that is backed up by law along with additional interest if the company wants. If the debt is still not paid, then the matter will move on to *The Swedish Enforcement Authority*.

The Swedish Enforcement Authority will send a new payment order to the debtor, with an additional fee and interest demand (Kronofogden, 2016). If the debtor still cannot repay the debt, then *The Swedish Enforcement Authority* will begin a seizure where they evaluate the customer's assets and belongings to see if anything can be sold to cover the debt. If there are no assets valuable enough to pay the debt, then the buyer can apply for debt restructuring and will be accepted if she fulfils the requirements. Debt restructuring means that she will have to live by minimal existence expenditure for five years during which she pays as much of the debt as possible. After five years, the rest of the debt will be cancelled. Debt restructuring is a

last resort for managing a situation for a person who have lived under economically unsustainable spending by consumption above her capacity.

When the matter is first sent to *The Swedish Enforcement Authority* the person in debt will receive a record of payment default at the *Credit report providers* (Bank, n.d). It is also possible to get a record of payment default by misusing credit cards or bank accounts. The record of payment default will cease to exist after three years for a person and up to five years for a company. The record of payment default is a warning to *Creditors*, banks or other actors that the person in question has a history of not paying her debt as agreed upon. This results in the person getting a low credit worthiness. A record of payment default leads to trouble getting various kinds of credit, and if the person does manage to get it then the terms will be much worse than without the record of payment default. It can also lead to a socially unsustainable situation where the person is treated differently when it comes to getting various kinds of contracts like a job, leasing contracts for apartments or a contract for a cell phone.

3 Method

The following chapter will describe and clarify the working process and why a certain approach was chosen to fulfil the purpose of the thesis. It focuses on thoroughness, justification and details to give the reader a fair idea both of how the project has been conducted and about the reliability of the results. Elements presented includes working procedure, interviews, questionnaires, a literature study, mapping, analysis, source- and method criticism. Totally, 11 interviews and 6 questionnaires were conducted which corresponds to a respondent ratio of 25%. Below is a list of these companies, certain companies were interviewed more than once but with different people.

Company	Segments	Comment
Anonymous retailer	Retailer	Wanted to be anonymous
Anonymous Creditor	Creditor	Wanted to be anonymous
Avarda	Invoice service provider, Creditor	
Collector	PSP, Invoice service provider, Creditor Debt portfolio buyer	
Colligent	Debt collection	
Creditsafe	Credit report provider	
Daniel Wellington	Retailer	
Ecster	PSP	
FS Evolution	Consultant within every segment	
Fyndiq	Retailer	
Lendify	Peer to Peer	
Netonnet	Retailer	
Rum 21	Retailer	

Table 1. Interviewed companies and questionnaire respondents

3.1 Working Procedure

The structure of this project is influenced by Eriksson & Wiedersheim-Paul's (2008) working procedure model and is illustrated in figure 1.

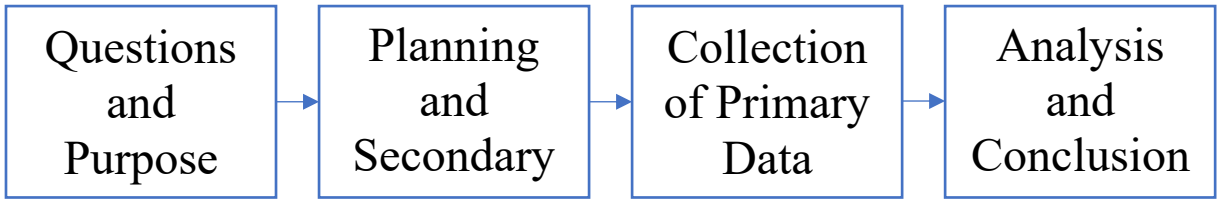

Figure 1. The working process inspired by Eriksson & Wiedersheim-Paul's (2008)

The model consists of four steps; the first one is to decide what the study should include, questions and purpose. Through several meetings within the group, with *Evispot* and with Marouane Bousfiha, doctoral student at Technology Management and Economics at Chalmers, a clear purpose was stated.

The second step in the model is the planning of the project and search for secondary data. The planning was done through a project plan which was thoroughly processed and written. It was helpful to have Marouane share his ideas on it, so that the group could re-write it with new ideas and have a better structure before starting the research. The project plan served as a roadmap throughout the rest of the project, which made it an essential part of the development of the project.

The project group's knowledge about the invoice market was very limited from the start why searching for secondary data took a lot of time. The credit market is known for its low transparency and in combination with that, the group did not know where or what to search for which made the internet a limited source in the beginning. However, *Evispot* provided the group with a lot of information and articles which facilitated the rest of the information search before the research began.

The third step is to gather primary data. This was done qualitatively through interviews and questionnaires. The ambition was to have as many interviews as possible. However, as predicted some companies did not want to participate at all while others only wanted to answer questionnaires by email. The reason to rather have interviews than questionnaire was simply to be able to ask follow-up questions which made interviews more valuable and dynamic than questionnaires. The various types of methods used to collect data is described in more detail later in this chapter.

The fourth step is to analyse all the collected data and state conclusions. This was done by re-reading the transcripts of the interviews and questionnaires in combination with discussions within the group. Discussions were very fruitful since group members shed light to things other members had not thought about. These different ideas and perceptions made the analysis of the thesis much more interesting.

3.1.1 Qualitative or quantitative data collection

In this study, the empirical data collection is of the qualitatively type. It does not measure something nor is experimentally examined (Babbie, 2010). The qualitative data collection fits the project well since the purpose with the collection of information is to understand and get insight in the market by experts. The opposite to a qualitative data collection is a quantitative one. It is not suited for this project because the sought information is of a more reasoning type. The quantitative approach focuses on gathering numerical data and generalizing it over groups of people or to explain phenomenon (Norman & Lincoln, 2000).

3.1.2 Working Procedure with *Evispot*

The start of the project was protracted due to *Evispot* changing their product idea several times before deciding which market they would target. It went from a B2B product to a B2C which changed the purpose of this thesis radically. However, by keeping close contact, with several meetings in the first couple of weeks, a purpose could be stated and the project started. The purpose took particularly long to clarify since authors of this thesis was keen not only to present a project which would result in a good grade, but also to create value for *Evispot*.

Evispot has been of high value for the thesis since they provided a lot of information in the beginning and has also been accessible by answering questions throughout the project. Furthermore, the discussions with *Evispot* and about their business have been rewarding since the project group could share their ideas freely with people with a lot of knowledge in the market; they have worked as a second supervisor.

3.2 Literature

The purpose with the literature study was to gather information that previously had been published and studied by others. It was conducted to facilitate the search for primary data later, to understand the market and get comfortable with different concepts for the interviews.

The literature focused on academic literature, articles and reports. These were primarily about the invoice-, e-commerce- or credit market. Several types of searching methods were used to obtain, as Backman (2008) proposes, an extensive range of theory. Searches were done from selected keywords, which is called systematic searching (Rienecker & Stray-Jörgensen, 2004). The study was primarily conducted through Google Scholar and Chalmers library with keywords like “invoice market”, “credit market” and “e-commerce market” (the Swedish translations most of the time) and combinations of these. Furthermore, the reference lists at web pages were used to broaden the scope of information, this type of search is called chain search (SBU, 2014).

3.3 Interviews

Interviews have been the main source for information. This was chosen because of the scarce information in literature and on the internet. Furthermore, it opened for valuable discussions and gave birth to new ideas. Three types of interviews were done, face-to-face, telephone and Skype.

3.3.1 Structure

Interviews can be conducted in many ways (Bryman, 2002). They can either be quantitatively or qualitatively structured where the qualitative approach has been chosen because the overall approach is of that kind. This approach lets the interviewee speak from his or her own experiences and findings. The interviewer let the interview take different paths depending on what the interviewee finds important, which is one thing that is considered as a disturbing element in the other approach.

Another way interview methods differ from one another is that they can either be *structured*, *semi-structured* or *unstructured* (Hague, 1998). Structured interviews are primarily used when conducting a large amount of questions and very short answers are sought. The opposite to this, the unstructured interviews are used when the interviewer want the interviewee to speak freely to a high extent. The questions are of a very open design which makes it hard to cover a large quantity of questions during one sitting. In this project, the third type of interviews, semi-structured, has been used. It is a combination of the two extreme types where both open and closed questions are asked. It allows the interviewer to have several questions asked, at the same time as it gives space for follow-up questions and discussions about certain answers.

The same approach was conducted in the interviews that were done by telephone. However, these interviews were not as valuable as the ones in person. This was due to social dynamics being harder to interpret only through voice, which led to several interruptions between the interviewer and interviewee as well as a few misconceptions. These experiences are also stressed by Hague (1998) as an issue with telephone interviews.

The Skype interviews were conducted just like the face-to-face interviews and was considered just as valuable. The web-cam was the only thing that differed from the telephone interviews but facilitated the communication enormously. The chemistry between the interviewers and the interviewee might not have been the same as in a meeting in reality, but the comfort and the easiness of booking meetings were much higher.

3.3.2 Preparation

The process of getting interviews was a bit different depending on the targeted company, but differed mostly based on the profession of the interviewee. *Evispot* contributed with a mailing list with people they had talked to that could be of value. In the rest of the cases the contact was initiated either through *LinkedIn* or by emails to email-addresses found on the companies' webpages. *LinkedIn* was a very powerful tool when looking for a specific profession, for example it was used for finding a person within business intelligence. When contacting a potential interviewee, a message was sent with both a presentation of the project and the group. It was also stated why that certain person was of interest to have as high of a respondent ratio as possible.

Even though open questions were used, the questions brought to the interviews were very well thought out. They were customized for every interview so that the questions would match the specific profession of the interviewee. *Evispot* overlooked the questions to make sure that nothing was left out but also to stimulate new ideas. The questions were sent to the interviewees before the interview so they could prepare and look up things beforehand. They were structured into two parts, which Blair et al. (2014) highly recommend. The first part was

basic questions, which were the same for all companies within a segment, and the second one contained questions that was designed for the specific interview.

3.3.3 During and after the interview

For all interviews three group members participated. It was a suitable number, not too many so that the interviewee felt intimidated but still enough to have good follow up questions. To be as little distracted as possible the interviews were recorded, by doing so no note-taking were necessary during the interviews. After every interview, the group summarized the recordings and made transcripts. This was of immense value since several interviews was conducted within a brief period of time. The transcripts served as a tool for the members not attending the interview to gain a recap.

The same approach for finding persons and designing the questions was used for the questionnaires described below.

3.4 Questionnaires

Questionnaires can be compared to structured interviews with the only difference that there is no interviewer present. The primary reason for using questionnaires is that it is easy to administrate and can be sent to many different potential respondents at the same time. Questionnaires were not intended to be used, but certain companies wanted to have the questions before conducting an interview. Therefore, the questions were customised, hoping to get an interview, but sometimes they were answered as a response on email. So, the benefits of using questionnaires were pretty much lost because they were custom made. However, the retained answers were considered valuable and contributed to the end results.

The questions in the questionnaires had, even though they were custom made, another structure than the questions used in the interviews. For the questionnaires, there were much more straightforward questions, a more structured approach. The reason for that is because unstructured questions tend to deter the respondent since it requires a long answer which can make the respondent completely ignore the questionnaire (Bryman, 2002).

3.5 Mapping the market

The mapping of the market was done through a compilation of data. First, a list of over fifty companies within the *Credit chain* was designed. *Evispot* provided a list of the companies they had been in contact with and the rest of the companies was found through the internet or provided by the interviewees. Google was a great tool as companies' webpages appeared when typing words as "*Payment service provider* company" et cetera. These webpages were then used to investigate both potential partnerships with other companies in the *Credit chain* and if they served in more than one area in the *Credit chain*, for example if they were both a P*ayment service provider* and a *Creditor*. These questions were also asked for every interview and questionnaire. *The Swedish companies' registration office's* (Bolagsverket) register and annual reports for companies were also used to examine if they were part of a group and thus had connections to other companies.

3.6 Analysis of the collected data

The method used to analyse the collected data from the interviews is called recontextualization (Harboe, 2013). It means that the answers from the interviews is put in new contexts and categories. The method is used to find common features from the different interviews.

When the analysing was about to start, all the summaries of the conducted interviews were read and individual reflections over the material were made. Then discussions were made within the group about the individual reflections. All thoughts were discussed and a whiteboard were used to visualize the interesting ideas. The discussion worked as a screening so the ideas that was not good enough was left out. When all thoughts had been discussed and the good ideas were up on the whiteboard a second screening was made where they were rated by importance and only the highest ranked ones were transcript into text.

3.7 Source criticism

To make sure that the collected data is trustworthy it is of high importance that the sources are reliable (Thurén, 2003). This thesis contains a lot of collected data which can cause potential biases and misunderstandings that would affect the final conclusions. Therefore, evaluating the sources critically is of great importance to assure a high quality for the thesis. Furthermore, Eriksson & Wiedersheim-Paul (2008) emphasize four criteria for the data to be trustworthy; *time, dependency, authenticity* and *tendency* which are discussed below.

A recent source is more reliable than an older one (Umeå University, 2016). This thesis treats a rapid moving market which makes this criterion particularly important. An old source can give false information about the current market. The literature used has been up to date and when only older sources were possible, they were reviewed more critically. Whenever there were any doubts about the reliability or authenticity of the information it was verified by contacts from the interviews or *Evispot*. Furthermore, it is important that the researcher understands that a source can be biased because of personal interests and hence hiding information which according to Thurén (2003) can affect the results. This was especially taken into consideration during the interviews since the companies does not want bad publicity nor can share all information. Therefore, various sources have been used to be able to compare information and ensure a high quality. Sources can also be dependent of each other which is one of many reasons primary sources have been used rather than secondary ones. All these four criteria have been the base for all the collection of data in this thesis.

3.8 Method criticism

The process of getting interviews could have been much more efficient from the beginning. Instead of using regular customer service email addresses, *LinkedIn* should solely have been used. It lets one decide who in the company to address and provides a much quicker response. A lot of times the interviews were a bottleneck in the process. Instead of waiting for respondents, a new person could have been contacted via *LinkedIn*. Also, in the cases where the intended interviewee only respondent on email and did not want an interview, a more aggressive method would have been useful. Instead of just accepting the answer, it would have been smart to respond with follow-up questions, or simply call them up and say that a

discussion would have been useful. If the thesis were re-done, Skype-interviews would have been used solely instead of in-person interviews because of the time efficiency.

During the writing of the analysis, it was realised that certain questions should had been asked that the group did not have the answer to. If the collected data would have been analysed ongoing during the thesis, it would have enabled more relevant questions for the following interviews. It is easier to see which questions that needs to be answered when the collected data are analysed. Then the analysis would have been easier to support in the results and hence more suited to answer the research questions.

