



**CHALMERS**

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**Applying a Venture Capital Approach for  
How Strategic Incumbent Corporations  
Shall Evaluate High Technology Start Ups  
Setting a Standard for How SEB Shall  
Understand, Evaluate and Monitor FinTechs**

*Master of Science Thesis*

*in the Management and Economics of Innovation Programme*

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## Abstract

This thesis concern how corporate venture capital can apply a pre-screening process in order to attain an efficient investment process. In order to develop a best practice of this process studies within industry and firm analysis have been carried out, as well as industry transformation and technological development. Moreover, studies within the specific industry that this thesis lean towards have been performed and the financial industry and FinTechs are discussed. Furthermore, as venture capital firms continuously use an investment process in order to gain best results studies of venture capital have been performed and inspired the pre-screening process for corporate venture capital. Interviews were held with professionals from SEB, Creandum and Chalmers Ventures, both in the type of open and semi-structured.

An assessment model has been developed in three sections, first with an introduction of the firm is presented followed by Phase I that include five important questions that have to be answered. This section will enable a determination of whether to further evaluate a firm or not, and if chosen to continue the model increase the level of detail in Phase II, that goes deeper in five dimensions; people, business, technology, maturity and risk/other. The result from this is a spider chart that enable viewers to identify which companies that are attractive, also general trends can be identified by performing assessments on multiple FinTechs. Moreover, after using the second phase of the model it is possible to perform a prioritisation of the firms and decide which should be considered to have higher importance and closer monitoring. Moreover, the detail of Phase II enable the possibility for a corporation to in more detail monitor and understand the business that is being tracked. In this case it gives an understanding for banks about how FinTechs work, in which segments and domains progress is made, and give the banks opportunities to allocate more resources to where needed.

Keywords: venture capital, strategic portfolio, screening process, technology analysis, strategy, fintech, financial services, banking, finance

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# 1. Introduction

*This chapter introduce the reader to the master thesis, what a screening process is, where in the investment process it takes place and what the essentials of a screening process are. Furthermore, why a screening process is important and what can be especially important for incumbent firms when thinking about performing a screening process similar to venture capital firms. Moreover, financial services are discussed as well as industrial transformation. The second section explain the purpose of the thesis whereas the third section will state the delimitations. Lastly the disposition of the thesis is drawn up.*

## 1.1 Background

Several industries have undergone structural changes, which are to be seen as disruptive. New entrants have, often due to digitisation, been able to take market shares and threaten the business of incumbent firms. The incumbent firms who did not adapt to industry transitions, which was enabled by disruptive innovations, have lost revenue income sources, or even worse, been forced out of business. The financial industry has been, and is currently, facing the same threat of digital structural changes (Dapp, 2014). While there are three threats for incumbent banks, FinTechs, established tech companies and shadow banks, McKinsey estimate FinTechs to be the strongest threat (Dietz et al., 2015). There is another particular type of threat that is not mentioned yet, neo-banks. Neo banks are according to King (2014) banks that use innovative approaches of day-to-day banking and are often Internet-only. Whether this type of company should be classed as a FinTech or not is complicated. However, it would be categorised as a FinTech under the current definition of this thesis.

FinTech are a shortened term of financial technology, which covers the firms that uses technology in the financial industry such as lending, payments, investments and equity financing (Ingram et al., 2015). Since scholars has not yet defined FinTech, Ingram et al. (2015) outline the definition from Accenture and CB Insights (Skan et al., 2014, p.15) which defines FinTech as “those that offer technologies for banking and corporate finance, capital markets, financial data analytics, payments and personal financial management”. A similar definition of FinTechs will be used in this Master Thesis, the authors are of the view that banks such as SEB, Nordea, Goldman Sachs, JPMorgan etc. are not what is to be considered a FinTech. Therefore, adjustments have to be made.

According to the authors of this thesis, FinTech is defined as *a start up using technology in the Financial Industry*. Thus putting FinTech as a particular subset of start ups, with the constraint of acting within the financial industry. Start ups have formerly been defined by Blank and Dorf (2012) as organisations which are searching for a business model which is repeatable and scalable. Additionally, according to Blank and Dorf (2012), start ups are temporary organisations which are designed to find a product-market fit, in contrast to large organisations which have already accomplished this.

In our times, banking is fundamental and a necessity according to Somashekar (2009), who divide banks into central banks and commercial banks, lanotta (2010) also explain investments banks. These three different sorts of banks are fundamentally different, however some banks are combinations of commercial and investment banks. Moreover, as an example all the four established commercial banks in Sweden have an investment banking unit.

Somashekar (2009) explain that the function of central banks is to control commercial banks as well as perform other various economic activities. According to Sveriges Riksbank (2011), the Swedish central bank, their responsibility is the monetary policy with the aim of keeping inflation low and stable on two percent. Moreover, Riksbanken also have the goal of maintaining a safe and efficient payment system by acting to keep stability in the financial system as a whole.

A commercial bank is a financial institution who accept money as deposits, and creates credit by making advances out of these deposits. Thus the function is to work as a mobiliser of savings in the economy. As commercial banks can be divided into different kinds there are many different products that can be delivered to different clients (Somashekar, 2009).

Investment banks have historically been taking the role as an underwriter, which means that investment banks buy securities and then sell them to investors. However, today investment banks are far more complex and offerings include advisory services, trading and brokerage as well as asset management, but still also underwriting (lanotta, 2010).

Both activities of commercial and investment banks can within some products be threatened by FinTechs. However, the part of the financial sector which have been the most vulnerable, to FinTech innovation, are the services which are most easily standardised and non-knowledge-intensive. Among others, these include payments solutions, online banking, and finance of consumer credit and allocation of venture capital (Dapp, 2014). This is also partly confirmed by McKinsey which states that up to 10-40 percent of revenues and 40-60 percent of profits might be at risk within the following business segment; consumer finance, SME lending, retail payments and wealth management. McKinsey follow this up by declaring that the battle of customers will define the financial services industry for the next 10 years. Looking at European SME customers they are 4.5 times more likely to choose a bank that have a good digital banking platform than one which have a local presence. Moreover, the huge drop in margins can be described by the example of how FinTechs charge as little as 15 basis points for Wealth Management advisory, which can be compared with incumbent banks' 100 basis points (Dietz et al., 2015).

Even though the financial services industry globally have recovered since the financial crisis with record after-tax profits of about \$1 trillion in 2014, from customer driven banking activities. This was not the case for western Europe, where the after-tax profits were \$120 million, corresponding to a CAGR of -3.9 percent during 2005-2014. In the near future banks must take some tough strategic choices and master digital technology in order to improve performance according to McKinsey (Dietz et al., 2015).

FinTechs using new digital technology is threatening the banks positions as a middle man in the retail financial services industry. Big Data has made it possible to more easily collect information of the customers, which in turn gives the opportunity for start ups to at a low cost own the relationship with the customers in the personal finance management. Moreover, the online payments have in turn lowered the barriers to entry which has increased the competition in the industry (Ozler and Pippa, 2015).

Due to the scalability and possibility to take niched FinTechs global, it will be of importance to investigate FinTechs on a global scale. In earlier times traditional banks in different regions have not been a direct threat to each other. However, with FinTechs a small company in Silicon Valley can quickly become a threat for banks all over the globe.

Since the industry is undergoing rapid technological changes, the need of investments in these technologies are of importance in order to remain competitive, which is argued by Dickinson et al. (2001). Moreover, Babatunde and Adebisi (2012) conclude that there is a strong correlation between strategic environmental scanning and an organisation's performance. When evaluating external environmental forces strategically, organisations can seize opportunities and avoid threats which in turn correlate positive with profitability. Moreover, an organisation's market share is positively impacted by environmental scanning which is a third reason to why companies should actively engage in environmental scanning. Rosner (2006) argue that the screening process is a critical step in the execution of mergers and acquisitions, where the first part is to establish screening criteria. There is a steep increasing trend in investments in financial technology, as can be seen in figure 1 (Skan et al., 2016). In August 2015 there were more than 12 000 FinTechs (Dietz et al., 2015). This points at the urge of acting upon the necessary changes for the financial sector. In order to be able to be competitive during the industrial transformation and increase revenue and be stronger in the future.

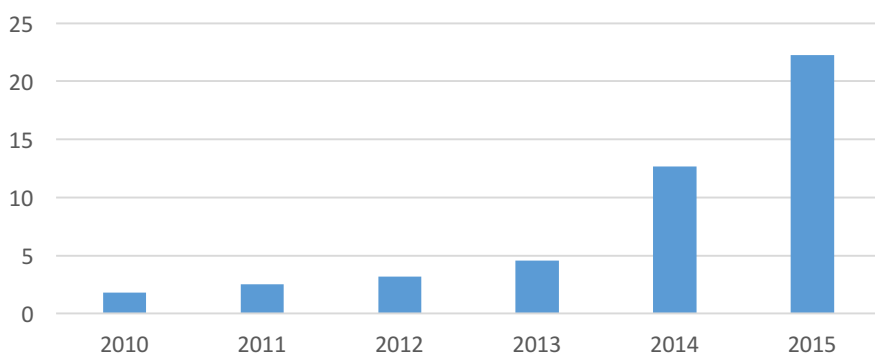


Figure 1 –Global investments in FinTech (\$Bn) (Skan et al. 2016)

Gompers and Lerner (2004) argue that venture investments by corporations can be as successful as the ones done by traditional venture capital firms. However, many firms lack a systematic screening process which ensure that the investment object has a strategic fit and generate growth (Rosner, 2006). Figure 2 illustrate where in an

investment process the screening process is. Gompers and Lerner (2004) agree and argue that in order for corporations to succeed with venture investments they need to have a strong strategic focus, which means that the portfolio company's strategy need to overlap the strategy of the parent company. Gompers and Lerner (2004) further identify three common characteristics from corporate investments which have failed;

- Lack of well-defined missions
- Lack of commission incentives for venture managers
- Insufficient corporate commitment



Figure 2 - Illustration of where in the investment process that the screening is performed (Rosner, 2006).

Gompers and Lerner (2004) describe the screening process used by venture capitalist as the process where they mitigate uncertainties regarding the evaluated start up. Macmillan et al. (1987) identified criteria which distinguish successful start ups from unsuccessful. These are among others quality of team, uniqueness of product offering and market potentials. As a consequence, it is of high interest to further study the screening process of new ventures conducted by venture capitalists. Within this area, strategic incumbent corporation have a lot to learn, and can adapt their own screening process for their venture investments. As stated, strategic investors need to remember their business and have a strong strategic focus. Furthermore, this is a subject which Maula et al. (2013) argue that little research has been conducted within.

As the background reflects, the financial services industry has a lot of challenges ahead, which mean both threats and opportunities. In order for the established banks to continue being competitive in the future digitised world they have to be open for using new technologies, operations and business models. For the four establish banks in Sweden it is a challenge to be agile and adopt to new technologies as well as become competitive in the new business areas that are very small but have large growth opportunities. As history have shown, disruptive technologies have changed the fundamental structure of industries before, which points to the crucial importance of banks' ability to adopt to innovations.

## 1.2 Purpose

According to Maula et al. (2013) further research should be conducted within the area of incumbent firms' process of capturing knowledge and information in corporate venture capital investments. This master thesis aims to give an understanding and develop a best practice of the pre-screening process that firms conduct, when making a thorough investigation of which firms to choose for further due diligence and potential acquisitions. Thus, a best practice to perform this pre-screening process is developed, for the usage

within corporate venture capital that wish to evaluate high technology start ups. This is applied on a case basis for the financial services industry with FinTechs.

Furthermore, as this Master Thesis is done in collaboration with SEB, an additional aim is to set a standard for how SEB shall understand, monitor and assess the opportunities and threats of FinTechs. This includes developing a strategy for how SEB shall leverage on technologies, operations and business models developed by FinTech firms and use this to appropriate growth and value for SEB. Moreover, research into what will impact the financial services industry is conducted to provide a foundation of the target described above.

From the purposes two main research questions and one supporting sub-research question have been developed;

- How should a pre-screening process look like for incumbent firms which seek to make strategic investments in high technology ventures?
- What are the most important parameters to evaluate before deciding whether to conduct a more thorough due diligence?
  - What resources and capabilities do banks and FinTechs have compared to each other?

### **1.3 Delimitations**

This master thesis has been delimited due to time constraints. Moreover, the interviews have been performed with professionals acting in the Nordic region, which imply a European attitude towards venture capital is used. This is even further narrowed as most interviews are held at only on corporation, with the exception of two interviews. A further issue to address is that this case is performed on an industry that is currently in the start of a boom, FinTech is in this time an increasingly hot topic, that might change the entire financial services industry. This could be compared with what people thought of IT before the IT bubble burst, people are somewhat biased by the market and gossips.