Evispot was very helpful throughout the thesis but there might have been a bit too much discussions with them in the beginning, especially for stating the purpose. There should have been more discussions with Marouane to avoid a bias from *Evispot's* initial ideas but also to have more of his general ideas of the working process. That would have simplified the statement of the purpose as well as the formulation of research questions from an academic point of view. Meetings with both Marouane and *Evispot* simultaneously would possibly have been a good idea since it might have balanced the academic and entrepreneurial nature of the project.

4 Results

The results begin with a visualization of the *Credit chain*. In the mapping, the companies' connections that forms the dynamic of the market are shown. This is done to provide a clear picture of which segments certain companies are active within as well as the size of the companies. It is supposed to be a useful tool to understand the next part better.

Following the visualization is the summary of all the interview material and response from companies. The companies' responses underlie the topics that are brought up in each subsection as well as the choice of headlines.

Each subsection of the summary will be structured according to the following:

- A piece of body text with continuous references to the interview material.
- A quotation that highlights the company representative's views in the text.

4.1 Mapping the credit market

To understand the dynamics and connections in the observed market, a visualisation has been made. Companies that have been included are either major players, companies that are interesting due to their connections to others or companies that are of certain interest for new credit evaluation models. The size of the company-figure is related to the total revenues of the company including subsidiaries, this is considered since it affects each company's perceived value of increased accuracy of credit models. The connections are either ownership relationships, including joint ventures, or business collaborations between the actors.

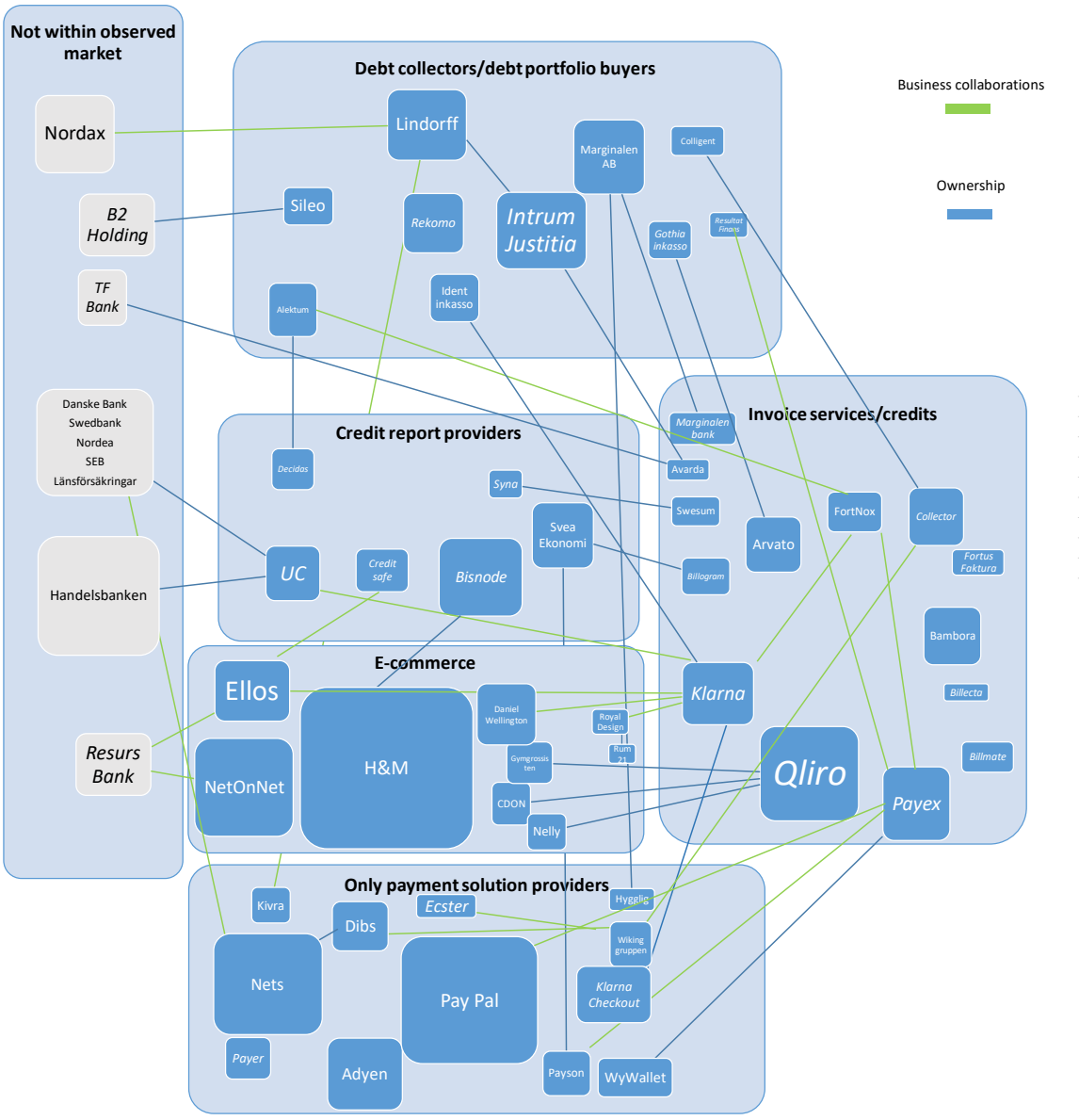

Figure 2. Illustration of market

4.2 Compilation of the interview material

4.2.1 Outsourcing of payment solutions

Outsourcing of payment solutions has created the foundation for the *Credit chain* discussed in this thesis. That is why the first section in the interview summary explains the motives behind retailers' choice to outsource payment solutions and what the benefits are. The last subsection treats the possibility for retailers to consider in-house payment solutions.

4.2.1.1 Increased sales and complexity

Many retailers are today asking themselves why they do not develop their own payment solution (Anonymous retailer, interview 2017). After all, their business has created a highly profitable market for other actors, simply by adding a payment service. Retailers' choice to outsource invoice as a payment method has created the *Credit chain* visualized in section 4.1. *Collector* for example, which is active within five of these segments, (debt collection included via their subsidiary *Colligent*) has since 2005 had an organic annual growth of 30% and an EBITDA growth of 55%, a proof of the profitability within the *Credit chain* (Collector, interview 2017).

When internet came and retailers started to offer online shopping, consumers did not want to pay before the product was delivered (Collector, interview 2017). Consumers were very sceptical about online shopping in general. The dilemma was solved by giving consumers the option to pay with invoice. For a certain fee the retailers could hedge against liquidity problems by getting paid immediately from the *Creditor*, who later collects the money from the consumers themselves. Furthermore, the consumer can get the product before the payment, a win-win situation which has resulted in an incredible growth of online shopping according to Collector. Hence, retailers are focused on their increased sales rather than the high margins for crediting companies that offer payment solutions, which according to *Daniel Wellington* is one reason to why retailers are still outsourcing payment services without question.

> "Business is good, *Invoice service providers* enable us to reach higher sales, we rather focus on our core business, which is selling watches"- (Daniel Wellington, interview 2017)

A couple of years ago, the situation was very different. Retailers with expensive products like *Netonnet* have offered invoice as a payment solution in-house, sometimes through agreement hire purchase (Netonnet, interview 2017). It allows consumers to pay an initial deposit and pay the rest over a certain period of time with interest and sometimes additional fees. It is a popular purchasing agreement when the product is expensive since consumers rarely have that sum of initial cash. *Netonnet* offered this solution through in-house development with a partner. They acted as a Creditor and the partner managed the invoice administration as an *Invoice service provider*. As mentioned before, there have been a trend to outsource payment solutions and *Netonnet* outsourced their invoice service to *Resurs Bank* in 2012. Mainly because of new ownership structures but also because it is complex to handle both e-commerce and payment solutions at the same time. It requires certain competencies to handle payment solutions which e-commerce rarely have in-house according to a retailer (Anonymous retailer, interview 2017).

> "We outsourced since it requires certain competencies to be competitive within payment solutions, which we did not have in-house. If we were to start falling behind our competitors on payment solutions we would lose customers on our e-commerce as well"- (Anonymous retailer, interview 2017).

4.2.1.2 Priorities and smoothness

Another specific reason to why retailers chooses to outsource payment solutions is that the continuously increasing competition requires priorities (Daniel Wellington, interview 2017). Hence there has been a constant focus on the development of the platform and the product offering according to *Daniel Wellington*. A retailer's niche is often within a certain product segment and they compete with products, not payment solutions (Anonymous retailer, interview 2017). In fact, some actors are still struggling with the transition from physical stores to online shopping and they do not have the time nor resources to prioritize in-house development of payment solutions.

> "E-commerce is constantly growing and if you are adopting late you will not be a part of the future. *Åhlens* for example, they could have been successful but started their online transformation too late. Since a retailer have to focus on their offering there is rarely enough time to also develop payment solutions" - (Rum 21, interview 2017)

Resources and time are allocated to other areas than in-house payment solutions. Customers value fast delivery and there has been a certain focus on logistics (Anonymous retailer, interview 2017). The administration required to handle invoices and other payment solutions is considered too heavy. To outsource the entire process is an easy way to focus on more prioritized areas.

> "We have never considered in-house payment solutions, basically because it is easy to outsource" - (Daniel Wellington, interview 2017)

> "It is very smooth and they continuously do improvements which we can share instantly."- (Rum 21, interview 2017)

4.2.1.3 Less risk and brand effects

Many retailers face challenges due to differences in sales during the year, seasonality in other words. In periods when sales are low, an in-house payment solution where the retailer offers invoice services and acts as a *Creditor* could be dangerous because the retailer would then take a huge risk if they fail to collect the money from their customers (Collector, interview 2017). If the retailers do not get paid in time they can fail to pay their suppliers and might go bankrupt (Anonymous retailer, interview). *Collector* mentioned a case about *Rossignol,* a manufacturer of alpine ski gear, who had liquidity problems during certain periods of the year. By using *Collector,* the risk associated with a certain purchase shifted from *Rossignol* to *Collector* and *Rossignol* could operate with almost the same margins but with less risk of liquidity shortage.

Payment solutions related costs is quite low in comparison with other costs according to *Daniel Wellington* and they have other costs to prioritize. Besides, their focus is growth and

Invoice service providers can enable higher sale numbers, it was an obvious choice for *Daniel Wellington* to outsource payment solutions. There are also positive effects by being associated with a certain invoice supplier, if a customer is satisfied with *Klarna* they can categorize the retailer as equally good, brand effects in other words.

> "Our customers appreciate the safety of using a well-known *Invoice service provider* like *Klarna*, by choosing *Klarna* we can share a part of their brand value" - (Rum 21, interview 2017)

Klarna´s goal was never to be an *Invoice service provider*, they simply wanted to simplify the purchasing process for consumers. "Simplifying buying" has been a very important motto and a success factor. *Klarna* did not only create a necessary service, they created the smoothest service to pay online. It became an infrastructure and by being first, that infrastructure became directly associated with *Klarna*. Consumers trusted *Klarna* and were very sceptical to retailers who did not use *Klarna* which pressured the retailers to choose them.

4.2.1.4 Can in-house be considered again?

So far, none of the interviewed companies are active within both e-commerce and invoice services. However, *Qliro* is active within both segments but via a subsidiary as can be seen in the mapping. An external supplier of payment solutions can be more innovative and deliver the solutions needed for the future according to *Rum 21*.

> "Klarna's ability to save profiles so a consumer can shop at any site which uses *Klarna* without the need to type their info again is really good and simplifies the purchasing process. Since we are going towards a more mobile shopping trend we need the innovation that only an external supplier can deliver" - (Rum 21, interview 2017).

However, when retailers start to get comfortable with their core business a shift towards in-housing of payment solutions could be an option (Daniel Wellington, interview 2017). *Daniel Wellington* has since the beginning focused on expansion and marketing to reach higher sales, which they have managed successfully. Hence, *Daniel Wellington* is today a well-established actor with a solid customer base who can take other focus-areas into account. A payment solution designed in-house could be one new area which also involves the procurement of a credit risk evaluation model. *Daniel Wellington* could for example acquire suitable companies with knowledge in relevant fields.

> "Three years ago, in-house invoice credits would not have been considered. However, since we have grown a lot since, if the opportunity presented itself and there were substantial savings to be done, then of course we would consider it." - (Daniel Wellington, interview 2017)

4.2.2 Revenue streams

This section describes how the money flows throughout the *Credit chain* and identifies which revenue streams that are more profitable than others.

4.2.2.1 Initial purchase

Initially, the retailer pays a fee to the *PSP* for providing different payment solutions which enables higher sales and less administration for the retailer (Daniel Wellington, interview 2017). The fee can be a fixed sum for every purchase or a percentage of the total sum paid by the consumer. When the *PSP* has received their payment they directly pay a part of that sum to the *Invoice service provider* or the card company depending on the choice made by the consumer (Daniel Wellington, interview 2017). The retailer does not pay the *Invoice service provider* directly, that fee is included in the fee paid to the *PSP*. A *PSP* is only connected to one stream of revenue, the fee mentioned above.

4.2.2.2 Credit evaluation

Consumers must undergo a credit evaluation process to be able to proceed with invoice as a payment solution, which is made by the *Creditor*. It is usually a combination between external and internal evaluation models. In Sweden, there is basically a norm to do an external evaluation and to hedge against potential complaints from the *Swedish Financial Supervisory Authority* (Anonymous *Creditor*, interview 2017). The external evaluation is retrieved from a *Credit report provider*, which in turn takes a small fee from the *Creditor* for every evaluation made (Creditsafe, Interview 2017). That is the only source of income for a *Credit report provider*. If the consumer is approved a credit, the *Creditor* pays a sum corresponding to the total amount of the consumers purchase to the retailer. The risk has moved from the retailer to the *Creditor* and the retailer is from now on excluded from the payment process (Collector, interview 2017).

There is a certain risk connected to the transfer of debts. Sometimes consumers can feel poorly treated by the *Invoice service provider* and that can damage the retailer's brand (FS evolution, interview 2017). However, *Invoice service providers* and retailers usually cooperate to reach customer satisfaction since they are active within the same *Credit chain* (anonymous retailer, interview 2017). The upsides are few by working solely on maximizing revenues, *Credit chains* like this creates deep dependencies between actors according to Collector. If some actor is misbehaving, there will be common losses throughout the complete *Credit chain*. On the contrary, a good cooperation can generate new consumers and make the *Credit chain* more profitable (Anonymous *Creditor*, interview 2017).