### **1.4 Disposition**

How the thesis is structured will be explained in this section. Firstly, the introduction introduces financial services, FinTechs and the growth trend of investments within FinTechs. It also sheds light on what the purpose of the thesis is and what delimitations have been made as well as how the disposition of thesis looks like.

From there the second chapter introduces relevant theory and models that are used or relevant for understanding of the thesis. How the project has been performed is developed upon in the following section of methodology. Thereafter the empirical findings are explained in the fourth chapter. The empirical findings are analysed in the fifth chapter. The conclusions that can be drawn are then brought up, together with the recommendations. Furthermore, the sources are listed afterwards and followed by the appendix containing among other the assessment model.

## **2. Theoretical Framework**

*In this chapter the relevant theoretical theories and models are outlined and expanded upon. Firstly, how the financial services and venture capital industry is structured with a general set of theory is explained, before moving to the next section that are digging deeper into industry analysis and how industries are transformed. Thereafter theory about firm analysis is covered in the third section. The fourth section include how technologies develop and how technologies can be forecasted. The last chapter cover how different investment frameworks can be used as a tool to evaluate industries and businesses.*

*The reasons for including industry, industrial transformation, firm, technology forecasting and investment frameworks are many. First of, in order to sufficiently analyse a company there is a need to understand the industry and what impact the industry has on corporations. As financial services potentially are in a phase, or transition into a phase, that can be considered to be an industrial transformation, there is a need to describe this as well. Moreover, understanding firms is of high importance when deciding upon whether to invest capital or not in a company. The need of technology forecasting is important when investing in high technology companies, and perhaps particularly important when industrial transformation is taking place. In order to develop a best practice for the pre-screening process there is also a self declared need to understand what possible ways a pre-screening process can look like and how investment frameworks are set up. Due to the potential of FinTechs to disrupt parts of the financial services industry, one must know the basics of how industries are transformed, and how technology development is taking place and are accepted in the markets by consumers. According to Peters and Panayi (2015), blockchain technology have the potential to disrupt the world of financial services.*

### **2.1 Financial services & Venture Capital**

As the model is to be used by an established bank there is a need to understand first and foremost how the financial services industry is structured, what the financial services industry actually is and how it works today. Moreover, as stated the pre-screening process is inspired by venture capital firms and therefore an overview of how these companies operate is covered.

#### **2.1.1 Financial services**

Due to FinTechs entrance there have been an increased competitiveness within financial services (Peters & Panayi, 2015). There are many companies that utilise the sharing economy, such as AirBnB, Uber and TrustBuddy, which essentially mean that unused assets are leveraged and value can be captured by asset owners as well as their clients. Moreover, many FinTechs operate through a sharing economy business model (Peters & Panayi, 2015).

There are many different domains that are included in a bank's services, customers can be both retail customers, high net worth individuals, small and medium sized enterprises, large corporations and financial institutions. Traditional banking activities

can be broadly divided into accepting deposits and loans. However, there are many different financial services on top of this (American Bankers Association, 2014).

In the wealth management division banks can advise or completely take control over clients money, thus instead of simply having the money deposited in a savings account with low interest the money are invested in different sort of investments depending on the clients profile. This service is open for a broad range of customers, however the service degree is different, with more money you get a more personalized service (American Bankers Association, 2014). This service is facing many new difficulties and threats, first of the demographics is changing where young investors are hard to sell to. Secondly, many are more willing to take advice online and are considering whether to engage in roboadvising. Bank of America and Morgan Stanley have started to remove the commission based revenue model with a fee based revenue model for some clients, in order to keep income from the wealth management division high (Rexrode & Rudegear, 2016).

Moreover, by making deposits at a bank, customers can store their money and make payments through different services provided by the banks (American Bankers Association, 2014). Payments is considered a backbone of the banking industry, and corresponds to a large piece of the revenue for many banks, usually 30-50 % (Hasan et al., 2011). Moreover, payment services are strongly linked to many other sorts of services, and an effective payment system is important for client satisfaction. Payments include a great variety of services, ATMs, credit transfers, direct debits, credit cards, card payments, cheques and so fourth (Hasan et al., 2011). Banks which provide foreign exchange payment services to their customers take on the risk of exchange rate fluctuations (BNY Mellon, 2015). In return, the customers are charged with a fee for avoiding to take on this risk themselves. However, due to new innovative technology non-banking actors can provide this service at a much lower fee because the technology enables the transaction to be performed much faster which decreases the risk of exchange rate fluctuations.

Banks can lend out these deposits to other customers which seek credit. For example, banks provide mortgages and credit cards to consumers, and administration loans to SMEs. Through these different kind of loans banks earn profits by charging the customers an interest rate (American Bankers Association, 2014). Crowdfunding, which essentially is financing from individuals in the crowd that are interested, or the public, is actually an old idea (Scholz, 2015). Both Mozart and Beethoven used public subscriptions to finance their composition of new music and concerts. The plinth on which the statue of liberty stands on was financed through public contributions and Indian mosques was able to be built as locals donated bricks.

Banks' market shares within the deposit and lending business has declined due to that new technologies have lowered the entry barriers which has enable new nonbank actors to enter (DeYoung & Roland, 1999). Of that reason, the traditional banks have switch their sales strategy into providing more non-traditional financial services such as insurance, mutual fund sales, data processing services, and mortgage services. DeYoung and Roland (1999) explain that there has been a shift from making profits from

interest rates to charging fees for these other financial services, which in turn are a more stable income source since it reduces risk for banks due to a diversified service portfolio.

Prior research by Kushwaha and Shankar (2013) conclude that multichannel customers are not always more profitable. When looking at low-risk products, such as food, single-channel customers have a higher monetary value, but for products giving some sort of utility, such as office supplies, multi-channel customers are more profitable. When increasing the number of sales channels for goods profits increase as customers spend more by buying more frequently. However, the cost of servicing the customers increase which means that the profitability decrease. The study of Kushwaha and Shankar (2013) was performed on goods. After this Cambra-Fierro et al. (2015) have performed a study on a specific area of services, bank-services. What banks provide to consumers are different sorts of services, even though they are often named products they are nevertheless different services. Some customer channels will be low-margin, while others are high-margin (Cambra-Fierro et al., 2015). According to Cambra-Fierro et al. (2015) the customers who use multiple channels to reach their bank are not always the most profitable ones. However, as online channels have limitations in regard to building close relationships with customers, as well as lacking the ability to cross-selling higher-margin products and services, it may not have any positive effects on performance (Cambra-Fierro et al., 2015). Furthermore, online channels also enable customers to easily switch to other service providers which influence the performance of the banks negatively, as the churn rate is higher.

This is debated by Calisir and Gummusoy (2009) who takes another approach, claiming that internet banking contains a full range of financial services as less staff and fewer physical branches are required. Thus the internet bank is more cost effective than other customer channels. Moreover, according to Calisir and Gummusoy (2008) internet banking is a substitute for two other customer channels, ATM and phone banking. Internet banking offer easy access to customers and are convenient to use while at the same time offering customers an unrestricted feeling. The conclusion by Calisir and Gummusoy (2008) is that consumers might use internet banking to replace ATM and phone banking. Together with brick and mortar banking, internet banking receives high success rates and are complementing each other (Calisir & Gummusoy, 2008).

Looking at technology, blockchain is here shortly introduced, following an explanation of where it can be applicable together with how this affects financial services. Blockchain was first presented when Nakamoto, in 2008, introduced Bitcoin. Nakamoto did not only introduce Bitcoin but also a communication protocol, together with the blockchain structure. A blockchain is essentially a database, that keep records of transactions within a network in chronological order. In order for a transaction to be admitted as a part of the blockchain all other nodes in the network have to confirm the validity of the transaction. Important to know is also that blockchain is often referred to as a ledger, and that there are many different types of blockchains that exist and fulfil different purposes (Peters & Panay, 2015).

The areas where blockchain have the potential to disrupt the financial service systems are not only directly linked to crypto-currencies, where it was first implemented. The



disruption of financial services will rather take place through global remittance, smart contract, automated banking ledgers and digital assets. The importance of blockchain has already been noted within domain registration, crowdfunding, prediction markets and gambling. Through the refinements of the blockchain technology, the second blockchain generation will also enable computations where actions can be dependent on, both internal and external conditions (Peters & Panay, 2015).

The major cost for banks related to regulation of the financial industry is considered to be cost of labour when initiating and executing compliance projects (Elliehausen, 1998). Larger banks have cost advantages compared to smaller banks, and according to Elliehausen (1998) this creates barriers to entry which inhibits the competition from new entrants. Furthermore, it may also decrease the competition among financial institutions as well as encourage consolidation within the industry.

### **2.1.2 Venture Capital**

To invest in companies' equity started already in the Roman empire. Structured organisation investing in firms in order to improve and develop firms came around later, in Great Britain during the fifteenth century, as a way to expand the trade with colonies. The modern private equity and venture capital structure have been around since about 1940 (Caselli, 2010).

Firms can be divided into six stages; development, start up, early growth, rapid growth, mature age and crisis or decline. Firms that are in their development or start up stage have negative profitability and cash flows. Moreover, sales growth are not available in the development stage, while in the start up stage it is just initiated. When moving into the early growth stages the profitability and cash flows are continuously negative, but nevertheless decreasing (Caselli, 2010).

Venture capital firms can be broadly divided into three different categories; private, governmental and corporate. The first two types are referred to as traditional venture capital while the later is not. Private venture capitalists constitute of private persons or firms which allocate capital from external investors. Most often, the external capital comes from institutional investors such as insurance companies, pension funds and large corporations. Governmental venture capital aim to serve public interests. These either do direct investments or indirect investments through other venture capital firms. Corporate venture capital is part of a corporation which do not have venture capital as their core business. These can take different shapes such as subsidies, banks and investment firms. Drivers for corporations to implement venture capital activities can be to allocate capital or control innovations which may be strategically important. The main difference between corporate and traditional venture capital is that corporate put more emphasis on the strategic objectives in an investment (Isaksson, 2000).

Caselli (2010) state that venture capitalists are in the American view dedicated to finance new venture, thus fund firms in their initial phase or expand and develop firm activity. Private equity on the other hand, are funding firms in the end of their first, or fast, growth process. From the European perspective venture capitalists fund start ups or early stage companies while private equity firms are involved in older firms. From this,

one can conclude that the difference is that European venture capital do not account expansion as a venture capital activity (Caselli, 2010). Moreover, according to Hege et al. (2009) there are of importance to note that American venture capitalists are more active and sophisticated in their relationship with the ventures compared to European venture capitalists, and as a result they have a higher level of value creation.

The start ups which venture capitalists invest in and include in their funds are classified as high-risk high-reward projects according to Gompers and Lerner (2004). Venture capitalists undertake many roles such as maintaining relationships with the investors, i.e. pension funds, university endowments and wealthy people, and providing the funds with capital. The funds are periodic, i.e. they raise capital every two to five years and have a life span of typically ten years, then the capital of the investors are returned and a new fund is raised. Venture capitalist can either partially or fully exit their venture-backed companies (Cumming & MacIntosh, 2003). The exits can take several forms such as initial public offerings, trade sales, buyouts, buybacks or write downs. (Cumming & MacIntosh, 2003; Gompers & Lerner, 2004; Gompers et al., 2015). However, historically 25 to 35 percent of the start ups financed by venture capitalists are taken public and represent a majority of the funds' returns (Gompers & Lerner, 2004).

## **2.2 Industry Analysis**

In order to make an assessment of a start up, one must understand how firms work in general. However what industry a firm operates in of just as high importance. This section is necessary in order for a proper assessment model to be constructed that not only look at the firm, but also at the general market.

### **2.2.1 Scanning Industry Environment**

The purpose of an industry analysis is to determine the profitability of an industry and identifying which are the drivers of that profitability (Nilsson et al., 2002). In order to achieve a viable screening process there has to be an underlying understanding of how industries can differ and what impact industries.