4.2.2.3 Different types of invoice choices

Invoice service providers and *Creditors* have several possible revenue streams (often the same company). If the consumer chooses ordinary invoice and pays within time, the *Invoice service provider* will earn the initial fee for handling invoice administration and the *Creditor* will take a small credit risk fee (FS Evolution, interview 2017).

However, another revenue stream which is highly preferred is the hire purchase agreement according to *Collector*. Instead of one invoice after 30 days (standard) with the entire sum, the consumer gets several recurrent payments with interest. There can also be several attached

fees as an arrangement fee and invoice fee. Hire purchase agreements are therefore considered very lucrative (Anonymous *Creditor*, interview 2017). *Invoice service providers* collect all the fees connected to the invoice and the *Creditor* gets the interest income.

If a consumer fails to pay the invoice in time, a reminder will be sent with an attached fee and interest, which is another source of revenue for *Invoice service providers* and *Creditors* (Avarda, interview 2017). Generally, consumers believe that this is the main source of income for *Creditors*. According to *Collector*, reminder fees are considered neither a prioritized nor sustainable income. Companies wants to be paid in time but reminder fees are necessary to keep incitements to pay in time. Higher accuracy in evaluation models would result in fewer people being unable to pay and cause less credit losses for *Creditors.*

> "We never strive to put consumers in debt, we are just offering them a way to try first, pay later"- (Collector, interview 2017)

4.2.2.4 Unsuccessful internal collection

If the consumer is still not able to pay after several reminders which can depend on a deceptive credit evaluation model or that something drastic has happened with the consumer's financial position (Colligent, interview 2017). The *Creditor* will then have a few options on how to proceed.

Creditors usually turn to a *Debt collector* at this stage since the invoice is considered to be relatively "fresh" in the *Credit chain* (Colligent, interview 2017). Actors within debt collection mainly earns money on a fee paid by the *Creditor* and a certain fee attached to the invoice sent to the consumer called "debt collection fee". It is only allowed to send one "debt collection invoice". According to *Colligent*, *Debt collectors* exists to send clear incitements to the consumer that they need to pay, consumers rarely want to ignore *Debt collectors* since the consequences like a record of payment default can have a significant effect on the individual's future life. Invoices usually gets paid when *Creditors* hire *Debt collectors*. The *Creditor* gets the money back and the *Debt collector* earns a small amount by basically just sending another reminder but with a more serious tone (Colligent, interview 2017). Easy earned money one could argue but *Debt collectors* plays a key role within the *Credit chain*.

Furthermore, *Debt collectors* offer legal advice to their customers, both to *Creditors* within the *Credit chain* and customers outside which need help with the collection of debts. It is usually about how companies can work more proactively with default risks and frauds. *Colligent* mentioned second hand rent of apartments as a usual problem.

> "Companies within the real estate business have big problems with illegal second hand rents and are in need of advice"- (Colligent, interview 2017)

4.2.2.5 Depreciation or sale of debts

If the collection is unsuccessful the *Creditor* need to consider depreciation, sale or try to collect the money over a longer period (Colligent, interview 2017). *Creditors* have different strategies regarding the issue but according to *Colligent*, many *Creditors* choose to sell invoices because in that way they at least get some money, often not even close to the entire sum but it is better than depreciation. Furthermore, they get rid of the administration cost connected to the collection process.

Debt portfolio buyers evaluates a debt portfolio and place a bid as a percentage of the total value (Collector, interview 2017). Their profit is the difference between the purchase price and how much of the total value they manage to collect. Actors have different strategies regarding collection time according to *Collector*, it is possible to place a higher bid if the collection time is longer since the possibility to get the money back is higher. Either way, a *Debt portfolio buyer* only has one revenue stream and it can be view upon more as an investment industry rather than a service industry.

4.2.3 Strategies and competition

Companies within the *Credit chain* has chosen different methods of differentiation. Most actors choose to be present in many segments, others only cover one of the specified segments while having their primary business on a related market. Due to the rapid growth in e-commerce, the market for short term credits in the form of invoices has become increasingly popular. The strategies differ between different credit invoice providers however.

The company *Avarda* is originally an initiative from the *Debt collector Intrum Justitia* to acquire a part of this attractive market segment. They therefore created *Avarda* as a joint venture together with *TF Bank*. *Avarda* has the explicit strategy to provide the customer company with all the promotional exposure (Avarda, interview 2017). That essentially means that the customer keeps their logotype on the invoice and throughout the checkout process, leading to the retailer to getting more of the customer relation and advertising for itself.

> "The primary value from having in-house crediting is that the company keeps the customer relation, including payment reminders, credit margins and the access to data. The long-term relationship can generate higher loyalty and recurring sales." - (FS evolution, interview 2017)

Certain companies such as *Qliro* has tried to combine e-commerce, payment checkout and credit supply by developing their own payment solution including invoice credits (FS Evolution, interview 2017). They then get the chance to choose how they want to approach their customers in case of payment defaults. Furthermore, *Qliro* could extract value from having data on the payment choice, credit invoices and payment behaviour of the customers (FS Evolution, 2017). This data could be used for optimised advertising and sales forecasting by revealing the economic behaviour of the customers.

As mentioned previously, retailers perceive crediting as something complex and erratic which there is not enough competence about within the company to have in-house (FS evolution, interview 2017). This combined with factors such as collecting debts, administering invoices and providing partial payments makes outsourcing convenient. The convenience has been considered to surpass the fees associated with it according to many, including *Daniel Wellington.* When the company is small, shortage of liquidity and possible credit losses might risk bankruptcy (Daniel Wellington, 2017). However, in the case of larger retailers those problems are the same as for any credit provider. The problem with only utilizing outsourcing in this area in the beginning is that they give away the data that provides the foundation for effective crediting later, when the company has matured (FS Evolution, interview 2017).

> "Retailers do not understand the mechanics of crediting. Because of a lack of estimates and calculations on cost savings from in-house crediting, online retailers

> might see a spectacular growth and associate that growth with outsourcing financial services without regarding the alternative with an own solution; which further prevent them from taking the services in-house. - (FS Evolution, interview 2017)

The need for consumer data is central, if the *Creditor* has enough data on individuals they can assess the payment behaviour and thereby disregard factors, that would have made ordinary credit reports turn down the credit (Avarda, interview 2017). The *Creditors* do use external credit reports for the evaluation but they generally rely more on the internal data. The use of credit reports is partly a way of avoiding liability if accused by *the Swedish consumer agency or Sweden's Financial Supervisory Authority* of poor credit evaluations.

> "Regarding credit evaluation, it is the amount of data that is paramount. *Klarna* was first out on the market, thus they have most data and can make the most accurate assessment of the credit." - (Avarda, interview 2017)

Retrieving external credit reports is partly a hedge against regulation while the internal models are the ones that the firms base the decision on (Avarda, interview 2017). However, the external report does provide a third-party opinion for the Creditor. External data parameters complement the internal ones and the external data is necessary to make a complete assessment (Collector, interview 2017).

> "We almost always retrieve an external credit report but our business intelligence unit provides a far better scoring model. With new and clearer regulation *Colligent* could become less dependent from *Credit report providers*." - (Colligent, interview 2017)

Furthermore, their business intelligence team is working on improvements and innovative solutions every day based on big data analysis. A credit evaluation model sold to the market by an external supplier could therefore be very useful for new actors so that they would be able to compete. The companies that owns the models also occasionally gets procured by more prominent firms (Avarda, interview 2017).

New actors are continuously trying to take market shares and widen their market scope compared to incumbent actors with different results. *Collector* and *Qliro* have been successful, they have managed to gather data and are covering greater parts of the *Credit chain* than what is common in the market. This strategy is becoming increasingly important to be competitive according to *Collector*.

4.2.4 Acceptance ratio versus credit losses

False-negatives are when *Creditors* reject credits that would have been repaid while false-positives are when a credit is approved even though the debtor will default on the payment. The false-negatives are a hard problem to deal with since it is not possible to evaluate whether the person would have paid the debt if he or she was granted one (Collector, interview 2017). The false-positives in turn result in credit losses for the Creditor. The companies choose their risk level themselves which effectively means that they adjust the acceptance ratio after acceptable credit losses. A higher acceptance ratio, essentially accepting higher risk credits, results in increasing revenues while larger credit losses results in a decrease in bottom-line profit. Accepting higher risk credits is generally seen as directly correlated with higher credit losses.

> "We can never collect data on how many wrongful credit denials we have. Therefore, we can never know how big of an issue it is. If we observe sharply rising credit losses, we will have to adjust the credit acceptance ratio afterwards." - (Collector, interview 2017)

Since the invoice credits do not have any interest, the profit that would have been earned from interest needs to be covered from increased sales from providing credit for the purchase (FS Evolution, interview 2017). The higher the net margin on the own revenues, the higher credit losses the company can accept without losing money on corporate level. That is, we consider the difference between the net margin times the increase in sales and increased credit losses due to raised acceptance ratio. Hence, if the company does not experience increasing credit losses from a higher acceptance ratio from accepting higher risk credits, there are no negative effects, provided that those credit losses does not increase over time.

> "It all comes down to how your company adjusts the acceptance ratio. If you are selling products with a positive gross margin on credit you could accept a higher rate of defaults compared to if you were providing unsecured credit, given they have same interest rate." - (FS Evolution, interview 2017)

In the case of outsourcing credits, a problem arises regarding the risk levels. Since the *Creditor* owns the credit risk while the retailer benefits from increased approval rates, both parties need to agree on a certain level where there is an acceptable risk for false-positives as well as a decent approval rate (Collector, interview 2017).

> "The problem with lowering the approval rate to maintain risk is that the retailer gets less satisfied due to decreasing revenues. Of course, we might agree on a compromise where the customer takes on the credit risk above our specified threshold, which gives the retailer the increase in sales while we maintain our desired risk level." – (Collector, interview 2017)

4.2.5 Impact from new regulations

There are two regulatory changes that are due within the industry: PSD2 and GDPR. PSD2 loosens up the possibilities to maintain customer data from other companies and is described in section 2.3.3. GDPR in turn regulates the usage, processing and storage of data, as described in section 2.3.1. Furthermore, the discussion about the usage of KALP-analysis in

section 2.3.2, driven by *the Swedish consumer agency*, is another possible change for the industry.

4.2.5.1 PSD2

Increased data access should favour smaller banks (Colligent, interview 2017). Most small actors will benefit from the upheaval of the large banks' control of data.

> "PSD2 is potentially very advantageous for *Collector*, and thereby *Colligent*, since the niche banks do not have the same size on their data archives as the larger banks." – (Colligent, interview 2017)

The regulation will decrease the dependency on a large data archives, which has historically given advantages to large corporations and banks (Collector, interview 2017). Currently, all actors are keeping their internal data strictly secret. If your company is good at data analysis, there is therefore a lot of value to extract from the new law.

> "The effects from PSD2 could render fantastic effects since we will be able to increase the accuracy of our evaluations. Banks that are technologically ready for this change will be able to utilise the data for extensive analysis. Larger banks, that have a less flexible technological structure, have a harder time to use and analyse the data." - (Collector, interview 2017)

Within debt portfolio trading, data is a critical point as well. That should mean increased growth derived from looser data control (Colligent, interview 2017)

> "There are high entry barriers in debt portfolio purchasing mainly due to accessibility to data and good valuation models of large portfolio buyers. However, the margins are at such levels that the segment is extremely attractive to new entries." - (Colligent, interview 2017)

4.2.5.2 GDPR

The fear is that GDPR makes it harder to collect data from customers. The risks are also higher regarding the punishment for misconduct (FS Evolution, interview 2017).

> "I do not believe the effects to be as bad as they might seem. If companies are meticulous regarding their terms and agreements, the customers can be easily incited to provide their information." - (FS Evolution, interview 2017)

Risk management seems not to be regarding GDPR law yet, but is rather aware of the upcoming change (Collector, interview 2017). The effects are still quite far away since they are to be implemented in May 2018.

> "GDPR has not come to my attention yet, it is still in hands of the legal department." - (Collector, interview 2017)

4.2.5.3 KALP

The KALP-analysis has been on top of mind in the crediting industry recently due to cases between the consumer agency and *Creditors*. If KALP is implemented as a standardized process for crediting, industry actors fear that it will induce a substantial restraint on the growth of short term credits such as invoice credits. Not only does it require more data from *Creditors* but also requires the consent from the debtor to share their financial data (FS evolution, interview).

> "The consumer agency has interpreted the consumer credit law but they have neglected the EU directives which should be considered alongside the Swedish regulation." - (Interview FS Evolution, 2017)

The critical issue for *the Swedish Consumer Agency* is to help the consumer. KALP complicates the purchase process for both the *Creditor* and the customer which is not desirable for them either (Collector, interview 2017)

> "We do not believe it to be probable that the consumer agency introduces the requirements since the consumer agency only needs to protect the customer without hindering the *Creditor*, which they already do" – (Interview Collector, 2017)

4.2.6 Trends and sustainability

This section describes trends noticed by actors within the *Credit chain*. Competitive and favourable trends are brought up as well as trends connected to sustainability.

4.2.6.1 Competitive trends

Consumers have become more comfortable with e-commerce and are today searching for lowest price instead of buying from a familiar Swedish site in which they trust (Fyndiq, interview 2017). It is a trend that is threatening the retailers in Sweden and thus the whole *Credit chain* according to an anonymous retailer. Only a few of the actors mentioned in the mapping have substantial business outside Sweden and when consumers start to purchase from sites like *Alibaba* and *Amazon* which uses international actors for payment solutions, Swedish *PSPs* faces a severe threat (Anonymous retailer, interview 2017).

> "We see a clear trend that consumers are looking for cheapest price and they are therefore buying more from international giants. It threatens our sales and thus the suppliers of payment solutions" - (Anonymous retailer, interview 2017)

Another trend is unsecured loans, a loan without any asset as security for the debt. Since the rates of these loans are relatively low, consumers take unsecured loans from peer to peer actors like *Lendify* to consume products and services, instead of using invoices (Avarda, interview 2017). Some argue that the individuals marked as "non-creditworthy" by the *Invoice service provider* take unsecured loans to be able to buy the product. It is hard to determine whether these loans compete with the *Creditors* within the *Credit chain* according to *Avarda*.

4.2.6.2 Favourable trends

According to *Collector* there are a lot of trends that will favour the *Credit chain*. Lower interest rates mean lower credit costs for consumers and more money for consumption, which increase the total demand for products and services, which in turn increases the demand for invoice payments. Another factor is that the new generations are not as sceptical to debt as the older generations and are more familiar with online shopping and the invoice concept, which favours the *Credit chain* (Collector, interview 2017).