According to Babatunde and Adebisi (2012), scanning the environment can be performed in three different manners; ad-hoc scanning, regular scanning, and continuous scanning. The first is often initiated by a crisis affecting businesses and is characterised by short term and infrequent evaluations in order to identify the problems. The lack of a systematic method is confirmed by Rosner (2006). Nevertheless, Rosner (2006) describe the ad-hoc approach differently. Ad hoc is described to be when potential deals are initiated informally, i.e. received by a phone call or a personal conversation. As a result, ad-hoc screening processes usually provide the firms with suboptimal outcomes due to the mismatched strategic fit, and can also simply result in a waste of resources. The second scanning, regular, are done e.g. every year, in order to identify changes in the environment (Babatunde & Adebisi, 2012). Finally, continuous scanning consists of continuous collection and analysis of data from the environment. Moreover, the purpose of scanning the environment is to provide insights of factors affecting businesses in order to shape tactics and strategies.

## 2.2.2 Industry Dynamics

Markets and technologies are criteria to be used when defining industry boundaries (McGee & Thomas, 1986). Markets define the products and services within an industry which are relatively similar to each other while technologies regard the similar processes used by the firms. However, when industries are complex, it might be advantageous to view the industry environment as sets of strategic groups (Anand et al., 2013). McGee and Thomas (1986) describe the concept of strategic groups as firms with similar strategic behaviours. As an example, if you would group the airline industry into strategic groups it could be divided into the following three strategic groups; dominants, high-end and niches (Smith et al., 1997).

The common characteristics which can define the strategic groups are their mobility barriers and isolating mechanisms (McGee & Thomas, 1986). Members of a strategic group which invest in marketing and promotion create strong brand awareness, which can be seen as an example of a mobility barriers that hinder others to enter (Anand et al., 2013). Moreover, mobility barriers can be categorised into (McGee & Thomas, 1986); market-related strategies, industry supply characteristics or characteristics of firms. Product line, user technologies, market segmentation, distribution channels are included in market-related strategies. Supply characteristics include economies of scale, R&D capabilities, marketing and distribution systems, while characteristics of the firm include ownership, structures, management skills, size of the firm and relationships with influence groups (McGee and Thomas, 1986). Moreover, the isolating mechanisms are the unique characteristics of firms in which they protect their strategic decisions.

Dess and Davis (1984) identified that industry profitability and growth correlates with a membership of a strategic group. Furthermore, Amezcua and Ratinho (2012) argue that start up firms which are members of strategic groups outperform others in terms of lower liquidation and higher annual growth rates. These strategic groups are defined as ventures with similar strategies, competing in the same industry that are present in the same geographical location. However, the intensity of rivalry is argued to be higher within groups as a consequence of the firms' similar strategies (McGee & Thomas, 1986). Moreover, changes in strategic group structures is argued to intensify the rivalry within an industry. This in turn influence the industry profitability negatively and it is highlighted, as these changes occurs, rivalry shifts from within to between strategic groups (Cool & Dierickx, 1993).

Williamson (1981) argue that from a transaction cost perspective, the boundaries of a firm can be defined as a firm's decision whether to buy-or-make will divide the firm into a specific part of the value chain. Transaction costs refers to the different market related costs such as the costs of obtaining a service or good, the costs of searching for information, and costs of bargaining (Coase, 1937). Firms may use these costs in relation to in-house costs, in order to decide whether to produce a service or good themselves or purchasing these from others. Williamson (1981) describe that a transaction occurs when a good or service is transferred from one technological interface to another. Furthermore, there are three dimensions which determine transactions; uncertainty, frequency and asset specificity. The latter explain in what

extent investments, related to a specific transaction, have to be made in order to achieve low supply costs (Williamson, 1981).

As the world is becoming more global and transaction costs are diminishing, location should matter less. However, certain geographic regions are more likely to have a certain field as a speciality. Think of Silicon Valley or Hollywood, both of these are clusters. A cluster is a geographic concentration of interconnected companies and institutions within a particular field, where the geographical area has reached a critical mass (Porter, 1998). Competition and cooperation are two crucial components of a cluster. Both are needed as competition will breed companies with high ambitions whom compete vigorously in order to retain customers. Due to cooperation between different players on varied dimensions companies receive the benefits of greater scale but still have individual flexibility. According to Jerome (2007), academia, government and industry can be defined as three separate helices, and moreover when these entities are collaborating together this can lead to triple helix innovation. While academia and industry often are collaborating there has to be an increase of social benefits for the government to be willing to bear any costs.

Klepper (1996) describe how industries and their technologies evolve from being completely new to becoming more mature, calling it the product life cycle. An important note in this section is to explain that this is a generalisation that is not always true and when the different phases occur is more flexible than what the theory suggests. When a new industry is created there are many entrants, where each and every firm provide their idea of the product. The market structure changes rapidly and market shares can quickly be won or lost. As the market develops the number of entrants decrease and there is a shakeout of existing providers that exit.

When the innovation of the products become more incremental and a dominant design is created, that is supposed to be some sort of optimal version of the product. In order to expand on the fuzzy concept of dominant design, it can be explained as that there are some fundamentals for how a product is designed that is preferred by the larger part of consumers. However, in some industry settings this is not always true as there are examples from where dominant design is argued to exist or not (Porter, 1983).

The research and development focus move from being focused on the product, to increasingly have a higher focus on production. This is a natural move as the incremental improvements of product innovation more often give lower profit gain than production innovation can give with large scale. As some providers do not have the possibility to provide the dominant design to a competitive price there is a further shakeout of producers (Klepper, 1996).

Open innovation can be defined as the combination of internal and external knowledge to support internal innovation (Chesbrough, 2006). Further, external capabilities can also help to expand the use of the innovation in external markets. Reed et al. (2012) argue that there are advantages of open innovation for firms in industries where experience-curve effects and employee knowhow are sources of competitive advantages. Also, in industries where competitive advantages are created through differentiation, distribution-

channel control, switching costs and reputation, there are benefits from using open innovation. However, Reed et al. (2012) explain that open innovation is negative for firms in industries where value capture is made possible due to barriers to entry, capitalisation of spill overs and propriety product design. Open innovation in these cases result in that the sources of monopoly rents for incumbent firms are threatened.

According to Baldwin et al. (2013) firms can by distributing activities across heterogeneous firms increase the total value of a system. However, for this to be beneficial for a firm, there has to be an understanding of how the firm captures value. Moreover, in order to enhance value in a decentralised system the different parts have to be interdependent, or modular. In order for the different parts to be modular there are a lot of requirements for the architecture, standards and agreements that have to be created if it not already exists (Pisano & Teece, 2007). This ease the combination of the different products, and technical standards can allow for “plug and play”. This makes it hard for a single company to introduce a truly innovative product architecture, each firm instead focus on the subsystems and different parts. Baldwin et al. (2013) define IP-modularity as a system architecture where the technical boundaries coincide with the IP boundaries.

### **2.2.3 Industry Frameworks Relations**

Grundy (2006) acknowledge that Porter’s five forces have had an immense impact in business schools, but practically are not used to it’s full potential. Moreover, as never put in context Porter’s five forces can be hard to relate to. In order to practically use Porter’s five forces, it has to be put into context and also further expanded upon. Grundy (2006) suggest how to perform this and gain an increased holistic perspective. Combining PEST, growth drivers and Porter’s five forces together with the idea of competitive position in an onion-based perspective, one can gain an understanding of how different factors impact each other on multiple levels.

While PEST is a tool for analysing environmental macro factors that affects industries or more specific business areas (Babatunde & Adebisi, 2012; Nilsson et al., 2002; Roos et al., 2004), the competitive position is clarified through SWOT analysis or using the resources based view (Wernerfelt, 1984). In order to connect these two levels, Porter’s five forces work as a linkage, however it is not complete according to Grundy (2006). Grundy’s growth drivers as developed in Grundy (2004) intend to decrease the gap by giving a stronger linkage through dividing forces in its components. Growth enablers and constrainers are the external factors which influence the volumes sold or prices in a positive respectively negative way (Grundy and Brown, 2002). Each and every component is given a score depending on if its an enabling or constraining force. In this way it becomes more clear cut, with a net worth that is quantified. One can then see whether e.g. the substitutes, or lack there of, is good or bad for industry profitability.

### **2.2.4 PEST**

The PEST framework includes an analysis of different factors which are influencing an industry (Roos et al., 2004; Nilsson et al., 2002). Babatunde and Adebisi (2012) explain the use of PEST as a tool which organisations can use in order to determine the present condition and situation of its environment, but also decide whether to enter a new market

or not. Moreover, this framework is important to use when analysing firms which are present in different countries where as the threats and opportunities differ between these regions (Nilsson et al., 2002). The following factors are analysed;

- Political
- Economical
- Social
- Technological

Political factors in a region affect the possible risks of running a business (Nilsson et al., 2002). These include, among others, the level of regulations, taxes, the influence of authorities in an industry (Roos et al., 2004). Furthermore, Nilsson et al. (2002) also suggest to analyse the economic policy and the stability of the political environment when analysing the political factors.

Economical factors are argued to have the greatest influence on a company's business in a region (Nilsson et al., 2002). These include trends in GDP, inflation and interest rates (Roos et al., 2004; Nilsson et al., 2002). The economical influences should be analysed both in short and long-term aspects, as they affect the return on investment but also the purchasing power of buyers (Nilsson et al., 2002).

Social factors such as consumption, demography, and education level all affect the business of companies (Roos et al., 2004). Nilsson et al. (2002) outline that it is of importance to take into consideration the attitude of the population towards foreign products and services, but also which languages barriers exists.

Technological factors in a region affect the manufacturing and sales possibilities for companies (Nilsson et al., 2002). An analysis of how the level of technology in a specific region contributes to how products and services can be created cheaper, or with a higher quality (Nilsson et al., 2002). Furthermore, public research, new technology, adoptions of new technology and technology knowledge will also influence the businesses (Roos et al., 2004; Nilsson et al., 2002).

### **2.2.5 Porter's 5 Forces**

In the 1930s, Edward Mason developed the foundation of the structure-conduct-performance (SCP) framework which explains the performance of a firm in regard to how they are influenced by the structure of the industry (Koller et al., 2010). Moreover, Koller et al. (2010) explain that Michael Porter applied the SCP framework into a company strategy context and developed the Porter's Five Forces framework. This framework evaluates the profitability of an industry through an analysis of the following (Roos et al., 2004; Nilsson et al., 2002);

- Rivalry among existing competitors
- Threats from new entrants
- Threats from substitutes
- Bargaining power of the buyers

- Bargaining power of the suppliers

The rivalry among the existing competitors constitute the average profitability in an industry (Nilsson et al., 2002). The competition can take different shapes and are affected by factors which influence the intensity of the competition within an industry. High growth potential of an industry makes it possible for actors to grow without stealing shares from each other. Low growth potentials or stagnation, however, intensifies competition through e.g. price wars. Other factors included are the level of concentration of competitors, the level of differentiated products, economies of scale and over capacity (Nilsson et al., 2002). Depending on the characteristics that of an industry, one can evaluate whether it is profitable or not.

If the profitability is high within an industry it will attract new competitors to enter the market, which would intensify competition and force profits to decline (Nilsson et al., 2002). The threats from potential new entrants can be evaluated by analysing the barriers to entry (Roos et al., 2004). Nilsson et al. (2002) argue that there are three main barriers to entry which determine the costs for new actors to enter an industry; economies of scale, early mover advantage and juridical barriers. However, Roos et al. (2002) further describe differentiation, capital requirements, switching costs, distribution channels and general costs as important factors creating barriers to entry. If the profitability is high and the barriers to entry are low, new competitors will likely enter the industry and force profit margins down (Nilsson et al., 2002).

Together with rivalry and threats from new entrants, threats from substitutes is also regarded as one of the drivers of profitability in an industry (Nilsson et al., 2002). Substitute products, in closely related industries offer similar services as the firm and thereby compete with the profits in the industry (Roos et al., 2004; Nilsson et al., 2002). If the prices of substitute products are more attractive than the products in the analysed industry, they can constitute a threat of and are therefore are of importance to evaluate.

Whether a company can sustain their profits or not depends on the bargaining power between the competitors, the buyers and the suppliers (Nilsson et al., 2002). The extent to which buyers have power in the industry are characterised of two factors; price sensitivity and bargaining power. The level of power from buyers depends on if the customers are concentrated, if products are standardised, the level of switching costs and the level asymmetric information (Roos et al., 2004). The level of bargaining power of the suppliers is similar to the power of buyers (Nilsson et al., 2002). They can be determined through, among others, the number of suppliers and their concentration, if they have any threats of substitutes or if their products are differentiated (Roos et al., 2004). If an industry is characterised by high levels of bargaining power of buyers and suppliers, profit margins are probably squeezed and competition though (Nilsson et al., 2002).