> "Our parents have experienced the real estate crisis in Sweden during 1994 and rates at 500%, they do not prefer to have debts. However, the new generation is comfortable with both e-commerce and consumer debts"- (Collector, interview 2017)

According to *Avarda*, the new generation is generally harder to evaluate, the lack of income and presence of student loans generally look bad in a credit evaluation model (Avarda, interview 2017).

4.2.6.3 Unsustainable booming Industries

Ever since the financial crisis of 2008, central banks all over the globe have launched quantitative easing programs (QE´s). Consequently, companies and individuals are today facing a low reference rate and huge supply of liquidity in the market (Anonymous *Creditor*, interview 2017). In Sweden, the reference rate has fallen from 4% at the beginning of 2008 to -0.5% in 2017 (Riksbanken, 2017). Many actors have taken advantages of the favourable market conditions and tried to start up a business within the *Credit chain*.

> "Actors come and go, within every segment, depending on market conditions and business cycles, but only the sustainable actors survive"- (Ecster, interview 2017)

The trend mentioned in the quote above is a general trend and can be distinguished in other industries outside the *Credit chain*. The problem according to *Colligent* is that when a certain market is doing well, too many actors are trying to enter the market, even companies that should not belong there (Colligent, interview 2017). One example is the construction business in Sweden, it is very strong right now but the number of unpaid invoices is unusually high at the same time.

> "When an industry is going well, even a bit shady companies tries to enter the market and succeed which results in many frauds, unpaid invoices and sometimes bankruptcies"- (Colligent, interview 2017)

Since *Debt collectors* are managing unpaid invoices, a larger number of unpaid invoices can result in more income. From one point of view it can be considered positive. However, it is not sustainable and *Debt collectors* do not like the development of increasing bad debt (Colligent, interview 2017).

> "Even if we get more invoices to handle we are not amused to see that fair-play actors go bankrupt just because their customers were not trustworthy and could not pay. That is not a sustainable way of doing business" -(Colligent, interview 2017)

Even though *Debt collectors* might be excited about a booming business there is one area within the *Credit chain* that is currently developing into something unsustainable. Due to the

high margins for *Debt portfolio buyers* many new actors have borrowed money to purchase debt portfolios, thus to buy debts with borrowed money (Anonymous *Creditor*, interview 2017). A vicious cycle in other words. It pressures the bid prices upwards and nowadays companies can buy a debt portfolio for 60% of the total value. Debt portfolios should be unattractive at these price levels, some years ago actors like *Lindorff* and *Intrum Justitia* paid 5-10% of the portfolio's total value at most.

> "We do not buy as much portfolios as we used to, the prices have increased too much and we have a precautionary principle within *Collector*."- (Collector, interview 2017)

The new actors extend their debt collection time which enables them to pay a higher price for the debt portfolio since the possibility to get the money back is higher if the collection time is longer (Anonymous *Creditor*, interview 2017). If the interest rate increases and *debt portfolio buyers'* capital base consists mainly of borrowed money they might suffer from illiquidity before they manage to collect their debts. Consequently, new actors with this approach might go bankrupt and even more debts will add to portfolios, an "evil debt cycle" as mentioned before. It can be a serious threat against the *Credit chain* and the society according to an anonymous *Creditor*.

> "It is really scary from any kind of perspective"- (Anonymous *Creditor*, interview 2017)

5 Analysis

The general structure of the analysis is not strictly consistent with the structure in the results. However, the contextual information is based on the provided information from the interviews. To facilitate the connections to the result, the analysis contains continuous references to the corresponding sections in the result.

In order to conduct the analysis, it is suitable to state a concrete definition of a better credit risk evaluation model. The final configuration of the offering is still unclear so the definition ought to be in line with the current perception of the offering. In this sense, the credit risk evaluation model can be said to aid actors in the *Credit chain* to decrease non-profitable and increase profitable customers respectively. The creators of the algorithm seek to overcome the conundrum of non-profitable customers in different segments, with different needs. Consequently, the definition needs to reach further and present the profitable and non-profitable customers while simultaneously considering different customer needs. Hence, the final definition can be stated as: *The credit risk evaluation model aids in increasing customers that pays their debt, and decrease the customers that do not, within the debt ownership period of the current holder of the credit risk evaluation model.*

5.1 The value of a more accurate credit risk evaluation model

How a more accurate credit risk evaluation model will affect the seven different segments in the credit market will vary depending on which segment that get access to it first. For example, if a *Creditor* get a hold of a more accurate credit evaluation model first, then their need for external evaluation, which they use *Credit report providers* for, will rapidly decrease. The consequences could then be that the demand of *Credit report providers* drastically reduces, even though it will probably still exist a value in the third-party opinion mentioned by *Colligent* in *Strategies and competition*. However, if the *Credit report providers* get a hold of the evaluation model before the *Creditor* then it might be the other way around.

Therefore, the first part of Chapter 5 will focus on how each segment is affected in the presence of a better credit evaluation model. Depending on which segment that gets a hold of the model, segments are affected differently. Furthermore, the analysis will be compiled into a short- and long term perspective.

The general effect of having a more accurate evaluation model is hard to determine because it depends on the number of false-positives and false-negatives. As mentioned in the interview with *Collector* in section 4.3.4 there does not exist data on the number of false-negatives, which makes it impossible to be entirely sure of the effects from a better evaluation model. To make the analysis as credible as possible it will take both perspectives into consideration. That is, both the case where the decrease of false-negatives is greater than the decrease of false-positives, due to a better model, and vice versa.

5.1.1 Credit report providers

5.1.1.1 Short term

If the *Credit report providers* would be able to more accurately determine a person's creditworthiness this would have direct positive effect on the *Creditor's* evaluation process as mentioned in 4.2.2.2 The short-term effect of having a more accurate evaluation model would therefore be positive for *Credit report providers*. The service provided by the *Credit report providers* are partly used by *Creditors* that does not have enough data on the person who is asking for credit but also due to policy reasons, even in those cases the *Creditors* could make a credible evaluation themselves. The indirect effect for *Creditors* will be that their risk associated with giving credit is decreased when using the provided service by *Credit report providers*. *Credit report providers* could therefore claim a higher fee and increase their only source of income according to section 4.2.2.2 The result would be a higher demand of actors that can supply this model and the *Credit report providers* would play a more vital role on the credit market.

5.1.1.2 Long term

In the long run, it is unlikely that *Credit report providers* will be the only segment that can acquire the evaluation model. The cost of the model will decrease and the demand of the model from other segments within the credit market will increase. *Creditors* would also be able to implement the evaluation model which would decrease the demand of *Credit report providers*. As discussed in *section* 4.2.2.2, *Creditors* often only use *Credit report providers* in good faith and to keep their back clean from authorities. If the *Creditor* could obtain an equivalent evaluation model as *Credit report providers*, then *Credit report providers* would lose a big share of the market. The demand of *Credit report providers* will therefore most likely decrease in the long run, with a better evaluation model present on the credit market.

5.1.2 Invoice service Providers

A more accurate evaluation model will not have any major effect on *Invoice service providers*. As stated in section 4.2.2.3, the *Invoice service provider's* revenues comes from administration fees connected with the invoices. They are therefore disconnected from any type of credit evaluation and does not have any direct benefits from implementing the evaluation model themselves. However, as described in the Literature Review, *Invoice service providers* often act as both *Creditor* and *Invoice service providers*. In those cases, the benefits of implementing a more accurate evaluation model are the same as for *Creditors*.

5.1.3 Creditors

Creditor is probably the segment within the *Credit chain* that is most positively affected by an improved evaluation model. That is because the *Creditor* is, as said in section 4.2.2.2, the first actor that has to decide whether a person is creditworthy or not and is therefore evaluating more people than any other.

5.1.3.1 Short term

An improved model would have an immediate effect in the short term for a *Creditor*. The model would enable the *Creditor* to make a better evaluation on a potential customer using invoice as payment method. Hence, it would let less false-positive and more false-negative purchase with invoice. This would lead to a higher percentage of the people purchasing with invoice to end up paying their debts in time. That is because more people that can pay are allowed to purchase and less people that cannot are not allowed to purchase. This would lead to higher earnings as noted in section 4.2.2.2 and less loss caused by missing payments. It is also possible to better evaluate consumers choosing hire purchase agreement, which is a *Creditor's* most profitable revenue stream.

5.1.3.2 Long term

In the long-term perspective, there is a potential negative effect for the *Creditors* with an improved model. As debated by *FS Evolution* in the results, the crucial factor is the chosen risk adjustment. In the presence of a better model, the results from this thesis implicates that the *E-commerce actors* that have a collaboration with these *Creditors* could face a decrease in their sales if the adjustment is non-optimal. That is, if the number of false-positives would decrease more than the number of false-negatives, resulting in less purchases. This could potentially make e-commerce companies change to another *Creditor* to increase their sales. On the other hand, *E-commerce actors* are keen to maintain their brand equity, according to section *Less risk and brand effects*, which is positively affected by letting less people default their payments. In this case, the market would experience a greater demand of better credit models. It could also lead to a greater bargaining power over *Debt collectors* because the debts would be easier to collect, since the persons that pass the evaluation should be able to pay, and therefore the costs of using *Debt collectors* would decrease. That would have a negative impact on the *Debt collector's* revenue stream. However, if the *Debt collectors* would receive fewer debts there is a possibility that the *Debt collectors* would need to increase the price. Fewer debts would result in weakened economies of scale and a price increase would be necessary to maintain their revenue stream described in *Unsuccessful internal collection*. With less debts to collect, the collection market would diminish and there would most likely be a consolidation within the market. Therefore, it is not certain that an increase in price would occur. However, how the amount of debts to the collectors is changing is not only dependent on the amount of purchases, it also depends on how many people that pays late. A better model would still approve a credit, even though the debtor might pay late, as long as the debtor do not end up at *Swedish Enforcement Authority*. Hence, there is a possibility that even though less purchases would occur, more debts would be sent to collectors. Therefore, it is very hard to forecast the exact effects.

If the number of false-negatives instead would decrease more than the number of false-positives, and thereby allow more purchases, the better model would be significantly more attractive from an e-commerce point of view. That is due to the model allowing the *E-commerce actors* to have both more sales and a stronger brand, which in turn also would lead to increased sales in the long run according to section 4.2.1.1. Furthermore, the *Creditors* would have a bargaining power over the *Debt collectors* since it is plausible that the debts at some point in time will be paid. That would lower the price of the collectors which converts to higher profit for the *Creditor*. However, it is not completely certain that the amount of debts to the collectors would increase. It depends on the model. It could potentially let fewer people, who would be a potential case for a *Debt collector*, purchase and thus reduce their

revenue streams. That is people that ends up paying late, but at some point, repay their debt. Thus, it is as mentioned before very hard to foresee the effects.

In conclusion, a better credit evaluation model would most likely be highly attractive for a *Creditor*. Even if the *E-commerce actors* decrease their sales because of it, it is plausible that they would still demand it over an older model because of the strong brand equity it implies. The model would also enable reduced credit losses in terms of missing payments which converts to greater profit which is described in section 4.2.2.3. However, it is clear from the analysis above that it is not sure that a *Creditor* would be better off with an improved model. That is because fewer *E-commerce actors* might be interested of a *Creditor* with an improved model. As *Collector* argues in 4.2.4, there is a trade-off for *Creditors* between credit losses and lost collaborations with *E-commerce actors*. *Creditors* would need to be aware of that trade off in order to maximize their businesses and outcompete competitors with an inferior model. It might also be a good idea to be open for customized risk sharing as *Collector* states that they are in section 4.2.4. That is because it opens up for solutions where the retailer can minimize loss of sales due to rejections.

As mentioned above in the analysis, if the *Credit report provider* would have a more accurate model than the *Creditor* they would be more important than before. There would be no need for the *Creditors* to do the evaluations themselves if they could have better ones by outsourcing it to *Credit report providers*. Therefore, there would be a possibility that the *Creditor* would drop all credit evaluation business and only do the lending part. That is, provided that the *Credit report provider* does not increase the price substantially; in this case, section 4.2.2.2 implicates that *Creditors* would still have evaluation in-house and use the *Credit report provider* when their own model is not enough.

5.1.4 Payment service providers

As mentioned in section 4.2.2.1, *PSPs* are just as *Invoice service providers* disconnected from credit evaluating and the benefits of acquire a more accurate credit evaluation model themselves are therefore minimal.

However, if the credit evaluation model is made available on the credit market it will affect the *PSP* in multiple ways. One potential outcome is that a *Creditor* implements a better evaluation model. If the number of false-positives decreases more than the number of false-negatives with the new model, then the outcome of the *Creditor* implementing a more accurate model imply fewer transactions for the *PSP*. Although, there is the exception where a potential customer takes an unsecured loan and purchases a product using debit card when she gets denied using invoice. As described in section 4.2.6.1, this is a trend due to relatively low interest rates from peer to peer actors. In the future with a potentially increase of prime rate it will be more expensive for people to borrow money and obstructs this way of going around the credit evaluation model. Therefore, the long-term consequence of a better model would very likely be fewer transactions which equal to less profit for the *PSP*. The decrease in profit is due to their business model, charging the customer for every single transaction, as described 4.2.2.1. However, if it is the other way around, that the number of false-negatives decreases more than the number of false-positives, hence a more accurate credit model for the *Creditor* would suddenly be beneficial for the *PSP*.

There are no effects of the *PSP* implementing a more accurate evaluation model in the short nor the long run. But if the credit evaluation model is made available on the credit market then *PSP* actors will be affected.

5.1.5 E-commerce actors

Since companies are of different sizes and operations, the effect of having a better evaluation model will differ. The final cost of the evaluation model will also affect the outcome of how the model will be adopted by different companies.

As described in the results, start-ups like *Daniel Wellington* often see invoicing as a service that can generate higher sales rather than a potential additional revenue stream. A company that is in an early stage often prefers to focus their resources on their core business and associate having invoice service in-house with additional organizational complexity. It is rather complex to handle both e-commerce and payment solutions and the e-commerce retailers often lack skills related to in-house invoicing. If e-commerce retailers fail to be competitive with their payment solution because of complexity this could lead to severe consequences as described in section 4.2.1.1.

5.1.5.1 Short term

As *Collector* mentioned in section 4.2.1.3, it is the *Creditor* that takes all the risk and from the retailer's perspective it does not matter whether the customer pays the invoice or not. The retailer will get the money as soon as the *Creditor* has granted the customer's credit in accordance with section 4.2.2.2. If the new evaluation model would imply that the number of false-positives decreases more than the number of false-negatives, the model will have a negative effect on the actors within e-commerce. Hence, as described above in *Creditors*, the consequences of a better evaluation model will be a decrease in sales for *E-commerce actors*. However, if it is the other way around, the number of false-negatives decreases more rapidly than the number of false-positives, then the effects will be positive for the *E-commerce actors*. If more potential customers are granted credit, then there is higher sales potential for the *E-commerce actors*.

5.1.5.2 Long Term

In the long run, if a better evaluation model is available on the market, there are three potential outcomes that are more likely than others for retailers within e-commerce.

- Move the full invoice service in-house and implement the evaluation model
- Move the invoice service in-house but use one external actor to do credit evaluation (hybrid solution)
- Use an external *Creditor* and *Invoice service provider* (like today)

If the result of a new evaluation model would be that false-positives decreases more than false-negatives, then the number of customers will decrease in the long run. However, this opens up for possibilities of having full parts of the invoice service in-house. From the interview with *FS-evolution* and stated in *Strategies and competition*, there are lots of benefits of having the invoice service in-house. If the *E-commerce actor* could offer both the invoice service combined with being the *Creditor* this would be a very profitable additional revenue

stream. Having the invoice service in-house lets the company itself handle the customer relationships related to invoicing. As described in section 4.2.2.2, companies today do not always know how the *Invoice service provider* treats their customers when collecting debt. Outsourcing the invoice service might have negative effect on the customer relationships since they might send unreasonable number of reminders to the retailer's customer to get paid.

The evaluation model will probably be highly expensive and be depended on huge amount of data. Therefore, it will be hard for individual retailers to adopt a full in-house invoice solution. The hybrid solution might be a more affordable alternative. It implies having the invoice service in-house but use an external actor, who has implemented the new more accurate evaluation model to do the credit evaluation. This solution will generate the revenues associated with invoicing but with a cost to credit evaluation providers described in section 4.2.2.2.

Another possible outcome could be that the fees *Creditors* take today decreases since the risk the *Creditors* take will decrease. Having invoice service in-house comes with both the risk mentioned above and certain restrains in flexibility such as bound capital, additional administration cost et cetera mentioned in section 4.2.1.2. Therefore, it might be more profitable to outsource the invoice service if the fees are decreased.

However, fewer customers' do not necessarily mean that the profitability for *E-commerce actors* will decrease. It will depend on how the credit market and the actors within it evolves and how the retailers choose to adopt the evaluation model. If the *E-commerce actor* chooses to have invoicing in-house the revenues from the crediting might generate profits equal to or even greater than the loss of revenues in decreased customers due to rejections of credits as mentioned by *Collector*. If the retailer still chooses to outsource the invoice service, the profitability will depend on how the fees develop using *Creditors* and *Invoice service providers.*

If the number of false-negatives decreases more than the number of false-positives more people is granted credit which results in more customers for the *E-commerce actors*. The upside of the model would be great for the *E-commerce actor* in the short as well as in the long run. As *Daniel Wellington* stated in the results, it is always a question about profitability when it comes to how the invoicing and credit evaluation should be done. If the upside of having the invoice service in-house is greater than outsource it, and it is the most profitable investment option at the time, the companies will probably do it. The same arguments, for the outcome if a better evaluation model is present, applies as when false-positive decrease more than false-negatives.

5.1.6 Debt collectors

5.1.6.1 Short term

In the short term a better credit risk evaluation model would not have any impact on the debt collection market. The companies within the debt collection market relies on that the *Creditor* have done a fair evaluation mentioned in section 4.2.2.2 and that the debt should be possible to collect. Therefore, they are not doing any evaluations themselves, why they would not have any direct effects with a better evaluation model.

5.1.6.2 Long term

Contrary to the short term, it is highly reasonable to think that, in the long term, a better evaluation model would have an impact for *Debt collectors*. As mentioned above in *Creditors*, an improved model would for a *Creditor* lead to a higher percentage of the people purchasing with invoice to actually end up paying their debts; which in turn would lead to an easier collection of debts for the *Debt collectors* as described in section 4.2.2.4. Hence, they would make a greater profit since a higher percentage of their collections of debts would be successful given that the amount of debts that the *Debt collector* receives are not decreased. That is however dependent on how the false-negatives and false-positives are changed in relation to each other and the scenarios of what happens to *Creditors* and *Debt collectors* are explained in 5.1.3.2. No matter the volume, the *Debt collectors* task would be significantly easier due to the improved model of the *Creditors*. There is a possibility that the *Creditor* would start doing it themselves instead of outsourcing it. This does, however, not seem very plausible since most companies use external debt collection even though it is not a very complex process. That is because people are much more likely to pay their debts if the debt collection is done by external actor according to section 4.2.2.4 (it makes people more afraid of ending up at *Swedish Enforcement Authority's*).

5.1.7 Debt portfolio buyers

5.1.7.1 Short term

The effect of a *Debt portfolio buyer* acquiring a more accurate credit evaluation model would be that they make more money with less risk. The *Debt portfolio buyer's* strategy is to purchase a portfolio of debts associated with high default risk, hence, the *Debt portfolio buyer* can purchase the portfolio at a discount as noted in section 4.2.2.5. When a *Debt portfolio buyer* considers purchasing a debt portfolio, they get access to information about the portfolio and the debts within it as mentioned in *Depreciation or sale of debts*. A more accurate credit evaluation model would substantially improve the analysis of the portfolio's value. By being able to fairly judge which of the debts they will be able to collect, they can calculate the actual value of the portfolio. This makes it easy to decide what price they would be willing to pay for a portfolio and how much money they would make from acquiring it. The situation would be different if several *Debt portfolio buyers* were to acquire a better credit evaluation model. Although they would still be able to better evaluate the portfolios, it would create competition which would decrease the margins of the *Debt portfolio buyers* because of the increasing price for the debt portfolios.

5.1.7.2 Long term

In the long term, a more accurate evaluation model would create a problem for the *Debt portfolio buyers*. Since the model would let *Creditors* to accurately evaluate their customers before granting them a credit, fewer individuals would find themselves in a situation where they cannot afford to pay their debts as mentioned in 4.2.2.3. This implies that the amount of debts on the debt portfolio market would be significantly reduced. If there are less debts and more accurate models to evaluate the value of a portfolio which decreases the margin, then the *Debt portfolio buyers* would have a hard time making profit in the long run.

5.2 Relevant parameters for the offering

Thus far, the analysis has conducted a compilation of the seven segments and their individual gain if the credit risk evaluation model will be available. The individual analysis has been divided into short- and long term perspectives since the time frame will affect the analysis outcome. The analysis regarding which segment that will benefit the most of the credit risk evaluation model will be extended further. As of now, the analysis only stipulates an array of various results which pinpoints the most relevant segments. However, with little analysis regarding the optimal way of selling the model and what parameters to consider for the target customers. Firstly, different offering strategies as well as the choice of target will be analysed, with the seven segments as scope. Secondly, the analysis will treat the companies divided into each segment and how their size might affect the value of the model.

5.2.1 The seven segments as scope

5.2.1.1 Whole market

When considering the seven segments it is important to realize the tremendous variety of outcomes different strategies might have. If the credit risk evaluation model is sold to the whole market the potential benefits of the product might dwindle after a while. The potential competitive advantage will be insignificant when the majority of the market have adopted it. Hence, this strategy might enable initial revenue of great scale when the market adopts to the model. If the product is not licensed out however (an option which will be covered in more detail in 5.2.1.3.2) the company will experience a steep loss in revenue once the market is saturated. In addition, the first customer will be more liable to pay a justifying price since they will be first with the product and reap its full potential. As the credit risk evaluation model gets adopted however, the value for the next customer will be diminishing, hence motivating a lower price tag. Consequently, the initial actors of the market, *Klarna* for example, aimed to solve isolated tasks. Now, however, competitive newcomers are more drawn to cover a wider range of segments as in the case with *Qliro* which is explained in 4.2.3.

5.2.1.2 Sole market

By reflecting upon this fact, it becomes obvious that other solutions might be suitable to analyse. In contrast to the benefits given by enabling the credit risk evaluation model to the wide market, with many customers, lies the possibility to give singular segments sole right to the method as mentioned in 4.2.1.4. This strategy would enable separate segments of the *Credit chain* to reap great benefits of the evaluation model over time. Giving separate segments this competitive advantage will motivate a considerable financial return. Since the sole ownership of the credit risk evaluation model will generate greater value than commercial ownership the sole ownership customers will be willing to pay more. The pros and cons of whole- and sole market targeting have motivated companies within the value chain to manage their business with different scope as mentioned in *Strategies and competition.*

5.2.1.3 Three offering strategies

The current lack of sufficient financial data makes it impossible to concretely determine which of these two strategies that might generate greatest profit. In order to do so a deeper analysis of the demand must be conducted. More precisely, it is necessary to know how many customers that are interested, at what price, if they are given a collective- or sole solution respectively. Albeit no exact conclusion can be stated in this regard an additive analysis linking the whole- and sole market targeting to a choice of offering strategy can commence. As mentioned earlier the credit risk evaluation model can be sold in different ways which are discussed below.

5.2.1.3.1 Sell the model as a product to the whole market

This alternative represents the most graspable offering strategy. In this case, the risk evaluation model sell by unit, at a fixed price, just as you would sell batches of tomatoes or cucumbers. Since the product offered does not constitute a concrete physical product this rather straightforward way of selling becomes more complex. The model could be packaged as a complete solution and be offered alongside implementation services. Hence, offering the credit risk evaluation model as a plug-in that adds functionality or could be used as a tool. This reasoning is in line with for example *Daniel Wellington* in section 4.2.1.4 and how they continue with their initial product offering but adds additional value by considering services like in-house invoicing.

The key distinctive aspects with this offering strategy is that the credit risk evaluation model would be sold in a transactional manner. Thereby, the owner of the model has no intention to commence a long-lasting relationship with their customers. Instead their main goal is to attain a bundle payment and then carry on with their business. Eventually they might reconnect with their initial customers with a new product offering with perhaps additional offerings thus generating recurring revenues.

This line of strategy contains obvious flaws that might give advantages to other offering strategies. Considering the immaterial appearance of this offering it is easily imitated by tapping into the source code of the model. In a worst-case scenario, even the purchasing firm could copy the product and do as they please with the content, for example sell it to a non-competing segment in the *Credit chain*.

Emphasizing the relationship in a transactional manner is also a loss of opportunity to earn cash continuously. The credit risk evaluation model could be offered as a bundle with the model and implementation services included and then additional offerings like maintenance and development could be offered post implementation. This line of reasoning will be continued in the next offering strategy but with a slightly different approach.

5.2.1.3.2 License the model as a service to the whole market

Proceeding with the reasoning from the previous section it is viable to reconsider the *product offering* and instead view it as a *service offering.* What this offering strategy does in practicality is to dynamically license the offering depending on customer needs. This means that the credit risk evaluation model can be constructed in numerous ways. In contrast to the offering strategy presented initially, this approach would charge nothing for the implementation and acquisition of the offering. By doing so it would reach a larger number of customers thus creating an installed base of customers ready to use their offering when

needed. This strategy is aligned with the theory of *penetration pricing* which enables new offerings to reach a vast number of customers directly at its launch.

The model owner should then structure their relationship with their customers in a more collaborative manner. This imply that the relationship between the owner and their customers would be of mutual benefit during a longer period of time. From the owner's point of view the initial lack of revenue, by dismissing the acquisition and implementation revenue, would then be seen as an investment in order to reap recurrent revenue in the future. The same line of reasoning goes with *Creditors* like *Klarna* and *Collector* who sustain a long-lasting relationship with recurrent improvement in their services as described in *Can in-house be considered again?*

In this case, the owner would construct a strategy that made the customer pay per use of their model. The initial strategy made the customer pay by product unit. This would allow customers to only pay exactly for the "amount" of service that they use. Hence, they gain greater profit from their customers that uses the credit risk evaluation model most frequently. The customers that only uses the credit risk evaluation model occasionally can on the other hand pay less for the offering. In this setting the overall offering is of greater value to the market which should be taken into consideration whilst choosing between offering strategies. In addition, licensing the model would generate a more stable and recurrent income than to sell by unit.

Finally, it is rational to consider the incremental revenue streams that arises because of the collaborative relationship that is conducted with customers. Since they manage their relationships post implementation they can also aid their customers in additional implementations, update services and maintenance. All these services are possible due to the collaborative relationship strategy and can enable additional revenue streams of considerable extent.

5.2.1.3.3 Sell or license the model to few sole owners

Regardless of previous offering strategies, the long-term outcome is certain as mentioned in the introductory section of this analysis (5.1). In due time, all segments and all companies will realize the credit risk evaluation model's benefits and adapt to it. When everyone can reap its benefits, and the market becomes saturated, the competitive advantage will decrease. However, a small amount of companies can be made the sole owner of the model thus making it last competitively. Either the model could be licensed to a small number of segments to retain the control and ownership of the model or another company could simply procure the legal rights to the entire model, as mentioned in 4.2.3, with similar outcomes.

Since the company is yet to prove its value, a licensing option make sense. If the legal rights of the model were sold to an external segment, the current value of the company would be obtained. If the company have been successful thus far it is reasonable to assume constant value increase in the future. In this case, a complete disposal of the model would be unjustified since it has yet to prove its full potential which makes it reasonable to keep the control and ownership of the model as long as possible or until it matures.

If the strategy of sole ownership mentioned above is deemed as superior, then licensing is the way to go. By doing so the owner of the model retain the values of working with fewer customers and would keep their ownership of the company until it matures. Since the model

still need development efforts the close relationship could be beneficial to both parties. The model could be observed during customer use which would be more difficult if multiple customers were involved. On the other hand, the customer would get more sophisticated support with implementation and maintenance for example. A close relationship could be vulnerable however by making the relationship less agile and by creating mutual dependencies causing lock-in effects.

5.2.2 The entities within segments as scope

The issue of this section cannot be concretely answered since it highly depends on the choice of offering strategy. It is possible, however, to recommend a specific offering strategy (discussed in *Three Offering Strategies*) and commence the final analysis. As stated in the introduction of this section (5.2) the final analysis conduct the aspect of separate companies within target segments and how their size may affect. When regarding the first two offering strategies, it is viable to assume that some segment will try to procure the credit risk evaluation model. In this case, the competitive advantage will be given to those who adopt quickly before the market is saturated. *Klarna* succeeded in this aspect which is covered in *Less risk and brand effects*. In this regard, it is somewhat irrational to try identifying more appealing customers since they in the long run will adapt to the credit risk evaluation model anyways. However, it makes sense to try identifying the most appealing segments if the credit risk evaluation model is sold to a separate customer in a specific segment. According to the analysis of different offering strategies (as discussed in 5.2.1.3) the aim to support a smaller number of customers (or just one) also means great possibilities to develop the credit risk evaluation model alongside the customers. In this endeavour, the company could benefit in different ways suitable with regards to the company in question. Consequently, this offering strategy will be preferred thus far and represent the foundation on which the preceding analysis will be built on: first, which segment to target, and then what kind of company in that segment that the model should be aimed at.