## **2.2.6 Industrial Transformation**

There are a lot of industries that have transformed, among others digitisation have been one important reason. The concept of creative destruction was first introduced by Schumpeter (1934), and explains how new entrants innovate new superior technology

which transform industries and displace incumbent firms. However, incumbent firms may survive, which Tripsas (1997) explain in his study of the transformations and technological changes in the typesetter industry.

Tripsas (1997) argues that the interaction between investments, technical capability and complementary assets influence the commercial performance of the actors in the shift of technology. Investments constitute the ability of incumbents to invest in developing new technology. The technical capability is measured in terms of the level of competence destroying that the new technology requires, i.e. what previous knowledge is irrelevant and what new knowledge has to be created (Tripsas, 1997). Complementary assets describe the other assets which are possessed by the firms (Tripsas, 1997), e.g. specialised capabilities in manufacturing, distribution channels and service networks (Teece, 1986).

Even if the technology of the incumbents is inferior to the technology of the new entrants, they can survive the transformation due to their ability to appropriate from specialised complementary assets (Tripsas, 1997). However, if the value of the complementary assets is devalued in the shift of technology, the commercial performance of the established firms will decrease. In the case when the incumbents invest in new technology which is competence destroying, the technical performance does not matter, since the necessary complementary assets is the vital factor (Tripsas, 1997). Furthermore, Tripsas (1997) stress the importance of interaction between these three factors in order to analysis the commercial performance of new entrants and incumbents in times of industrial transformation initiated by creative destruction.

In comparison to what Tripsas have concluded above, Glasmeier (1991) focused on how a network structure affected the Swiss watch industry. Glasmeier determine that networks promote innovation within existing technological framework, however in times of technological changes the disorganisation and disintegration becomes a problem, at least looking from a historical point of view. While earlier research of the Swiss watch industry has focused on a model of oligopolistic competition, Glasmeier (1991) take the standpoint of that; technological change challenge the current ways of organizing production, industry, culture and society. In times of technological changes, a network of smaller firms often lack the collective will to make the essential investments that is needed to keep up with the industrial change (Glasmeier, 1991).

## **2.3 Firm Analysis**

In order to make an assessment of a start up, one must understand how firms work in general and what different kind of views one can take when researching a firm. This section is necessary in order for a proper assessment model to be conducted that not only look at the market and industry, but also at the specific firm and its capabilities.

### **2.3.1 Competitor Analysis**

Roos et al. (2004) explains that when conducting a competitor analysis, the focus should be on identifying competitors' strategies, goals, capabilities and their ability to execute. The outcome of a competitor analysis show whether the company investigated is



constituting a threat or not. However, in order for companies to capture the profits in an industry they must position themselves and undertake a strategy which gives them a competitive advantage (Nilsson et al., 2002). This can be analysed through looking into if a company has either cost leadership, differentiation or a focused strategy according to Porter (1980) and Nilsson et al. (2002). Grant (2015) on the other hand takes a different approach, both are explained below starting with introducing Porter (1980) and Nilsson et al. (2002).

Cost leadership aims to create a cost structure which outperform the competitors' which in turn creates a competitive advantage (Nilsson et al., 2002). By focusing on constant cost reductions in all operations and successfully execute them, firms may offer the same products and services as their competitors at a lower price and at the same time increase their margins. Cost leadership demands a high market share and other advantages, such as easy access to raw material, in order for the strategy to create competitive advantages (Nilsson et al., 2002).

Differentiation strategy creates a competitive advantage through offering a unique product or service that is demanded by the customers, but not provided by competitors (Nilsson et al., 2002). In order to successfully execute this strategy, a company must identify a dimension of a service or product that customers demand and are willing to pay for. Further, they need to position themselves in a unique way that meet the demands of the customers. Lastly, they must reach differentiation through having lower costs than their competitors and at the same time adjust the price so that customers will pay for it. Nilsson et al. (2002) explain that this strategy is capital intensive and requires marketing in a larger extent compared to a cost leadership strategy. The reward of a successful differentiation strategy is that it generates profits which are above the average in the industry, as customers can become less price sensitive due to attachment to the brand (Nilsson et al., 2002).

The last strategy, focused strategy, aims to strengthen competitiveness through focusing on a specific customer, product or service segment, or a geographical market (Nilsson et al., 2002). By not focusing on the entire industry, a firm will niche itself toward a target customer group or aim to achieve cost advantages in a specific product category. Small firms use this strategy most commonly as their resources are limited (Nilsson et al., 2002). When industries are characterised by intense rivalry and over capacity, this strategy is widely adopted as it creates opportunities to capture some of the profits.

The difference of the idea presented above and Grant (2015) view is simply what is included in the differentiation strategy. According to Grant (2015) there are two possible strategies one is cost advantage, which is identical with the description of Nilsson et al. (2002) and Porter (1980). The second one is differentiation and this is where Grant (2015) indicate that the focused strategy can be considered to be a part of a differentiation strategy.

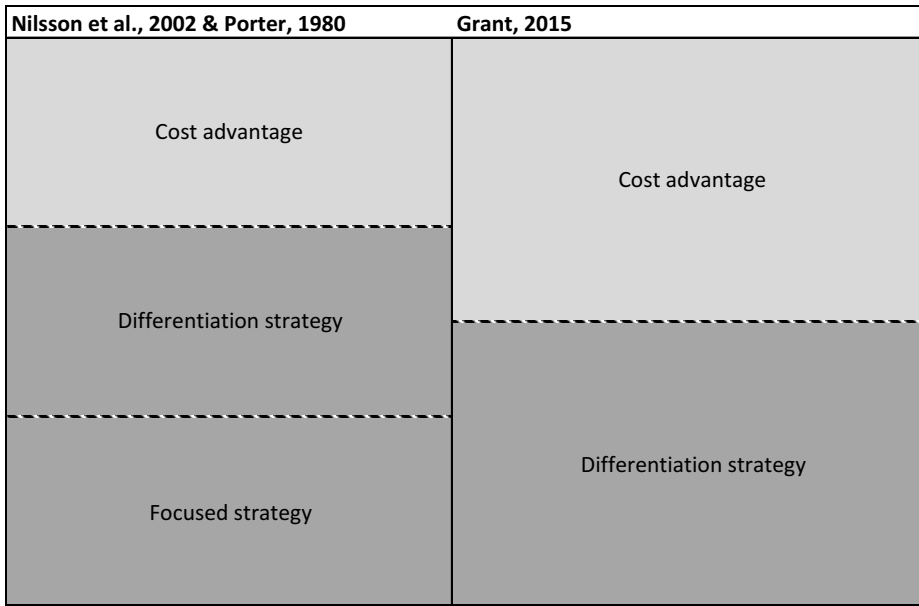


Figure 3 - Illustration of the different views of strategic positioning

### 2.3.2 Resource-Based View

A firm can be defined as a portfolio of resources (Jarvenpaa & Leidner, 1998). By analysing firms from a resource-based view it can provide insights of their competitive position (Wernerfelt, 1984). Resources and capabilities are regarded to be the main source of competitive advantage which in turn enables profits (Grant, 1991). Moreover, resources are either tangible, e.g. machinery and capital, or intangible, e.g. brand and employee know-how (Wernerfelt, 1984). However, in order for these resources to create a sustained competitive advantages they need to be valuable, rare, in-imitable and non-substitutable (Barney, 1991).

Resources that are valuable enable firms to increase their efficiency and effectiveness by develop and implement relevant strategies (Barney, 1991). However, if many firms possess the same valuable resources they will not provide any competitive advantages. On the other hand, if a firm possess a resource that is rare, in terms that it is unique compared to its competitors', it might generate a competitive advantage (Barney, 1991). Resources which are valuable and rare can thereby enable firms to create first-mover advantages and in turn provide advantages toward competitors.

In order for valuable and rare resources to create a sustainable competitive advantage they need to be hard for others to imitate, i.e. in-imitable (Barney, 1991). If resources are hard to obtain by others due to historical reasons, ambiguity with the link to sustained advantage or socially complex, they are to be considered as in-imitable (Dierickx & Cool, 1989). Moreover, a firm's valuable resource can not be rare and in-imitable alone, the other resources also need to be that in order for them to be non-substitutable (Barney, 1989). If a firm possess resources that fulfil these four requirements, they can create competitive advantages which are sustainable (Barney, 1991), and which generates profits (Grant, 1991).

The extent to which firms can establish competitive advantages originate from their resources that are determined through, not only the structures of the external environment, but more important how a company utilise and use them (Dierickx & Cool, 1989). That is, the firms' capabilities, which are defined as the set of resources which have the capacity to perform a certain task (Grant, 1991). Thus, capabilities have a primary impact on whether a firm can create competitive advantages or not.

In the case of start ups, in order for them to survive and steal market shares from established firms they need to create a unique constellation of resources (Liao et al., 2008). Financial capital is argued to be a critical resource for new ventures, enabling them to focus on strengthen their business instead of generating profits which in turn lower the probability liquidation (Liao et al., 2008). According to Davila et al. (2003), venture capital correlates with the growth of start up firms. When start ups receive financial resources from venture capitalists, it results in an increase in their growth pace. However, Wu (2007) argue that financial resources together with human capital do not alone constitute the success of a start up. In order to outperform competitors, they need to possess dynamic capabilities, i.e. their ability to rapidly addressing changes in the business environment through integrating, building and reconfiguring internal and external resources (Wu, 2007).

### **2.3.3 SWOT Analysis**

According to Barney (1995), the SWOT framework cover both internal and external analyses as they evaluate the sources of competitive advantages of firms. Moreover, the framework aims to provide strategic insight by analysing a firm's strengths, weaknesses, opportunities and threats (Valentin, 2001). While the internal factors are inquiring the strengths and weaknesses, the opportunities and threats regards external factors. Barney (1991) explain that valuable resources enable firms to seize opportunities or mitigate threats and in turn improve their performance. As the resources possessed by a firm determine their strengths and weaknesses, these internal factors need to be identified when conducting a SWOT analysis.

Nilsson et al. (2002) explain when conducting a SWOT analysis one should make a list of all relevant sub-factors within each of the four factors. Babatunde & Adebisi (2012) state that SWOT analysis is instrumental in strategy formulation. However, the framework is criticised for being subjective, i.e. it does not take into consideration the level of impact from the different sub-factors. Furthermore, Valentin (2001) argue that the SWOT framework is not based on any credible theoretical background which will result in misleading insights.

### **2.3.4 Business Models**

Teece (2010) argues that the understanding of business models is vital for managers and entrepreneurs. A business model can be defined as the description of how a firm are going to create, deliver and capture value (Osterwalder & Pigneur, 2011). However, Teece (2010) stress the importance of business strategy as it represent a substantial part when designing a business model that is competitively sustainable. In order for a business model to constitute a source of competitive advantage, it must be iterated until it meet the needs of the customers. Furthermore, a competitive business model is non-

imitable to competitors, i.e. it should either be hard to replicate or unusable to others as it would not benefit their relationships to their customers, suppliers or key partners (Teece, 2010).

As a business model can constitute competitive advantages, it must also fulfil certain criteria. These include a compelling value proposition, a contribution to cost and risk advantages, and finally, enable an extensive value capture (Teece, 2010). However, Osterwalder and Pigneur (2011) suggest that a business model should consist of nine blocks which cover four business areas; customers, offer, infrastructure, and finances. The business models nine blocks can be divided into a revenue and cost side. The former includes customer segment, value propositions, channels, customer relationships and revenue streams, while the latter includes key resources, key activities, key partnerships and cost structure (Osterwalder & Pigneur, 2011).

Creating new successful business models does not always mean it has to include new technology (Teece, 2010). More importantly, the people developing these must possess a deep understanding of customers' needs, the usage possibilities of technology and the logic of organisation. When evaluating a new business model, Teece (2010) suggest that managers should look into if the products or services creates customer utility, if complements are required and whether the offering is superior to other similar offerings. Furthermore, Teece (2010) argue that other considerations when evaluating are to identify where the industry is in its lifecycle and if a dominant design has emerged. Overall, a successful business model is adjusted to a defined market segment and are protected in some way so it is non-imitable to competitors (Teece, 2010).

Chesbrough (2007) state that successful business models do not last forever. Hence, it is necessary for firms to innovate them since creating all new business models is time consuming. This can be done through experiments, such as testing new revenue sources, in order to find out whether they have potential or not. Further, Amit and Zott (2001) identify that there can be barriers of such experiments which may be conflicting the current structures of a firm's assets. These barriers include novelty, efficiency, lock-in and complementarities, and are the key aspects of business model innovation as they constitute the sources of value creation.

Experiments need to be done with caution as it cannot interfere with the firm's mainstream business (Chesbrough, 2007). In order to prevent this issue Chesbrough (2007) argue that firms should have separate financial resources for business model innovation initiatives so that they are not perceived as taking resources from existing business. When an innovation of a business model proves to have potential it will most likely compete with the firm's existing one. Therefore, the firm need to evaluate and determine which model creates most value for the customers in order to decide whether to implement the innovation or not (Chesbrough, 2007).

One important factor of business models is the ability to find increasing returns. Holmen (2005), refers to this as a self-reinforcing force that gives an additional push towards a higher marginal output. Moreover, a few origins of increasing returns are identified as

network effects, economies of scope, economies of scale, technological interrelatedness/complementary, informational returns and learning by using.

### **2.3.5 Customer Relationship**

Firms should focus their attention towards new customers since customers with previous cumulative satisfactions of the firm are less vulnerable to new and negative information (Bolton, 1998). Even though firms have a good service track record, if new customers are not satisfied with the services provided, their relationship with the firm are likely to be short. Bolton (1998) argue that the lifetime revenue from a customer depends on the duration of the customer relationship and the monetary value per purchase, which in turn impact the finances of the firm. According to Morgan and Hunt (1994), the duration of the relationship is influenced by satisfactory interaction with the customer which in turn leads to a higher frequency of purchases. Furthermore, Bolton (1998) suggest that firms should have a proactive approach towards their customers through understanding their satisfaction level as it correlates with customer retention. Bolton further concludes that this insight is of importance since an increase in retention rate have significant impact on a firm's profits as it is more expensive to acquire new customers than it is to retain existing ones.

According to Verhoef (2003), loyalty programs can lengthen the customer relationship and provide a firm with economic benefits. Moreover, Bolton et al. (2000) investigated loyalty programs for credit card customers and found that it affected customer retention in a positive manner. Bolton et al. (2000) also found that the value propositions was enhanced by the customers due to the loyalty programs.

Peppard (2000) stress the importance of customer interaction through any channel and simultaneously deliver personalised service with high quality. This is argued to be challenging for traditional financial institutions since they lack the culture of organising around their customers. Peppard (2000) explain that scalable technology, such as platforms, is an enabler for creating customer value and that information becomes essential for successful customer relationship management (CRM). According to Peppard (2000), customer relationship includes gathering data that are to be transformed into customer insights, which will support the core of CRM, i.e. maximise the customer lifetime. In order to implement successful CRM and avoid costly investments, financial institutions must understand the customers' needs as it brings value into their businesses.

## **2.4 Technology Evaluation and Forecasting**

In order to understand FinTechs it is not enough with understanding what kind of business the firm is operating, but also how the firm operates and when it comes to FinTechs, technology is most likely involved. Therefore, it is useful to have some understanding of how technology can be evaluated and forecasted.

### **2.4.1 Diffusion of Innovation**

The adoption of innovations can be described as how an innovation is communicated to the society over a period of time (Rogers, 2003). Furthermore, Rogers (2003) categorise

the innovation-decision process in five stages; knowledge, persuasion, decision, implementation and confirmation. The underlying activity in this process is for the adopter to diminish the uncertainty of the advantages and disadvantages of the innovation. These stages describe how individuals go from awareness of the innovation to confirmation of his or her decision of adopting the innovation. However, the individual may reject the innovation in the decision stage depending on the influences from others in the persuasion stage (Rogers, 2003).

Due to the uncertainty of advantages and disadvantages of an innovation, Rogers (2003) propose a list of characteristics of an innovation which may help to decrease the uncertainty and the time of the adoption process; relative advantage, compatibility, complexity, trialability and observability. Relative advantage regards whether an innovation is perceived as better than other offerings (Rogers, 2003), e.g. increased capacity compared to current technology. Compatibility concerns to what extent an innovation fits in current situation of the adopter and complexity describes the difficulties in terms of understanding and usage. Trialability regards how easy an innovation can be tried and experimented with. Finally, observability describes the degree of how well an innovation is visible to others. Innovations which fulfil these characteristics, increase the possibility of successful adoption compared to other innovations (Rogers, 2003).

Kuhn (2012) mainly criticise scientists in his article the Structure of Scientific Revolutions, however the theory of scientific paradigm is critical for the research study. According to Kuhn (2012) research is about explaining the world through different academic concepts, what it is not about is to actually discover the truth. Moreover, scientists go to great lengths in order to defend the assumptions of that they do know what the world is like, and that their theories are correct, even when it obviously is not. Scientific paradigms are cyclical, what is considered right in one point of time can be declared incorrect when something fundamental change everything. The foundation of science has to be changed as it is acknowledged that the former theories were in fact incorrect. There is then a rise of new science, that can explain what the former could not. This do not happen too often as students learn from the older researchers who constrain students to the conceptual box of what is facts and fundamentals. Kuhn explain how normal research is cumulative, in contrast to the scientific of revolution where new paradigms are destructive.

Well managed companies tend to focus on current customers and markets when identifying technological trends, customers' needs, assess profitability etc. (Bower and Christensen, 1995). However, even though these firms have been successful in these aspects, they have missed out on important new technologies rising in emerging markets. Bower and Christensen (1995) outline in their paper how established firms in the minicomputer industry ignored the new desktop technologies emerging. The new technology was initially adopted by a different set of customers outside their mainstream customer base, and as a consequence many of these firms failed. Even though new technologies themselves are not disruptive, they share two common important characteristics. First, the new technologies are packaged with a different set of performance attributes, not valuable to existing customers. Second, the performance

characterises that mainstream customers value improves in such a quick rate that enables the new technology to later take market shares in the established markets.

Holmström and Stadler (2001), explain two different theories than explain why information technology often have to change in the implementation phase. They apply it to the case of adaption of cashcards in Sweden. The theories, technology-drift and actor-network theory, come from the dynamics of large socio-technical system. When socio-technical systems stabilise it has to drift from a single-purpose network to a multi-purpose network, otherwise it won't work, this as the interests of all social actors have to be catered. According to Holmström and Stadler (2001), when introducing cashcards in Sweden, banks did initially not listen on the users, merchants and consumers. There were a lot of disappointments regarding how banks handled the feedback from merchants who required more flexible and adjusted technology, thus a technology drift. As the feedback and their perspectives were ignored, there were low interest in the new technology. While merchants were hesitant to the product, they did not object to the technology per se. If banks on the contrary would have listened to the feedback and better understood the issues of users, more would have had adopted to the technology. In order for successful development and implementation of technology it is crucial to understand how and why people adapt to technology as well as the reverse. Technology drift have to be integrated into the development models (Holmström & Stadler, 2001).

#### **2.4.2 Understand, Forecast and Evaluate Technologies**

Meredith and Mantel (2000) argue that technology forecasting essentially is to predict what technological abilities and capabilities there will be in the future. To predict how things will be done or include profitability is not a part of the forecast. However, this is argued by Saffo (2007), who state that a forecasting should be efficient and identify the full range of possibilities, that way an idea of future possibilities exists, as an accurate prediction is impossible.

Technology have historically been forecasted through guesses and estimations by experts. But this is no longer appropriate as technologies become interdependent and a single person can not be experienced enough in different areas according to Meredith and Mantel (2000). Niiniluoto (2001) do however believe that the best you can do about the future is to guess, since what you do know in the future is of no use. Fundamentals, such as basic algebra, which is true now will still be in the future, but will not help prediction.

According to Fey and Rivin (2005) The Theory of Inventive Problem Solving (TRIZ) was developed by Genrikh Altshuller and is built upon repeatable pattern of technological evolution. As the model deals with systems of technology and not the mechanisms, machines or processes it can be generalised and used in any technology. This mean that the TRIZ-laws can foresee the direction of technology development. By keeping the TRIZ laws in mind one can more easily find solutions and design systems in a more advantageous way.

The TRIZ laws comprise of the following laws which are very briefly explained for more easily understanding (Fey & Rivin, 2005);

- Law of increasing degree of ideality – meaning that technology becomes better, by performing more functions or the same functions better, alternatively become less complicated or less costly
- Law of non-uniform evolution of subsystems – in a system the different components will be developed at different pace
- Law of transition to a higher-level system – technologies move from a mono system to a bi- or poly-system, meaning they can perform different functions, an inverse bi- or poly-system is a combination of components with opposite functions
- Law of increasing dynamism (flexibility) – systems move towards performing more actions with less operation needs and becoming more seamless, a trend towards modularity, platform development, forward sensing systems and
- Law of transition to micro-level – essentially systems are becoming smaller and smaller
- Law of completeness – more things are done by the system and less by humans
- Law of shortening of energy flow path – less energy is used while the function is still performed
- Law of increasing controllability – the different elements interactions are controlled more advantageous
- Law of harmonisation of rhythms – the different parts support each other and are synchronised to a higher degree

The laws above concern how to forecast both disruptive and sustaining innovations, but says nothing about how to mitigate the concerns of new technologies. However, Bower and Christensen (1995) describes a method in order to identify and adapt to new technologies. First, the new technology must be determined whether it is disruptive or sustaining. In order to protect current customers and serve their needs, it is of importance to identify sustainable technology. However, there is a challenge to identify a disruptive technology. Bower and Christensen (1995) suggest one approach, which outline disagreements between managers from different departments. They argue that if a disagreement arises, it is most certain a disruptive technology which top-level management should further study.

Second, the strategic importance relevant to the disruptive technology must be determined and handled by involving the right people and asking the right questions (Bower & Christensen, 1995). Organisations tend to involve mainstream customers when there is a need to evaluate new innovative products, as they are generally good at assessing whether a technology could be sustaining or not. However, they lack the ability to detect if a technology is disruptive. Bower and Christensen (1995) suggests a graph which describes the relation between product performance, defined by the mainstream market and time. By plotting the predicted performance improvement demanded of mainstream customers and then locating the estimated current performance level of the new technology, a disruptive technology can be identified, i.e. if the performance of the new technology will lay way below the line of the current technology (Bower & Christensen, 1995). An analysis of the potential improvements in performance of the disruptive technology shows if the technology will address the needs



of the mainstream customers and when. If this were to be the case, new technology need to be addressed strategically.

The third step is to identify the market which the disruptive technology initially will start emerging (Bower & Christensen, 1995). Due to the limited amount information regarding these markets, managers must create their own, with the aim to identify the customers, what main attributes of performance these customers demand and the pricing. However, Bower and Christensen (1995) argue that seeking this information should be done by start ups, as it is difficult for established firms due to costs of resource allocation. Moreover, by embracing input from parties such as technologist, venture capitalist and non-traditional sources of information, established firms may avoid new entrants to capitalise the market.

A separate organisation should be created if profit margins of new disruptive technology are lower than the mainstream business and address the needs of a new set of customers (Bower & Christensen, 1995). Bower and Christensen (1995) describe a case of a firm and its strategic approach when developing their 5.25-inch disk drive. They established a team of engineers and marketers and them kept separately from the mainstream business. After launching the product they captured 20% market share in this segment.

Once new markets have grown and become established, the independent disruptive organisation must be kept separate (Bower & Christensen, 1995). If not so, internal competition of resources and arguments regarding cannibalisation of established products may arise, which in the case of the disk-drive industry, many firms failed. As disruptive technologies are a part of the industry life cycle, companies need to understand this process, replace businesses with new ones, in order to survive. Bower and Christensen (1995) conclude that managers need to handle and create disruptive technology with focus on the future needs of the mainstream customers, not the needs that is present.

## **2.5 Investment Framework**

As the assessment model model being developed is to be inspired by how venture capital screen their investments. It is of fundamental importance to understand what an investment framework actually are. Moreover, how different investment frameworks have been designed and how best practice for the venture capitalist's investment process is constructed, will guide how the pre-screening process in this thesis is constructed.

### **2.5.1 Investment Process**

The strategic reasons for engaging in mergers and acquisitions can be plenty (Chesbrough, 2002). However, there are high levels of uncertainty when deciding whether to invest in a start up or not (Gompers & Lerner, 2004). In order to mitigate the uncertainties, venture capitalists perform a screening and assessment of the business proposal before further looking into a start up (Hall & Hofer, 1993; Gompers & Lerner, 2004). When screening companies there should be a consistent strategy decided upon

before engaging in the activity (Rosner, 2006), describes as acquisition screening in figure 2 in chapter 1.1.