5.2.2.1 Which segments will benefit the most?

Some segments in the *Credit chain* will benefit from the credit risk evaluation model, some more and some less. As discussed in 5.1, *Creditors* might be the most eligible target segment if the model should be offered to the most obvious customers. In this segment, there will be customers that seek to improve their established algorithm further. *Klarna,* for example, is continuously looking for improvements in their evaluation models. The same goes for *Credit Report Providers* who also operate businesses that rely on evaluating customers' creditworthiness. In both cases, however, it is likely that the market within that segment will become saturated quickly since every company will be interested in the offering. Consequently, the method owner need to keep a strict customer relationship-plan if they want to reap the benefit of collaborative relationships and keep the market from saturating.

Another viable strategy would be to sell the offering to a segment that is less likely to become saturated. *E-commerce* would be the most reasonable candidate in such a case. This strategy would sustain the positive aspects of selling to few customers in the model's development stage and still avoid the temptation of selling to the whole segment which would cause the market to saturate. Hereby, the model could be licensed to *e-commerce* that, for example, want to offer their customers invoice payment in-house. Nevertheless, this strategy does also accommodate risk if the retailer fail to retrieve customer's debt.

When activities become redefined, as in the case with the credit risk evaluation model, some segments usually get pushed out of the market. These segments usually relied on asymmetries in the previous system. In the *Credit chain* both *Debt Collection Firms* and *Debt Portfolio Buyers* reap their revenues by these asymmetries as found in 4.2.2.4. It is safe to state that these segments would be considered useless if the market acquired a model that decreased the customers that cannot pay their debts accordingly.

Debt Portfolio Buyers could actually be a viable customer to consider if their future market presence would have been more secure. Their use of the credit risk evaluation model would help them evaluate which customers fail to pay the initial *Creditor* and yet might pay the *Debt Portfolio Buyers* in due time. But, as stated in the introduction of the analysis, the credit risk evaluation model aims to reduce or even eliminate the customers that fail to pay their debt in time, which would make the *Debt Collection Firms* and *Debt Portfolio Buyers* of no value in the long run; hence, not a viable target segment to recommend.

5.2.2.2 What kind of companies will benefit?

In the end, the credit risk evaluation model need to be aimed towards particular companies. Regarding the analysis conducted above (section 5.2.3) some segments (*Creditors, Credit Report Providers* and *E-commerce)* are more likely to generate sufficient revenue. Within these segments several companies compete with different offerings where some relevant exemplifications are presented in *Mapping the credit market*. Conducting an explicit analysis resulting in a company to aim for in each segment is beyond this report. However, large- and small sized companies as subsections in each segment will be considered.

It is justified to consider *Creditors* and *Credit Report Providers* as participants in the same market in this case. If the *Creditors* implement the offering they will have less need of the *Credit Report Providers'* services. On the other hand, *Credit Report Providers* can improve their services if they implement the offering thus making the *Creditor's* in-house evaluation models less valuable. As of now, *Creditors* make the external evaluation mainly just to hedge against potential complaints from the *Swedish Financial Supervisory Authority* as stated in 4.2.2.2. This fact strengthens the assertion that the value of *Credit Report Providers* will dwindle unless they manage to implement the method more rapidly and add value that way.

In this affinity, large- and small sized companies will have varied reasons to claim the credit risk evaluation model. A large sized firm, such as *Bisnode* or *Klarna,* could acquire the model for various reasons. Partly, because their business relies on the creditworthiness algorithms and they constantly strive to improve these, but also because they have financial resources to secure the competitive advantage that others would acclaim if implementation were denied. Less prominent firms, such as *Decidas* or *Avarda* are assumed to invest extensively in their development efforts to produce in-house algorithms just as the more prominent firms discovered in 4.2.3. Hence, by granting small companies the possibility to acquire the model *Decida's* or *Avarda's* venture to market presence and possible revenue could be simplified.

Regarding *E-commerce,* their incentive to utilize external firms to manage the payment procedure is to simplify their business. It is becoming increasingly popular, however, to enable these services in-house when firms reach considerable size, such as *Daniel Wellington* or *Ellos Group* which is further explained this case, the model could be aimed towards large sized *E-commerce* companies that seek to offer payment options in-house.

In the end, however, the credit risk evaluation model will befall the companies that are willing to pay the most. Undoubtedly, large companies have the possibility to acquire the method if they consider it beneficial. If they do, the smaller companies will not have the financial capabilities to match the larger firms' offerings. In conclusion, this part of the analysis will urge the owner of the model to construct an appealing offering to attract as prominent firms as possible, and keep them few, in order to reap their financial capabilities. Albeit, this way of reasoning is the most rational, other strategies should also be considered.

5.3 External effects

This section evaluates how upcoming laws & authorities and other trends could affect how a better credit evaluation model would be received by the *Credit chain*.

5.3.1 Regulation & authorities

In section 4.2.5, three new regulatory frameworks are mentioned: PSD2, GDPR and KALP-analysis. Each framework presents threats as well as opportunities depending on where in the market one's company is.

5.3.1.1 PSD2

According to *Colligent* in section 4.2.5.1, PSD2 will force the larger banks to provide their own data to smaller banks and crediting institutes. That means that the economies of scale, regarding data collection and analysis, that the large commercial banks possess is therefore undermined. This change will benefit smaller actors, such as *Colligent's* owner *Collector*, that have an easier time analysing the data thanks to a more agile digital structure while the larger banks will continue to have problems with the analysis. PSD2 will therefore present an opportunity for all actors to exploit the new data access, which should increase the demand for new credit risk evaluation models.

Previously, the incumbent commercial banks have not been able to use their data efficiently due to an inefficient digital structure. Their digital systems have been built from a manual base which has led to that the processes only being digital initially and then becomes printed or requires physical meetings. As *Collector* states in the interview in section 4.2.5.1, the digital approach of smaller financial institutes and *Creditors* such as *Klarna* and *Collector* gives them a considerable competitive advantage. These advantages are seen most clearly on the cost side of the organisation but also on the revenue side, for instance through segmentation. On the cost side, there is possible optimization of staffing, agreement processes and facilities while the banks are stuck with front offices, printout agreements for mortgages and manual processes (McKinsey, 2013). On the revenue side these actors gain from the customers' increasing requirements of digital tools and accessibility. All the different parts of the large banks' business are now being picked away by smaller institutions, small short term credits included. According to McKinsey (2013), there are cost cuts of about 40-90 percent to be realised within European banks. Given such a cost structure, it seems like the smaller actors have a very good opportunity to slowly disrupt the traditionalistic banking industry. The very last competitive advantage for the large banks has been their exclusive rights to their

own data, which is now being undermined by PSD2 and shift these advantages to the smaller actors, which ought to substantially increase demand for better analysis methods of this data.

5.3.1.2 GDPR

GDPR in turn will work in the opposite direction. In section 4.2.5.2, *FS evolution* states that the fear of the new framework is excessive regarding collection of data. Given that most interviewees are not fully up to speed on the regulatory framework, that might indicate that it is not of considerable importance for the segment. It could however be that the effects are under-analysed and underestimated. The effect from a stricter view of consent from the customer might restrict the access for all actors, leading to less data to analyse and thereby a decrease in demand for new credit evaluation models. Furthermore, the threat of sanctions on bad handling and collection of sensitive data presents a larger risk for smaller actors since they will have a harder time with liquidity in the case of fines. However, the larger banks most likely will receive substantially higher sanctions for mismanagement; but as can be seen previously in the banking industry, they seldom manage to match the sanctions to the size of the bank. That leads to large banks getting away with fines that are not as severe as the earnings from the misconduct, or as large share of their total revenues that would have been the case for a smaller actor.

5.3.1.3 KALP

There seems to be a consensus within the market that *H&M* are to win the current legal action against them; however, that does not eliminate the risks associated with KALP being implemented. Collector argues in the result section that it is not in *the Swedish Consumer Agency's* best interest to implement the framework as much as to set an example of a large actor, in this case *H&M*. Given that the agency does not wish to unnecessarily complicate the process of credits, the framework is interpreted as too harsh by *Collector* in the results. If it was to be implemented, it seems like the process of the online purchase associated with the credit is heavily complicated due to the need for filling in lots and lots of data points as a customer, which works against the previous progress of the industry. The inconvenience for the customer, as well as the need for new tools for the *Creditor* to collect real time data, risks to heavily restrain the growth of the market for invoices and credit evaluation. depending on the consumers' reaction to the change, this might shift back the market to using more debit and credit cards or other direct payment methods.

5.3.2 Trends

As mentioned in the section 4.2.6.1 consumers have begun to purchase more from retailers outside Sweden because of the possibility to find cheaper products. It threatens many actors within the *Credit chain* since they mainly deliver solutions to Swedish retailers. To be able to compete, actors within the *Credit chain* must begin to establish businesses outside Sweden. It will require time, money and new strategies. Hence their priority will not be to evaluate a new credit evaluation model, it will rather be a pursuit of survival by focusing on expanding worldwide.

Blank loans are increasing through peer to peer lending (section 4.2.6.1) and actors that provides the platform, *Lendify* for instance, needs to evaluate every lender. *Lendify´s* brand value is completely determined by how well the evaluate risk/reward for their two-sided

market, the *Creditors* and they debtor. Hence, an improved credit evaluation model would be of interest for them.

5.4 The value of a more accurate credit risk evaluation model for the society

This section will, based on the findings from the result and the theory, analyse what effects a better credit evaluation model would have on society. This will be done by first analysing the effects on an individual level and then proceed to analysing the effects from a society's perspective.

5.4.1 Effects on social and personal economic sustainability

Judging by the growing market of debt portfolio buying, as mentioned in section *4.2.6.3*, one might argue that there is a vast number of people that cannot consume sustainably within their limits. Through better credit risk evaluation models this number can be reduced. By being able to more accurately identify who these people are, the decision on whether they can afford a product or service could be made by the *Creditors* instead of the consumers themselves. This would reduce the risk of overconsumption and getting a record of payment default. To live with a record of payment default can put a person in a socially unsustainable position where she is an outsider in society.

Many things that were hard to manage before can become even harder when receiving a record of payment default. For example, housing which is a cost that can be reduced to manage economically unsustainable spending, however, it cannot be eliminated completely. Generally, in Sweden, there is a bigger demand on homes than there is supply (Hur vi bor, 2017). This means that there are usually several persons that the landlord can choose from when she is renting out a home. One of the key aspect that a landlord considers when choosing a tenant is whether the tenant has a record of payment default or not (Hemhyra, 2013). The other option for acquiring accommodation is to buy a home. Unless the person has the means to buy the home without a loan, which is highly unlikely if she has received a record of payment default, this can be difficult to manage as well. Banks looks very seriously at records of payment default so it can be difficult to be granted a loan. If the person does receive a loan, the interest rate would be high and probably economically unsustainable for the person.

A record of payment default can also be especially troubling for an unemployed person. When applying for jobs, the employer often checks if the person has a record of payment default, to determine whether this is a responsible person or not. The consequence of this will be that a person who needs an income has trouble to acquire one. These different scenarios above could get a person to make rash and economically unsustainable decision like getting an unsecured loan like a text message loan with a very high interest rate.

With the risk of the scenarios above to occur it would be in a person's own best interest if there would be better credit risk evaluation models on the market to reduce the risk of receiving records of payment default. As mentioned in section *Can in-house be considered again?* there is an interest for some *E-commerce actors* to start with in-house payment solutions. This could reduce the risk of receiving a record of payment default even more. If

the *E-commerce actors* would have in-house payment solutions it would allow them to handle the customers that have trouble to pay by themselves as mentioned in 4.2.3. This could mean that the *E-commerce actor* in some cases extend the payment period for a customer in order the give the customer a better chance to make the payment. The reason for this would be to strengthen customer relationships.

5.4.2 Reduced costs that does not add any value to society

As previously mentioned a better credit risk evaluation model would be something that society would benefit from. When the false-positive consumers are allowed credit through invoice they start a process that is economically unsustainable for society and does not create any value for society. The first aspect of this is all the administrative costs for the *Creditor* that comes from trying to collect the unpaid debt. In addition to this there are the different fees that applies to the invoice due to default payments as described under section 4.2.2.3 and 4.2.2.4. Although the costs do, in a way, finance the *Debt collectors* and *Debt portfolio buyers* they do not really contribute anything to society. In today's situation *Debt collectors* and *Debt portfolio buyers* are indeed needed in society, as described in the results under *Unsuccessful internal collection* and *Depreciation or sale of debts*. By buying and collecting debts they make sure that *Creditors* get some of their money back but this is rather curing the symptom, not the disease which is that people not worthy of credit receives it anyway. Better credit evaluation models would, if not make their function obsolete, at least decrease the importance of these actors. This would cure the disease and, by doing so, remove the symptoms. Another aspect of this is when a person has filed for debt restructuring at the *Swedish Enforcement Authority*. After the person, has served the five years of debt restructuring, during which she pays as much of the debt as possible, then the rest of the debt is cancelled and the company that owns the invoice will have lost money. These costs do not add any value to society and therefore will not contribute to economic growth for the nation and therefore does not add to the economic sustainability of the society, simply put it is wasted money.

5.4.3 Increased stability and growth in society

Because of non-creditworthy persons receiving credit, the debt portfolio buying market has grown rapidly as mentioned under section 4.2.6.3. The margins in this market are high and there is a vast amount of debts to trade and collect. During the IT bubble in the 90s and beginning of the 00s, high margins attracted many new actors to enter the IT market (Colombo). The same thing is happening in the market for *Debt portfolio buyers* as mentioned in section *Unsustainable booming industries*. High margins and a lot of debts to trade has attracted new actors to start buying and collecting debts.

It is currently easy to start a profitable debt portfolio buying company as discussed under section 4.2.6.3. The reason for this is because the interest rates in Sweden are currently extremely low. This combined with the low price on debt portfolios makes it rather easy to make a profit. Basically, these companies borrow money so that they can purchase debts. As more actors enter the market, more companies will be competing to buy the debt portfolios which leads to increased demand. When the demand on the portfolios rise, the price will follow, causing the earlier high margins to decrease which is something that has begun already according to section *Unsustainable booming industries*. Smaller margins will make it harder for the companies on the *Debt portfolio buyer* market to survive, especially for the newer actors who has yet to gain a strong expertise in the analysis and collecting of the debts.

If the companies that are funded by loans cannot make a profit they will soon not be able to pay their debts and default on their loans, causing them to eventually file for bankruptcy. The company's debts in addition to the debt portfolios that the company possesses will then return to the market and add to the pile of debts that are being traded.