The next steps in the process, target investigation and valuation analysis are covered by more in depth due diligence which includes evaluation of the legal, accounting, environmental, strategic and other aspects (McKelvey, 2002). Due diligence is a rigorous process where the legal, accounting and environmental aspects aim to confirm or reject the information disclosed by the seller, while the strategic aspect reveal the future potential valuation of the targeted object. The strategic due diligence can be divided into two parts, where the first is an analysis of the external environment and the second is valuation and negotiation. The objective of the first part is to provide insights of the market, customers and the competitors. The objective in the latter part is to include the insights from part one in order to assess the value creation potential of the acquisition and establish a negotiation strategy. McKelvey (2002) argue that by thoroughly and systematically performing a strategic due diligence process combined with the environmental, legal and accounting aspects, can yield high returns.

The key to the two last parts in the investment process, post-acquisition planning and integration, is to at an early stage identify realistic and supported strategic and business objectives of the acquisition (Baker & Mckenzie, 2011). The planning is an iterative process as new information is learned about the targeted object from the due diligence. As the plan becomes more refined and finalised, a more in-detailed step list of the implementation process is developed. This step list functions as a checklist and current status of the implementation. Baker & Mckenzie (2011) stress that communication channels with decision makers should be open and clear in the final part of the investment process in order to successfully integrate the acquired object.

### **2.5.2 Corporate Venture Capital**

Inter-organisational learning can be pursued by established firms through corporate venture capital, i.e. minority equity investments in privately held start ups (Wadhwa et al., 2016). It is argued to be a positive relationship between investment in moderately diverse portfolios of new ventures and the innovation performance of the investing firm. Furthermore, the technological knowledge and social capital of the start ups impact the investing firm in terms of reduced costs and enhanced quality of innovations.

According to Chesbrough (2002) corporate venture capital investments are characterised by either its objectives or to the degree which the start up is linked to the investing company. The characteristics are in some extent in line with the arguments of Souitaris and Zerbinati (2014) which identify that the focus of investments practices could either be in integrated with the corporation's business or held at an arm's length. However, the objective of the investments could either be strategic, i.e. strengthening the business of investing company, or financial, i.e. achieving attractive returns (Chesbrough, 2002). The second characteristic of the investment may be valuable when new markets emerging and disruptive technology is threatening the business of the investing company. In this case the external start up can provide its resources and capabilities if the environmental factors affect the viability of the investing company's

capabilities negative. As most of the corporate venture capital investments fall in between these characteristics, Chesbrough (2002) identify four types of investments;

- Driving investments
- Enabling investments
- Emergent investments
- Passive investments

Driving investments have strategic objectives and the start up is linked tightly to the investing company's operations (Chesbrough, 2002). The purpose and benefit of this type of investment is to advance the strategy of the current business of the investing company. However, the start up will not be able to provide insights as external environment changes demand new capabilities.

Enabling investments are characterised by a strategic focus but not a tight link between the start up and the investing company's operations (Chesbrough, 2002). The aim of this investment is to use the start up as complementary in order to develop the eco-system in which they operate. In turn it can create an increase in demand of the investing company's products and services as the complementary market grows. For this investment to succeed, the investing company need to capture a significant proportion of that market growth.

Emergent investments have primarily a financial focus rather than a strategic but the start up is linked tightly into the investing company's operations, sharing technology or products etc. (Chesbrough, 2002). Even though these investments aim to provide attractive returns, they might become strategically valuable as markets conditions change and the need for new strategies occur. When new markets with new customers emerge, these start ups may enter new markets and provide insights to the investing company. Although many of these investments might never become strategically important, the fulfilment of the financial objectives must be managed by balancing financial discipline together with strategic potential.

Passive investments are neither tightly connected to the operations nor have a strategic objective (Chesbrough, 2002). In these cases, corporates main objective is financial returns and they act like any other investor in the venture capital market. In these corporate venture capital investments there won't be technology or market knowledge spill-overs as the company do not actively trying to advance their own business by learning for the start up.

### **2.5.3 Systematic Acquisition Screening Process**

Firms which are seeking potential targets to acquire do often lack a systematic screening process (Rosner, 2006). Consequently, resources are wasted on investigating objects that are of no value for the buying firm or objects with potential are missed out. Moreover, McKelvey (2002) argue that huge returns can be made through a systematic due diligence approach of acquisitions. When forecasting revenues without having reliable market, customer and competitive data, the revenue forecast is unreliable or

even guesswork. Rosner (2006) suggest that by introducing a proactive and systematic screening process for M&A objects it will provide advantages in terms of;

- Enhanced strategic consistency
- Opportunity prioritisation
- Resources effectiveness
- Reduced influence of politics
- Ongoing analysis

Rosner (2006) divide the screening framework into four steps; establish screening criteria, build a comprehensive list, prioritise the comprehensive list, and develop profiles. The initial step includes developing clear strategic M&A goals which helps highlighting the attractive opportunities. As a part of this step, judgement criteria are to be established, i.e. if the objects should fall under the category of inclusion, exclusion or prioritisation. On the contrary to inclusion and exclusion, prioritisation requires more in detail judgment as there are more factors to consider in order to decide if the object should be further included in the screening process or not.

In order to screen companies methodically, a standardised way of conducting the screening have to be considered. There are three sorts of analysis that are applied when evaluating a company; accounting, strategic and financial analysis. The strategic analysis is to be regarded as the most important analysis of a company evaluation (Nilsson et al., 2002). The purpose of the analysis is to identify the factors which affect the profits a firm generate, i.e. key profit drivers. Moreover, it also includes to identify risk factors related to the company's business. The latter factors are identified through conducting an industry and competitor analysis. The strength of the strategic analysis is that it assures that the final valuation of a company is not based on unrealistic assumptions. Furthermore, it is also an important information source when evaluating the company's ability to generate profits in the future (Nilsson et al., 2002).

The second step in the screening framework consists of creating a list out of the objects which are investigated in the screening process (Rosner, 2006). Further, the list must be prioritised by applying the set of inclusion and exclusion criteria in order to efficiently reject those objects which do not fit with the company's M&A strategy. Sometimes the criteria may be weighted with the purpose to deliver a quantitative summary of each objects. Rosner (2006) suggest that the final step, developing profiles, may include among others; key company information, background and contact information, management team background, company background, ownership structure, product information, customer and market data, current business alliances, competitive solution, and segment trends.

When completed the screening process, the decision makers will have a short list of attractive objects which they further can conduct a more thoroughly due diligence of (Rosner, 2006). However, the screening framework is not adequate enough to lay a foundation for moving forward with a transaction, although it provide a good insight before beginning the process.

In general, when venture capitalists screen their investment opportunities they assess four major areas (Dotzler, 2001). First, the product and technology is evaluated depending on the level of protection and the likeliness of market acceptance. Second, the market is an important area because venture capitalists only invest in ventures with high growth potentials (Kungliga Ingenjörsvetenskapsakademien & CONNECT Sverige, 2002). The potential market size, sales possibilities, competing products, sales channels, customer segments, and regulations are important factors venture capitalists assess when evaluating the market (Dotzler, 2001). Third, the management is evaluated based on their capabilities, track record, leadership and motivation. Fourth, venture capitalists evaluate the possible financial returns by estimating the venture's future valuation.

The factors of a new venture are ranked differently by venture capitalist depending on what stage they are in (Kungliga Ingenjörsvetenskapsakademien & CONNECT Sverige, 2002). In the development stage, the most important factors when evaluating a venture are the entrepreneurs, the management, the business idea, the product or service, and the business model. In the start up stage, the product become less important while the business model and the customers become more important. Moving on to the early growth stage, the most important factor of a venture is the management followed by the entrepreneur, the product, the business idea, the customers and the business model. In the rapid growth stage, the management is still regarded as the most important factors while the business idea and business model become more crucial for the venture.

MacMillan et al. (1987) stress that the management and the team are two major important factors behind successful new ventures. One way of assessing the quality of the management and the team is to consider the human and social capital which are considered as valuable resources for start ups as new external conditions arise (Debrulle, 2012). If the environment is turbulent, previous start up experience and the strength of social relations of the entrepreneur increases the ability to gather new information and acquire, absorb and exploit it. Previous start up experience does also imply that entrepreneurs will more likely exploit discovered business opportunities successfully (Davidsson & Honig, 2003). Moreover, MacMillan et al. (1987) argue that the staying power of the team, i.e. the dedication of the team, must be high in order to increase the chances to succeed. Showing strong staying power indicates that a team can successfully manage competitive attacks and turbulence in the external environment.

Cooper et al. (1994) examined the influence of human capital in new ventures' performance and found that it has a positive impact on survival and growth. However, human capital can be divided into three different categories which individually affects the performance differently. First, general human capital, i.e. the entrepreneur's education and life experiences, do influence both growth and survival rates as the entrepreneur's ability of problem-solving and networking is favourable. On the contrary, Roure and Maidique (1984) argues that there is no difference between successful and unsuccessful start ups in regard to the overall years of entrepreneurial experience of the founders. It is rather the length of relevant experience from previous ventures that matters.

Second, management know-how describes the previous management knowledge of running a business, but this it is argued to have limited impact on the start up (Cooper et al., 1994). However, the number of partners can contribute to the growth performance due to that the combined expertise is favourable compared to if the start up consists of a single founder.

Third, industry-specific know-how contributes to both growth and survival rate as the start up possess valuable insights of key success factors in an industry and complex understandings of specific products or technologies (Cooper et al., 1994). Davidsson and Honig (2003) agree that specialised knowledge is necessary when exploiting entrepreneurial opportunities. Specific industry experience is also in line with previous research by Cooper and Bruno (1977) which states that previous experiences in markets which the start up addresses are beneficial.

Social capital are the social relations that contribute to the ability of new ventures to acquire the resources and sponsorship needed (Adler & Kwon, 2002). De Carolis et al. (2009) expand the definition and describe social capital, in the context of entrepreneurship, as the output of goodwill and resources from individuals' social networks. In technology-based start ups, social capital can be divided into four sub-networks; academic, industry, finance and family (Zane & De Carolis, 2016). A strong composition of these sub-networks increase the possibility to acquire relevant resources, e.g. human capital and financial capital. Davidsson and Honig (2003) argue that social capital is an important aspect when a start up scales its business as it contributes to an increased probability of sales and profitability.

Roure and Maidique (1984) further stress the importance of team characteristics. In previous successful ventures, the essential functions, such as the president and executive responsibilities, have been represented by the founders. Another significant characteristic of a successful start up is that the founders have had at least six months of joint work experiences. Furthermore, MacMillan et al. (1987) stresses that a team which is characterised by highly qualified members with a strong dedication to pursue the start up even under competitive attacks will increase the chances to succeed.

#### **2.5.4 Due Diligence**

According to McKelvey (2002), in its original form due diligence merely represent a fraction of what is to expect, in terms of success from an acquisition. Legal, Accounting and Environmental due diligences are fundamentally backward-looking reviews. Due to this, due diligences give a measure of what has been before, and focus on what is inherited to the acquirer in a deal, not what lies in the future. Although these types of due diligences are of importance, strategic due diligence is the activity which provide insights into the future value of the object. There are two phases of strategic due diligence; an analysis of the external environment and a valuation and negotiation process. The former consists of three stages; market assessment, customer analysis, and competitor analysis. Whereas phase two includes; valuation analysis, sensitivity analysis, and negotiation strategy. The need of thoroughness of a due diligence depends on how well you know target and markets, and how large the transaction is in

absolute terms relative to your company's resources. Nevertheless, to perform a strategic due diligence, as well as the other forms of due diligence, is crucial before following up with the valuation of the company. This as the due diligence process is fundamental for forecasting revenue. Without the information revealed in the due diligence, one can simply just guess what the revenue will be. Thus, as revenue forecasting is performed poorly without due diligence, the valuation of a company must follow after a thorough due diligence (McKelvey, 2002).

Market assessment aims to determine market size and expected growth for the company being investigated (McKelvey, 2002). Initially, the object's business model has to be divided into strategic segments, e.g. end-user, geography and technology. Thereafter, these segments are to be forecasted in order to determine the object's current position and its growth potentials. Even though the market assessment provides valuable information, customer analysis provides the most important insights (McKelvey, 2002). The customers contribute to the due diligence by providing insights on their buying behaviour and how well the investigated object is serving their needs. By targeting key customers within the different strategic segments, interviews may be held, both with current, ex- and non-customers in order to successfully execute the customer analysis. The last stage in the external environment analysis, the competitor analysis, aims to provide information on the objects competitive position (McKelvey, 2002). There are of importance to regard the barriers of entry within the industry and the possible threats these may impose in order to contrast the object's strategic position with future and current competition. Furthermore, when the competitive landscape is identified, benchmarking the strengths and weaknesses of the object in how well they manage to serve their customers provide insight on its threats and opportunities.