Another aspect of this is what would happen if the interest rate would rise, which it probably will sometime in the future. The loan based *Debt portfolio buyers* would then have their margins decreased and just as the scenario above they will have trouble to pay their debts as a consequence of their reduced profits. Something even more troubling is what would happen to the whole market if the interest rates increased. Just as the mortgage loans in the CDOs during the financial crisis of 2008 started to default, as a consequence of an increased interest rate, the debts in the portfolios will also start to default. This will hit particularly hard on consumer credit portfolios since households will probably prioritize to pay the mortgage on their homes instead of paying their invoice debts. This is because the fear of losing their homes in case of defaulted mortgage payments.

Since the debts within the debt portfolios will then default, the consequence would be that the debt portfolios that the *Debt portfolio buyers* possess will quickly lose value because of the low chance to collect. The impact would mean big losses for the debt portfolio companies and probably many bankruptcies, not to mention the loss of value for society because of the chance that the uncollected debts end up being cancelled. In addition to this the debtors will receive record of payment defaults which will put them in socially unsustainable situation as a result. These kinds of situations could be avoided through better evaluation model on the market. This would cause the less debts on the market which means that the debt portfolio market would cool of and the capital tied up in uncollected debts could instead be allocated elsewhere.

6 Conclusions

PSPs, *Debt collectors* and *Invoice service providers* will not have any benefits of acquiring a better evaluation model themselves. *Creditors* is the segment that will gain the most. Since they are doing the initial evaluation, a better model will result in reduced credit risk and less credit losses. A better model would further incite *E-commerce actors* to have the invoice service in-house. Benefits include both an additional revenue stream and strengthening of the relationship to their customers. *Credit report providers* and *Debt portfolio buyers* will most likely be obsolete in the long term but a better model would make their services more attractive in the short term.

Further consideration need to be made to succeed when launching the credit risk evaluation model on the intended segments. Firstly, it is rational to aim for a narrower range of customers within the segment, hence, facilitating the development stage of the model. Secondly, to reap economic benefits post implementation, the model should be licensed. Finally, the model developers should commence partnerships with customers of average- to large size.

The effects of a better evaluation model would be positive for society. Non-value adding costs, such as fees and credit defaults, will be reduced. This capital can instead be allocated elsewhere, where it can contribute to the society. The risk for bankruptcies decrease by the reduced credit losses. Since people who cannot afford a certain product or service would not be able to acquire them, the social and economic sustainability would improve. This would put less people in difficult debt situations and reduce the risk of individuals receiving records of payment defaults.

The new regulatory frameworks should increase the market for evaluation models and increase the growth of the *Credit chain*. PSD2 will most likely increase the demand for evaluation models since it will make data accessible. GDPR could potentially restrain the growth of the *Credit chain* due to inconvenience for the customers. Introduction of standardised KALP-analysis is in turn deemed improbable, but if it is introduced, it could significantly impact the growth due to increased complexity in the evaluation process.

7 Discussion

Historically, previous generations in Sweden have been unwilling to indebt themselves due to financial crisis such as the real estate crisis associated with the real estate bubble in the beginning of the 90s. The negative association to credit has created a mentality of paying off debts and living on equity; leading to demographic groups missing out on the positive effects from credits. For instance, avoiding the risk associated with paying for merchandise that has not been received and the liquidity aspect that facilitates personal financial planning to time sales or discounts.

The recent generation, called millennials, does not possess the same risk aversion as the generation before, which has been the source of the expansion of short term unsecured credits. Small credits such as invoices, text message loans and peer to peer loans effectively channels capital from willing lenders to debtors in need of liquidity, without the need to provide a security for the loan. The question is if the increase in these sorts of credits increases the risk for financial instability in the case of mass credit defaults.

Göran Persson once famously said “He who is indebted is not free.” This mentality has become obsolete; however, there are substantial risks associated with excessive crediting.

8 References

Arvato (2016). Fakturaadministration. Retrieved March 31th, 2017 from: https://www.arvato.com/content/dam/arvato/documents/sweden-ecommerce/Produktblad%20Fakturaadministration_arvato_2016.pdf

Babbie, Earl R. (2010). *The practice of Social Research*. Belmont: Wadsworth Publishing.

Backman, J. (2008) *Rapporter och uppsatser*. Lund: Studentlitteratur.

Bank. Betalningsanmärkning. Retrieved March 26th, 2017 from: http://www.bank.se/betalningsanmarkning/

Begany, T (2010). 5 Consequences of The Mortgage Crisis. Retrieved March 19th, 2017 from: http://www.investopedia.com/financial-edge/1110/5-consequences-of-the-mortgage-crisis.aspx

Blair, J., Blair, E.A. and Czaja, R. (2014) *Designing surveys: a guide to decisions and procedures.*

Breakit (2017) LISTA: Här är svenska P2P-utmanarna som vill sno bankernas lånekunder. Retrieved April 11th, 2017 from: http://www.breakit.se/artikel/6909/lista-har-ar-svenska-p2p-utmanarna-som-vill-sno-bankernas-lanekunder

Bryman, A. (2002). Samhällsvetenskapliga metoder. Malmö: Liber.

Carolina Neurath (2014). Tidigare Medarbetare Avslöjar Klarnas Strategi. Retrieved March 30th, 2017 from https://www.svd.se/tidigare-medarbetare-avslojar-klarnas-strategi

Cederblad, J. (2016). Konsumentverket drar H&M till högsta instans. *Svenska Dagbladet.* Retrieved April 17th, 2017 from: https://www.svd.se/konsumentverket-drar-hm-till-hogsta-instans

Circular Ecology. Sustainability and sustainable development - What is sustainability and what is sustainable development? Retrieved March 17th 2017 from: http://www.circularecology.com/sustainability-and-sustainable-development.html#.WOjo1hhh0y5

Colombo, Jesse. The Dot-com bubble. Retrieved 9th of May 2017 from: http://www.thebubblebubble.com/dotcom-bubble/

Datainspektionen (2017). Kreditupplysningslagen (KUL). Retrieved March 30th, 2017 from: http://www.datainspektionen.se/lagar-och-regler/kreditupplysningslagen/

Dibs (2016). *Svensk E-Handel*. Retrieved January 30th, 2017 from: http://info.dibs.se/nordicecommerce2016download?hsCtaTracking=b9083799-1c83-463d-9795-b59ae98749c6%7Cc1894b05-a1ed-4fa2-8a16-44cecb1ef7aa&__hstc=40902717.8b6769079fe98bca81c32e7b5acb19af.1485773319753.1485773319753.1485773319753.1&__hssc=40902717.1.1485773319754&__hsfp=2462055278

Doane, D & MacGillivray, A (2001). Economic Sustainability The business of staying in business. Hämtad: March 17th, 2017 from: http://isites.harvard.edu/fs/docs/icb.topic140232.files/RD_economic_sustain.pdf

E-butik Norden AB. Retrieved March 23rd, 2017 from: http://kundportal.e-butik.se/tillval/betalstt/kortbetalning-med-auriga

Ehandel.se. Retrieved March 23rd, 2017 from: http://www.ehandel.se/kortbetalning/

Eriksson, L. & Wiedersheim-Paul, F. (2008). Rapportboken – hur man skriver uppsatser, artiklar och examensarbete. Malmö: Liber.

EVRY (2017). PSD2 - the directive that will change banking as we know it from: https://www.evry.com/en/news/articles/psd2-the-directive-that-will-change-banking-as-we-know-it/

European Commission (2017). GDPR key changes. Retrieved April 24th, 2017 from: http://www.eugdpr.org/key-changes.html

Financier (2017). Kreditupplysningsföretag. Retrieved March 30th, 2017 from: https://financer.com/sv/lana-pengar/kreditupplysningsforetag/

Finansinspektionen (2017). Retrieved April 9th, 2017, From: http://www.fi.se/sv/om-fi/vart-uppdrag/

Fortuna Auctioneers (2017). Debt Portfolio. Retrieved April 17th, 2017 from: http://www.fortnaauctioneers.com/sellers/debt-portfolio

Friberg (2016). Konsumentverket överklagar kammarrättens H&M-dom. Retrieved April 17th from: http://www.gulliksson.se/konsumentverket-overklagar-kammarrattens-hm-dom/

Friedman, J (2012). 6 Business Benefits of Sustainability. Retrieved March 23rd, 2017 from: http://www.huffingtonpost.com/john-friedman/sustainable-business_b_1576400.html

Förvaltningsrätten i Karlstad (2015). Mål 23-15; H & M Hennes & Mauritz Sverige AB./. Konsumentverket. Unpublished court case.

Hague, P. (1998) *A practical guide to market research.* Guildford: Grosvenor House Publishing Ltd.

Harboe, T. (2013). *Grundläggande metod: Den samhällsvetenskapliga uppsatsen*. Malmö: Gleerups Utbildning AB.

Hemhyra (2013). Här nekas du bostad för betalningsanmärkning. Retrieved May 8th, 2017 from: https://www.hemhyra.se/nyheter/har-nekas-du-bostad-for-betalningsanmarkning/

Hitta Lånet. Vad händer om jag inte kan betala tillbaka lån? Retrieved March 26th, 2017 from: http://www.hittalanet.se/lanefakta/vad-hander-om-jag-inte-kan-betala-tillbaka-lan

Hur vi bor (2017). Bostadsbristen slår nya rekord. Retrieved 8th May, 2017 from: http://hurvibor.se/bostader/bostadsbristen/

Intrum (n.d). Inkasso. Retrieved 11th May 2017 from: https://www.intrum.com/sv/se/tjanster-och-erbjudanden/kravhantering/inkasso/

Investopedia (2017). Subprime Loan. Retrieved March 19th from: http://www.investopedia.com/terms/s/subprimeloan.asp

Investopedia (2017). Debt collector. Retrieved March 19th from: http://www.investopedia.com/terms/d/debt-collector.asp

Klarna (n.d.) Klarna Checkout. Retrieved May 10th from: https://www.klarna.com/se/foretag/klarna-checkout

KTH (2016). Social hållbarhet. Retrieved March 17th, 2017 from: https://www.kth.se/om/miljo-hallbar-utveckling/utbildning-miljo-hallbar-utveckling/verktygslada/sustainable-development/social-hallbarhet-1.373774

KTH (2015). Ekonomisk hållbarhet. Retrieved May 11th, 2017 from: https://www.kth.se/om/miljo-hallbar-utveckling/utbildning-miljo-hallbar-utveckling/verktygslada/sustainable-development/ekonomisk-hallbarhet-1.431976

Konsumentverket (2016). H&M har inte brustit vid kreditprövning. Retrieved April 17th, 2017 from: http://www.konsumentverket.se/aktuella-konsumentproblem/mal-domar-och-forelagganden2/domar/domar-2016/hm-har-inte-brustit-vid-kreditprovning/

Konsumentverket (2017). Krediter. Retrieved May 11th from: http://www.konsumentverket.se/for-foretag/regler-per-omradebransch/finansiella-tjanster/krediter/

Kronofogden (2016). Skuldsanering. Retrieved March 26th, 2017 from: https://www.kronofogden.se/kanintebetalaskuldsanering.html

Kronofogden (n.d). Betalningsanmärkning. Retrieved April 20th, 2017 from: https://www.kronofogden.se/Betalningsanmarkning.html

Kronofogden (n.d). Inkassokrav. Retrieved March 26th, 2017 from: https://www.kronofogden.se/Inkassokrav2.html

Lamarque, H (2016). 10 Companies That Still Use Child Labour. Retrieved March 23rd, 2017 from: http://www.careeraddict.com/10-companies-that-still-use-child-labor

Leibowitz, J et al. (2013). The Structure and Practices of the Debt Buying Industry. Retrieved May 4th 2017 from: https://www.ftc.gov/sites/default/files/documents/reports/structure-and-practices-debt-buying-industry/debtbuyingreport.pdf

Lendify (2016). Retrieved April 11th, 2017, from: https://lendify.se/Invest/Register

Mckinsey (2013). The Rise of the Digital Bank. Retrieved on the 28th of april from: http://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/the-rise-of-the-digital-bank

McVey, R. (2012) Restoring Credit Market Liquidity. Retrieved may 11th from: http://files.shareholder.com/downloads/AMDA-1P4MV7/4453623685x0x712884/A502F5C5-3DA7-4457-AB8F-D5FAFA34A1D2/712884.pdf

Norman, D. & Lincoln, Y. (2000). *Handbook of Qualitative Research*. Thousand Oaks: SAGE Publications.

Nyteknik (2013) Sverige populär marknad för tekniktest. Retrieved March 23, 2017, from: http://www.nyteknik.se/innovation/sverige-popular-marknad-for-tekniktest-6403313

Ordanini, A. et al (2009). CROWDFUNDING: TRANSFORMING CUSTOMERS INTO INVESTORS THROUGH INNOVATIVE SERVICE PLATFORMS. Retrieved March 23, 2017 from: http://didattica.unibocconi.it/mypage/upload/49036_20110414_125339_JOSM_CROWD_FINAL.PDF

Personal Data Protection. (2006). Retrieved March 3, 2017, from http://www.regeringen.se/contentassets/87382a7887764e9995db186244b557e4/personal-data-protection

PwC (2017). Retrieved April 11th, 2017, from: http://www.pwc.se/dataskyddsforordningen

Reddy, Sriharsha; Gopalaraman, Krishna (2016). Journal of Internet Banking and Commerce. Retrieved April 11th 2017 from: http://search.proquest.com.proxy.lib.chalmers.se/docview/1877375585?pq-origsite=summon

Rienecker, L. & Stray-Jörgensen, P. (2004). *Att skriva en bra uppsats*. Malmö: Liber.