### **3. Methodology**

*This chapter explain how the research have been conducted during this thesis, and what theory have been used in order to determine what method to use, and how to use it. The first of the three sections introduces the reader to what research strategy have been used in broad terms. Thereafter the second section expands on how the research design have been formed, the third section describe the process more in depth of how this thesis is carried out method wise, whereas the last chapter discuss the validity and reliability of the research.*

*As the final result of a research study is heavily inflicted of what research strategy and research design that is used, it is important that each research study has a transparent methodology (Bryman & Bell, 2011).*

#### **3.1 Research Strategy**

The general orientation of how to conduct research is called research strategy, and can either be qualitative or quantitative. The norms are that in a qualitative strategy the information comes from words through e.g. interviews, and build up a theory. Qualitative strategy focuses on reaching a new and deeper understanding. On the contrary a quantitative study often uses a lot of numerical data. This numerical data is then used to find statistical evidence that can either confirm or reject a theory (Bryman & Bell, 2011).

The strategy used in the thesis is qualitative and has a constructionist epistemology, i.e. it aims to explain a problem through interactions with people who shares their experiences through language (Easterby-Smith et al., 2012). Moreover, a qualitative research in a constructionist sense provide a richer and more nuanced picture of a setting compared to a quantitative study. In the case of this thesis, the primary data is collected from interviews with individuals working within the financial industry. Saunders et al. (2009) argues that an exploratory study is an eligible choice of method when there is a problem that needs to be explained and clarified.

#### **3.2 Research Design**

The exploratory method consists of different sub-methods to collect data and achieve viable answers; literature reviews, formal theory, open-ended interviews, semi-structured interviews, field studies and laboratory experiments. The data collected from each method is triangulated in order to provide the thesis with as reliable conclusions as possible.

Saunders et al. (2009) explain that there are three different approaches when conducting exploratory studies;

- Literature reviews
- Interviews with 'experts' in the field of the research topic
- Interviews with focus groups



In order to fulfil the purpose, the research design will combine two out of these three approaches, interviews with participants from the financial industry as well as reviewing literature. Due to the time limitations of the research, focus group interviews was not conducted since the respondent had busy schedules.

According to Saunders et al. (2009) literature review means that existing literature is summarised within a specific research area in order to enable conceptualisation of models for empirical testing. This type of research method often involves some sort of inductive process (Scandura & Williams, 2000). In order to be able to start investigations of the FinTech industry and evaluate firms as well as be able to create an assessment model studies have been made in the following fields; FinTech, venture capital, industrial transformation, IT, financial services, banking, management, technology evaluation.

Unstructured interviews, one-to-one, are of relevance in the initial state of an exploratory research according to Bryman & Bell (2011). In unstructured interviews the respondents can decide the content of the discussion, within the specific topic, and provide information that she or he believes is of importance (Bernard, 2011). The questions asked in these interviews are open-ended, i.e. the respondent can interpret the questions in many different ways which enables them to respond with their own take of the subject and thereby give insightful answers (Mack et al., 2005). The advantage of using qualitative methods in exploratory studies is that the open-ended questions provide information which are not anticipated by the researcher initially. Furthermore, Rowley (2002) also argue that exploratory studies are valuable in the beginning of a research as it gives a broad introduction to the subject and enables a foundation for a more structured research after this phase.

The field studies consist of collecting secondary data which Scandura and Williams (2000) describe as archival studies. Data from secondary sources can be e.g. management research, industry reports and news articles. By triangulation this kind of data together with the primary data gathered from interviews, one can confirm whether the research topic is an actual problem or not. Bryman (2006) argues that if comparing findings from different sources, the topic can be corroborated. Furthermore, the outcome from the triangulation of the findings can lay a foundation for semi-structured interviews in later phases of a research study. These interviews are then focused on finding information regarding more specific and relevant aspects of the subject.

Saunders et al. (2009) suggest that semi-structured interviews can be used after the initial phase of an exploratory study which in this thesis has been the main source of primary data. The template of the semi-structured interviews consists of a set of topics and questions which are to be covered. However, the questions may be tweaked depending on the position of a respondent within the organisation, and what relation to the research topic a participant has. Since the conducted interviews in this thesis were with employees from different divisions, as well as people outside of the organisation, the questions may vary somewhat depending on that reason, which is line with the argumentation by Saunders et al. (2009). By doing this it can provide a richer picture of the research topic as earlier stated in chapter 3.1. Furthermore, respondents can be put in an artificial setting where they are asked to elaborate on the objectives on a research

without any specific questions being asked. Scandura and Williams (2000) describe this method as a laboratory experiment. By using this complementary method in parallel with the semi-structured interviews the internal and external validity of a research can be strengthened.

To assure that all information given from a respondent is accurate when analysing the findings, the interviews should be audio-recorded and transcribed (Saunders et al., 2009). One more advantage when recording an interview is that the interviewer can focus on listening and questioning. However, if two or more researchers are present during an interview, one can focus on the questioning while the other can transcribe the answers immediately. This will decrease the time resources when transcribing the interviews, which Saunders et al. (2009) argue to be a disadvantage of audio-recording.

As the transcription from interviews do not provide any explanations, an analysis of primary data is necessary (Pope et al., 2000). By coding the transcripts of the qualitative data, analytical categories can be developed which are to be used to explain the research subject. Pope et al. (2000) explain that most common in qualitative research is that these categories derive from inductive processes by the researchers. Once relevant data has been identified and categories are established, they are grouped together and thereafter, key themes which contribute to the purpose of one's research can be derived. In order to assure high consistency and reliability of an analysis of qualitative data, Pope et al. (2000) suggest that more than one researcher is preferable. This is also referred to as inter-rater reliability.

### 3.3 Research Process

The process of the research can be divided into three different phases as explained in figure 4. The first phase consisted of data collection and literature reviews with the purpose to create an understanding of the financial services industry as well as guide the research process in the right direction with regard to answering the research questions. In the second phase, the focus was to gather more in depth data of the industry dynamics and how a pre-screening process should be composed. The last phase consisted of analysing the findings from the interviews and triangulate these with the theoretical framework in order to finalise the assessment model. Furthermore, final conclusions were drawn in regard to the purpose of the thesis.

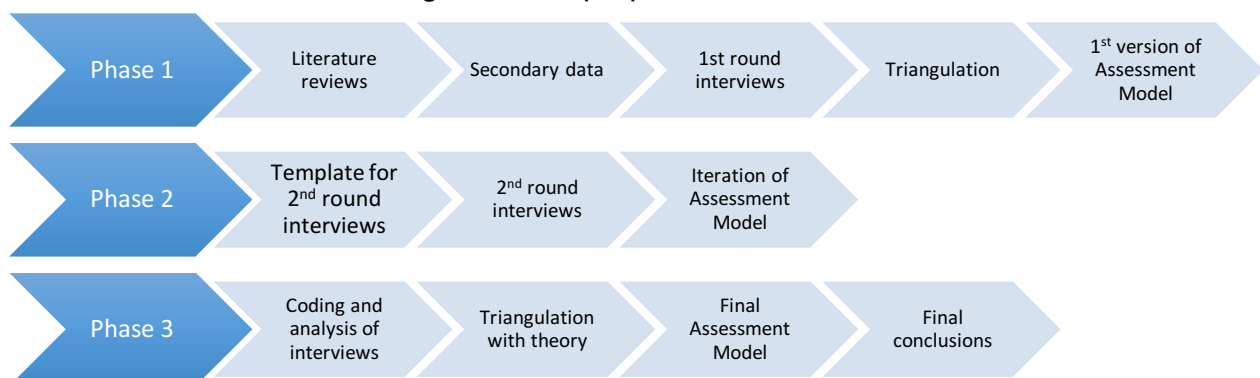


Figure 4 – An overview of the research process

Initially, the exploratory study was conducted with the aim of understanding the business and the competencies of SEB, as well as gain insight into FinTechs and the digitisation of the financial industry. Both primary and secondary data was collected in this phase. Primary data was collected through open-ended interviews with five employees at SEB. The topic of these interviews regarded the respondents' views of the prospects of SEB and the other established banks in general and how FinTechs affect it. This enabled an understanding of the organisation's view of their internal and external environment. Secondary data was gathered from industry reports, management research and annual reports etc. As the purpose of the collection of primary and secondary data in this phase were to gather information and insights of the situation broadly, the unstructured approach was in line with the exploratory methodology introduced in chapter 3.2.

The findings from the data collected was analysed and the most critical patterns was distinguished. In parallel, a theoretical foundation of how academia approach the subject investigated was constructed through literature reviews. Through triangulation of the data from the different sources, the insights were put into relevance of the business. Furthermore, the insights from the first phase were used to create a first version of the assessment model which was to be experimented with respondents during the second rounds of interviews.

In the second phase of the research, interviews were mainly held with employees of SEB. As the employees had different positions and worked at different departments of the organisation, more specific questions were sometimes asked in order to gain deeper insights in some aspects of the research subject. However, due to the semi-structured interviews the questions was to some extent open-ended which gave the respondent an opportunity of interpret the questions in their own way. This enabled more nuanced and rich answers, which was the intention. Since the main purpose of the thesis regards pre-screening processes of investment objects, two additional interviews were held with people in the venture capital industry. The focus of the questions was more specific towards venture capitalist screening processes. However, in order to strengthen the validity and the decrease the risk of the primary data to be biased, some key questions from the SEB interview template were asked as well. In Table 1, an overview of the positions of the respondents are covered as well as the main topics which the questions addressed for each round.

Table 1 - Overview of interviews and topics covered

	<b>Interviewee position</b>	<b>Topics covered in the interviews</b>
<i>Round One</i> SEB employees	Head of Emerging Technologies Head of Strategy & Architecture Head of Process & Information Management Enterprise Business Architect	Financial services SEB FinTechs Technology aspects
<i>Round Two</i> SEB employees	Chief Strategy Officer Head of Venture Capital Head of Business Development Head of SEB Way Head of Payments Investment Director Private Equity Investment Analyst Private Equity Enterprise Business Architect Trainee IT Solutions Delivery	Venture Capital Investment process Assesment Ventures FinTechs Swedish banks SEB Bank and FinTech comparison The Assessment Model
Venture Capitalists	Investment Advisory Manager, Creandum Head of Investment, Chalmers Ventures	Emphasise on venture capitalist screening

During the interviews, one researcher was responsible of administrating the interview while the other researcher was responsible of transcribing the answers given. The purpose of dividing the tasks was to ensure that the collection process of interview data was of high quality. Additionally, with the permission from the respondents, the interviews were recorded in order to avoid any transcription mistakes. The process after the interviews consisted of correcting any misinterpretations and highlighting the valuable inputs from the interviews by creating a final transcription with assistance from the audio-recoding.

During the interviews, the participants were asked to elaborate on the assessment model and provide it with feedback. Thereby, the model was iterated continuously and the questions within the model was validated or rejected. Together with the data from the interviews, the literature review and the secondary data, all inputs were analysed and triangulated. Due to this, the assessment model took shape during the entire research process, both in terms of structure and components. Moreover, the exploratory method together with its complementary methods contributed to that suitable data was collected which in turn could fulfil the purpose of the thesis.

In the final phase of the research the transcribed interviews were analysed. Separated from each other, both researchers read through the interviews and highlighted the most important empirical findings of each interview in their own view. Thereafter, the findings were compared to each other and in many cases the researchers had the same insights. However, in cases where only one researcher had highlighted a finding, a discussion of the matter occurred. Together, the finding was either accepted as valuable for thesis or rejected. Due to this approach, the findings derived from the analysis of the qualitative data increased its credibility as well as the inter-rater reliability. Furthermore, the empirical findings were coded and categorised in order to capture the essence of the data gathered. From this, key themes derived which were summarised and thereafter

triangulated with the theoretical framework. The triangulation contributed to the analysis and conclusion as well as the finalisation of the assessment model.

### **3.4 Validity and Reliability**

The meaning of validity is whether a research study corresponds to the reality or not (Bryman & Bell, 2011) and is occasionally divided into external and internal validity (Easterby-Smith et al., 2012). External validity concern whether the findings in a research is applicable to another research setting or not, which Saunders et al. (2008) explain in terms of generalizability. Furthermore, Saunders et al. (2008) stress the limitations of generalizability if research is conducted within single organisation. The internal validity of research refers to whether the result is true and that the conclusions drawn out of these are correct (Easterby-Smith et al., 2012).