Riksbanken (2017). Retrieved April 9th, 2017, From: http://www.riksbank.se/sv/Riksbanken/Riksbankens-roll/

Siddiqi, N. (2006). Credit Risk Scorecards: Developing and Implementing Intelligent Credit Scoring. Retrieved February 2nd, 2017 from: https://www.google.se/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwiKpvm74_3RAhViJ5oKHW0qCc4QFggtMAI&url=https%3A%2F%2Fxa.yimg.com%2Fkq%2Fgroups%2F15062060%2F260217532%2Fname%2FCredit%2BRisk%2BScorecards.pdf&usg=AFQjCNHZuSBRiJ_Vh4RAF-dw_sTS5miXxw&sig2=x9EMSY2sniLDkUu219pEVA&bvm=bv.146094739,d.bGs

Singh, M (??). The 2007-08 Financial Crisis in Review. Retrieved March 19th, 2017 from: http://www.investopedia.com/articles/economics/09/financial-crisis-review.asp

Smith, Alan D. (2008). International Journal Vol. 2: Online payment service providers and customer relationship management. Retrieved March 23rd, 2017 from: http://www.inderscienceonline.com/doi/pdf/10.1504/IJEF.2008.020597

Statens Beredning för Medicinsk Utvärdering (SBU). (2014). *Utvärdering av metoder i hälso- och sjukvården*. Retrieved April 1st, 2017 from: http://www.sbu.se/globalassets/ebm/metodbok/sbushandbok.pdf

The Economist (2013). The origins of the financial crisis. Retrieved March 19th, 2017 from: http://www.economist.com/news/schoolsbrief/21584534-effects-financial-crisis-are-still-being-felt-five-years-article

_____

The Second Payment Services Directive (PSD2). (2016). Retrieved March 3, 2017, from https://www.paymentsuk.org.uk/sites/default/files/PSD2%20report%20June%202016.pdf

Thousand Oaks: SAGE publications.
Thurén, T. (2003). *Sant eller falskt? Metoder i källkritik.* Stockholm: Krisberedskapsmyndigheten

Umeå University (2016). Source criticism. Retrieved April 3rd, 2017 from: http://www.ub.umu.se/skriva/kallkritik

United States Government (2017). Retrieved March 30th, 2017 from: https://www.usa.gov/credit-reports

Unruh, G et al. (2016). Investing for A Sustainable Future. Retrieved March 23rd from: http://sloanreview.mit.edu/projects/investing-for-a-sustainable-future/

Upplysningscentralen (2017). Retrieved March 30th, 2017 from: https://www.minuc.se/min-upplysning/

World Commission on Environment and Development (1987). Our Common Future. 019282080X. Retrieved March 17th, 2017 from: http://www.un-documents.net/our-common-future.pdf

9 Appendix

9.1 Questions for specific companies

9.1.1 Colligent

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditupplysning, fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut?
- Vilka är era största konkurrenter?
- Hur bedöms skulder innan inkasso ska göras?
- Finns det gränser för hur små skulderna kan vara för att de ska drivas in?
- Hur komponeras portföljer av förfallna skulder innan de säljs vidare? Har ni identifierat några mönster?
- Hur görs värdering av en portfölj med skulder?
- Kan ni välja att endast köpa en del av skuldportföljen och vad händer i så fall med resterande del?

- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PSD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?

9.1.2 Avarda

Vi har identifierat 6 aktörer i kreditvärdekedjan (psp, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Samarbetar ni med någon aktör för att nå ut till fler delar av kreditmarknaden?
- Hur utvärderar ni vilka kunder som ska få köpa på faktura?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Var har ni hittat kundvärde i vår kedja?
- Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till faktura, alltså när ett köp för 2000 kr görs jämfört med ett på 200 kr?
- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PHD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?

9.1.3 Collector

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur utvärderar ni vilka kunder som ska få köpa på faktura?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Var har ni hittat kundvärde i vår kedja?
- Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till faktura, alltså när ett köp för 2000 kr görs jämfört med ett på 200 kr?
- Hur bedöms skulder innan inkasso ska göras?
- Finns det gränser för hur små skulderna kan vara för att de ska drivas in?
- Hur komponeras portföljer av förfallna skulder innan de säljs vidare? Har ni identifierat några mönster?
- Hur görs värdering av en portfölj med skulder?
- Kan ni välja att endast köpa en del av skuldportföljen och vad händer i så fall med resterande del?

- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PHD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?'

9.1.4 Ecster

Vi har identifierat 6 aktörer i kreditvärdekedjan (psp, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni vi missat någon essentiell aktör i värdekedjan?
- Är ni nischade mot någon speciell bransch gällande betallösningar och utlåning?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Vilka är era största konkurrenter?
- Berätta mer om "my wallet"?
- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PHD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Ni har verkat under Handelsbanken Finans i 60 år, har ni identifierat mönster på kreditmarknaden under den tiden? ser ni att vissa fenomen dykt upp flera gånger?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?

9.1.5 Wikinggruppen

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditupplysning, fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur ser era intäktsströmmar ut?
- Vilka är era största konkurrenter?
- Samarbetar ni med någon annan aktör inom kreditvärdekedjan?
- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PSD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?'

9.1.6 Finansinspektionen

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditupplysning, fakturaservice, Skuldköp/factoring)

- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Beskriv ert förhållande till bolagen inom kreditvärdekedjan, hur har den utvecklats över tid?
- Hur ser ni generellt på kreditmarknaden i Sverige?
- Hur ser ni på regleringar som (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PSD)
- Krävs det mer regleringar?
- Förutspå den framtida kreditmarknaden i Sverige!
- Har ni under er tid på marknaden identifierat trender inom kreditgivning? Hur såg det ut under finanskrisen?
- Hur ser ni på Blockchain?

9.1.7 Resurs Bank

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditupplysning, fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut?
- Vilka är era största konkurrenter?
- Hur bedöms skulder innan inkasso ska göras?
- Finns det gränser för hur små skulderna kan vara för att de ska drivas in?
- Hur komponeras portföljer av förfallna skulder innan de säljs vidare? Har ni identifierat några mönster?
- Hur görs värdering av en portfölj med skulder?
- Kan ni välja att endast köpa en del av skuldportföljen och vad händer i så fall med resterande del?

- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PSD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?

- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?
- Hur ser ni på möjliga uppköp av mindre företag? Något ni gör?
- Har ni samarbeten med några företag inom värdekedjan?
- Varför är ni inte verksamma inom alla delar i värdekedjan?
- Tror du modellerna skiljer sig mellan företag?
- Har ni under er tid på markanden identifierat trender inom kreditgivning? Hur såg det ut under finanskrisen?
- Är svenskarna överbelånade, är världen överbelånad?

9.1.8 Intrum Justitia

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur utvärderar ni vilka kunder som ska få köpa på faktura?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Var har ni hittat kundvärde i vår kedja?
- Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till faktura, alltså när ett köp för 2000 kr görs jämfört med ett på 200 kr?
- Hur bedöms skulder innan inkasso ska göras?
- Finns det gränser för hur små skulderna kan vara för att de ska drivas in?
- Hur komponeras portföljer av förfallna skulder innan de säljs vidare? Har ni identifierat några mönster?
- Hur görs värdering av en portfölj med skulder?
- Kan ni välja att endast köpa en del av skuldportföljen och vad händer i så fall med resterande del?

- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PHD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?

9.1.9 Zimpler

Vi har identifierat 6 aktörer i kreditvärdekedjan (psp, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Samarbetar ni med någon aktör för att nå ut till fler delar av kreditmarknaden?
- Hur utvärderar ni vilka kunder som ska få köpa på faktura?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?

- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Var har ni hittat kundvärde i vår kedja?
- Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till faktura, alltså när ett köp för 2000 kr görs jämfört med ett på 200 kr?
- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PHD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?
- Har ni lyckats göra mätningar eller bedömningar av false-negatives? Det vill säga att kunder inte får kredit men kan köpa i efterhand. Är det helt omöjligt att få statistik på det? (DVS krävs det ett hypotetiskt scenario där man kontrollerar alla försäljningskanaler etc?
- Hur stora kostnader medför det att ta kreditupplysningar från externa företag såsom UC? Hur stor blir styckkostnaden? Vad är er policy kring att ta in kreditupplysningar externt? Är det bara regulatoriskt för att slippa visa upp era modeller?
- Vad har Intrum och TF för intresse av er? Har inte de liknande tjänster?
- Hur kommer det sig att era modeller kan vara bättre? Varför har man inte kreditupplysning ”In-house”? Exempelvis: Kostnadsineffektivt, reglerat pga att de måste vara externa eller försumbar kostnad?
- Hur är egentligen regleringen kring kreditupplysning? Krävs det vid samtliga krediter? Finns det storleksmått eller är det bara vid banktillstånd man drar gränsen för risknivåer i utlåning?

9.2 Questions for various actors

9.2.1 Betallösningar

Vi har identifierat 6 aktörer i kreditvärdekedjan (psp, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Samarbetar ni med någon aktör för att nå ut till fler delar av kreditmarknaden?
- Hur utvärderar ni vilka kunder som ska få köpa på faktura?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Var har ni hittat kundvärde i vår kedja?
- Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till faktura, alltså när ett köp för 2000 kr görs jämfört med ett på 200 kr?
- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PHD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?

- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?

9.2.2 Crowdfunding

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, fakturaservice, kreditupplysning, kreditgivare, inkasso, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur bedömer ni vilka som ska få investera?
- Har ni några specifika kundgrupper som har svårast att betala lånen?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet till vilka som ska få investera beroende på belopp? 50k mot 100k t.ex.
- Hur hanterar ni nya hot och regelverk?
- Förutspå hur den framtida kreditmarknaden kommer se ut!

9.2.3 Lånehandläggare

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, fakturaservice, kreditupplysning, kreditgivare, inkasso, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur bedömer ni vilka som ska få låna/låna ut pengar?
- Har ni några specifika kundgrupper som har svårast att betala lånen?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Vilka är era största konkurrenter?
- Hur hanterar ni nya hot och regelverk?
- Förutspå hur den framtida kreditmarknaden kommer se ut!
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som tar lån?
- Hur ser ni på möjliga uppköp av andra företag?
- Har ni samarbeten med några företag?
- Har ni under er tid på marknaden identifierat trender inom kreditgivning?
- Är svenskarna överbelånade, är världen överbelånad?
- Hur jobbar ni med finansiell risk och hedging?
- Hur ser ni på Blockchain och crowdfunding i framtiden? Kommer det slå ut traditionella institutioner?

9.2.4 Låneplatformar

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, fakturaservice, kreditupplysning, kreditgivare, inkasso, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur bedömer ni vilka som ska få låna/låna ut pengar?
- Har ni några specifika kundgrupper som har svårast att betala lånen?

- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till lån, 2000 jämfört med 200 t.ex.?
- Hur hanterar ni nya hot och regelverk?
- Förutspå hur den framtida kreditmarknaden kommer se ut!
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som tar lån?
- Hur ser ni på möjliga uppköp av andra företag?
- Har ni samarbeten med några företag?
- Har ni under er tid på marknaden identifierat trender inom kreditgivning?
- Är svenskarna överbelånade, är världen överbelånad?
- Hur jobbar ni med finansiell risk och hedging?
- Hur ser ni på Blockchain och crowdfunding i framtiden? Kommer det slå ut traditionella institutioner?

9.2.5 Debt collectors and debt portfolio buyers

- How are debts evaluated before the debt collection process starts?
- Are there limits for how small the debts can be for them to be accepted by a debt collector?
- How are portfolios of debts compiled before sale? Have you identified any patterns?
- How do you determine the value of a debt portfolio?
- Can you choose to buy only a part of the debt portfolio, if so, what happens with the remaining part?

9.2.6 E-commerce

- Vilken aktör/Vilka leverantörer använder ni för att bedriva er E-handel?
- Vem levererar betalösningar? Vem erbjuder faktura?
- Vad anser ni är viktigt när ni väljer leverantör?
- Varför väljer ni att outsourca betalösningen?
- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PSD)
- Ser ni övriga hot mot E-handel?
- Förutspå framtida B2B respektive B2C för E-Handel?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ser ni på möjliga uppköp av företag som sysslar med betal och fakturalösningar?
- Har ni under er tid på marknaden identifierat trender inom E-handel?
- Hur ser ni på Blockchain och crowdfunding?

9.2.7 FS Evolution

Basic frågor

Vi har identifierat 6 aktörer i kreditvärdekedjan (PSP, kreditgivare, inkasso, kreditmodell på kran (kreditupplysning), fakturaservice, skuldportfölj)

- Av dessa 6 aktörer vilka skulle ni säga att ni täcker?
- Tycker ni att vi missat någon essentiell aktör i värdekedjan?
- Hur utvärderar ni vilka kunder som ska få köpa på faktura?
- Har ni identifierat något mönster gällande vilka som köper på faktura?
- Har ni några specifika kundgrupper som har svårast att betala fakturor?
- Hur ser era intäktsströmmar ut? Var tjänar ni mest pengar? Var har ni hittat kundvärde i vår kedja?
- Vilka är era största konkurrenter?
- Hur tar ni ställning till beloppet när en kund ska ges möjlighet till faktura, alltså när ett köp för 2000 kr görs jämfört med ett på 200 kr?

- Hur bedöms skulder innan inkasso ska göras?
- Finns det gränser för hur små skulderna kan vara för att de ska drivas in?
- Hur komponeras portföljer av förfallna skulder innan de säljs vidare? Har ni identifierat några mönster?
- Hur görs värdering av en portfölj med skulder?

Framtid:

- Hur hanterar ni nya hot? (H&M fallet, KALP-kalkylen (kvar att leva på), PUL, PSD)
- Förutspå framtida B2B respektive B2C för faktura?
- Hur förhindrar ni att andra företag tar av er marknadsandel?
- Hur ställer ni till att det kanske inte är dom med störst möjlighet att betala som använder faktura?

Följdfrågor:

- Hur ser ni på möjliga uppköp av mindre företag? Något ni gör?
- Har ni samarbeten med några företag inom värdekedjan?
- Varför är ni inte verksamma inom alla delar i värdekedjan?
- Tror du modellerna skiljer sig mellan företag?
- Har ni under er tid på markanden identifierat trender inom kreditgivning? Hur såg det ut under finanskrisen?
- Är svenskarna överbelånade, är världen överbelånad?
- Hur jobbar ni med finansiell risk och hedging?
- Är collector ventures ett sätt att bredda är verksamhet, hitta potentiella förbättringsområden eller bara tjäna pengar?

- Hur ser ni på Blockchain?
- Görs upplysningar på samtliga i skuldportföljen? Hur stor kostnad utgör detta i det stora hela?
- Får skuldportföljen sättas ihop hur företaget än vill? Blir det misstag i värderingar där det är svårt för utomstående att förstå att vissa skulder inte är inkasseringsbara?
- Hur görs bedömningen på alla skulderna? Är det så att en skuld kan gå från en portfölj, köparen försöker driva in och att samma skuld sen hamnar i en ny, likadan portfölj? Finns det något sätt för sista ”personen/instans” att förstå att samma skuld varit del i 4 olika portföljer och därmed är fullkomligt värdelös?
- Köper dessa bolag in information annat än från upplysningsföretag?
- På vilket sätt samarbetar dessa bolag med kreditgivare (främst fakturautställare vid ehandel)? Det vore intressant att veta om t.ex. skuldportföljköpare kände sig mer bekväma att köpa förfallna skulder från en viss leverantör.
- Har skuldportföljköpare återkommande relationer med kreditsäljare? Varför?
- Har dessa typ av bolag något informationsutbyte med kreditgivare? Alltså, dessa skulder kan ge ytterligare information om ”kategoririsker” (produkt, konsumentgrupp, industri etc.)