This thesis mainly relies on interviews with employees at a single company, additional interviews outside of the company were conducted in order to increase the understanding of the research topic as well as strengthen the generalizability. Furthermore, the triangulation together with secondary data further increase the generalizability somewhat. However, since many of the respondents are from SEB the view of FinTechs not seeking collaboration with banks is quite heavily biased from one bank's perspective. In order to understand whether this was the case one would have to ask multiple banks and also find out whether this is a regional phenomenon or a fact for the entire world. Due to scope of the thesis, the generalizability mainly concerns banks that are similar and in an equal environment as Swedish banks. Consequently, this limitation will put a constraint on the external validity of the thesis.

In order to increase internal validity, all the respondents gave their consent of audio-recording the interviews, the data collected could be monitored and assure that they were transcribed correctly. In this sense, the internal validity of the thesis should be regarded as high. Moreover, as the respondents had different positions at the company and were not completely involved in each other's daily work, the issue of bias was reduced in some extent. Bias is also a feature that demonstrates external validity (Easterby-Smith et al., 2012). Due to the majority of the respondents were employed by the same organisation there was a risk that they shared similar perspectives on the subject. However, to further decrease the risk of being biased two additional interviews outside of SEB were conducted. Moreover, as the primary data collected in the thesis came from interviews, there is a risk of interview bias. Easterby-Smith et al. (2012) argue that this type of bias may occur if the responses of the participants are influenced in anyway, by the interviewers. Furthermore, this can be avoided if questions are asked in an opened way. Therefore, the interviews in this thesis were open-ended or semi-structured in order to decrease the risk of interview bias.

The need for the discussion regarding reliability is of important. Easterby-Smith et al. (2012) describe reliability as the concerns whether an instrument will record the same findings for each occasion it is used. Saunders et al. (2008) refer to reliability as the extent of consistency in the findings used by a certain data collection technique or analysis. This is what Pope et al. (2000) refers to as inter-rater reliability. In the case of

the interviews in this thesis, the unstructured interviews in the initial phase of the thesis can be regarded as tests which provided insights to the next rounds of interviews. This approach generated questions that were clear and had the ability to be answered by the participants despite their different position and experience within the organisation. Furthermore, subject or participant bias can influence the extent of reliability in a research (Saunders et al., 2008). In this case, bias can occur if respondents answer what that they believe their bosses want them to say. This may inhibit honest answers that can be valuable to the research topic. However, the interviews in this thesis have been performed with employees with a high degree of responsibility within the organisation. Due to this, reliability in the answers can be argued to be high.

## 4. Empirical Findings

*Interviews have been performed with employees working for SEB and experienced venture capitalist professionals, there are a several findings from these. The questions have been adjusted depending on what position each respondent have, it has therefore been possible to get an understanding of certain specific domains. As explained in the theoretical session of due diligence, it is important to have an understanding of the business when performing assessment analysis of companies.*

*The first part of this chapter summarise the findings that are of importance related to the financial industry. Sub-chapters have been created that dive deeper into the resources and capabilities of established banks, as well as FinTechs, lastly what the future implications of the financial industry is stated. The chapter following is focused on the assessment model, with findings that relate to how the model should be constructed, what is important and what one can learn from earlier models. Moreover, there are some deep dives into how to assess people, business, technology, maturity and risks together with what other aspects that are important.*

### 4.1 Financial Services Industry

Some of the respondents have pointed out that FinTech is a buzzword and are currently in a phase similar to the IT bubble. This as their viewpoint is that many FinTechs are riding on the wave of being in popular start up domain. Respondents have pointed out that when looking into the specific FinTechs their business model can be non-credible, or they are simply not operating as indicated. One respondent pointed out how one Robo-advisory FinTechs only had very simple algorithms with an advisor operating in the background, not at all as automated as implied. Thus the respondent gave it the epithet of using the Flintstone-method, it looks like a car but still there are someone using their feet and it is people doing the job.

According to a majority of the respondents FinTechs have shown a pattern of avoiding the banks initially and focus on being independent, but as the FinTechs move further in their lifecycle they are connecting with the banks. With this in mind one respondent also pointed out that many of the FinTechs that have gained traction have done this as a result not only from their actual product, but due to the fact that they have been funded with more money than competitors. This meaning that successful FinTechs would not be where they are if banks would have stepped in early, as the banks would not have given the FinTech the funding and space to grow. Unicorns of today, companies worth more than one billion dollars, require a lot of capital to get where they are. These start ups need multiple investing rounds, often with many different investors, in order to achieve high growth. Would incumbent firms be willing to invest all the funds necessary to achieve the success of the firm or would incumbent firms slowly loose interest and let the entrant die.

A few persons have referred to FinTechs as piranhas, while the other banks are sharks. Meaning that the FinTechs take small bites on certain specific services and are not

threatening the entire bank, but rather certain branches, whether these piranhas can tear down the entire bank seem for the respondents unlikely. However, the sharks have the possibility to quickly attract customer and win deals and can rapidly hurt the other banks if using superior technology.

What FinTech actually do seems to be quite confusing for the respondents, whereas one person say that FinTech is essentially more operationally efficient, another banker state that FinTechs essentially combine technology in a new way that is not done before. In general, it seems hard to agree on how the new FinTechs operate, the common ground seems to rather be the underdog position and a way to service customers in a way that is appreciated.

#### **4.1.1 Banks Resources and Capabilities**

Looking at the financial industry the banks do have some leverage towards the FinTechs. First of the banks are, banks, there are thus by definition certain things that is associated with these firms. First of the banks have something no other kind of corporation have, the banking license. To have a banking license mean that a number of different requirements have to be met, but also the legal right to take deposits. One respondent explains that there are regulations that protect banks from certain areas and due to this banks are not in that much hurry as sometimes indicated. Without being a bank, FinTechs are not allowed to take deposits, and in order to become a bank FinTechs have to meet the regulations. This is one of the reasons that keeps FinTech away from certain core financial services business areas. Also quite astonishing is that merely a few SEB employees pointed out the fact that banks have the right to lend out more money than what is borrowed. Banks basically have the right print more money, the effect of this leverage impact the lending business a lot and is a huge competitive advantage.

Except for being protected by regulations the banks have one advantage that is just as fundamental, the banks rely on trust. Almost everyone points out the fact that the larger banks have been around for long, have strong brands and are trusted with a lot of money. As humans, according to one respondent, are narcomaniacs of safety when it comes to money, banks that can live up to safety demands will be safe. FinTechs on the contrary do not have the track records, as a company, and lack both the capital and brand as the established banks. However, one respondent also explains that there will be demanded more transparency in how investment management is handling customers' money and if this can be done by Roboadvising firms in a more favourable way, that would mean increased trust for these companies.

One respondents take the analogy of banks being stabbed and hurt, but claim that there will be no death. It is the auxiliary services that are in jeopardy according to almost every single respondent. A few of the respondent point out that auxiliary services have low capitalisation needs and as stated is less regulated, but more importantly, auxiliary services are the high margin services. Meaning that the core business with low margin services is the only business being protected by regulations. To point out is also one of the respondent's analysis of the increasing amount of regulations. With more and more regulations the banks become more similar.



A few respondents refer to the concept of taking advantage of not being a first mover. Explaining that it can often be more useful to enter in at a later stage and do something better. One respondent state that Apple is very good at this as they did not invent the mp3 player, but were very successful with the iPod, and the same thing goes for the iPhone, not the first smartphone, but one of the most successful ones. Moreover, there is a huge regulatory risk in being first, if you are first and the money starts flowing into the business regulations might come into place and change the entire market structure. For the banks, a lot of the IT investments is eaten up by compliance, according to one of the respondents one has to give much more emphasise on cost and innovation and not only compliance. Another respondent estimates the compliance costs to half the budget of IT investments.

Additionally, it is pointed out that the FinTechs still represents only a tiny fraction of the total financial industry. However, FinTechs are sometimes creating new solutions or entire markets that have large growth potentials, when the niche becomes large enough in size it is likely that larger players with more muscles will enter aggressively. Another advantage that banks have is the customer relations, the banks know what people are ready to pay for and have an understanding of what is effective, while FinTechs simply only have hypothesis. This could be explained with that the banks have access to customers and ability to test what works and does not work, as one respondent explain.

When it comes to scale even the Swedish banks are lost, as one of the respondents state HSBC have 27 000 people working with compliance. However, the scope of a wholesale solution is by the many of bankers believed to be a strong advantage, individuals want their solutions in one place is a common belief. The banks will lower the fees instead of people moving their money is a conclusion that is drawn by one of the respondents. While the banks have the wholesale financial services solutions, FinTechs are usually single solution – single product. From the viewpoint of a majority of SEB employees, the wholesale financial services solutions delivered by banks are of high importance and something that is leveraged on with positive impact and will continue to be a major advantage of incumbent banks.

Looking particularly at the P2P lending and crowdfunding business areas three of the respondents explain they do not believe in it, in the Nordic market. While the market may exist in the US these banker state that the customers that are left out in the US get to lend in the Nordics, at a higher rate perhaps, but still there would be no advantage to go to a P2P lender according to one respondent. Another respondent claim that the P2P lending model is broken and that most providers when asked for deposits only pay out 90% directly, and the other 10% have to be worked out of the system.

#### **4.1.2 FinTech Resources and Capabilities**

One of the major strengths of FinTechs that is pointed out is their ability to think about and understand the customer. FinTechs think about the customer's perspective and not only compliance and the structured process, this is a key reason for many FinTechs being client friendly with a high usability. Another advantage that is pointed out is that banks represent trust. It is something that can not be compromised and new services

have to work straight away according to a few respondents, if consumers can not access their money this results in a very bad publicity for the entire banks legacy. However, if a FinTech is failing with uptime for important maintenance or other update, this would be understandable. This means that FinTechs can to some extent test the borderlines and not be as harmed as an established bank would be if something goes wrong. A few of the respondents also explain that there are in general a misbelieve towards banks, which is hard to change. One clear advantage of FinTechs is the lack of regulation for these companies.

FinTechs do have the natural consumer relation digitally, this is both a cost advantage but moreover it enables the company to interact with consumers with one single channel. Thus having better coordination of information shared with customers. According to one banker if you do not have a digital relation with customers, you won't have any kind of relation at all. Banks have to keep up with the fast pace of digital transformation, to be competitive in the future. A number of people mention that FinTechs can work more agile and have a lot of different competencies in the same room, whereas the banks are very large and slow moving. Moreover, one of the respondents mention that it took four years for the banks to work out Swish, while a FinTech could probably have done it in one month. The respondent points out that the common development for banks doing joint venture projects are extremely slow. According to another of the respondents the FinTechs are not only working more agile and but it is also cheaper to innovate and change the user interface. The same respondent also takes the example of that it is only two producers of processors in the entire world, however the layer is very agile and cheap to innovate upon. The business innovation is much cheaper than hardware innovation is the conclusion from the respondent. According to FinTechs themselves FinTechs are extremely good at being agile, flexible, innovative and at the same time experiment with risk, says one of the respondents with a lot of FinTech connections.

FinTechs have often identified a customer demand that is not being met by established banks, or at least not sufficiently. As FinTechs gain larger traction they take the information from banks, before a bank always knew about the transaction of an individuals bank account. According to one respondent it now simply says Klarna, Klarna and once again Klarna if the customer is using this payment method. Klarna has basically opened up an entirely new market where you help businesses to sell more, this something completely different from what established banks traditionally have done. The credit card companies started to demand that consumers had to verify online to increase security of online credit card payments. This made a lot of people to not go through with the buying process, Klarna solved this and helped to regain the online stores sales. One respondent point out that while Klarna is seen as a payment FinTech, it is actually within the business of financing, and that so are the larger majority of the FinTechs identified as working with payments.

### **4.1.3 Future Implications**

A lot of the respondents are talking about being the train or the railway, it is clear that this is a common illustration of what crossroad the bank has in front of itself. One of the respondents explain that if the bank would be in the railway business it would be both

the travel agency, the train operator and the railway infrastructure maintenance company. The respondents have discussed whether it would be possible or not to have this width and if not what part of the value chain banks should focus on in the future. One of the respondents point out that the telecom business is moving to becoming content providers, however it is uncertain whether this can be done by the banks or not. Another respondent thinks that the regulations from all different sources mean that the banks might be squeezed with lower profit as a result, and thus should be emphasised as a large threat. One of the bigger challenges for both FinTechs and banks seems to be to control and keep track of information according to some of the respondents.

One of the keys to be successful is by multiple respondents mentioned as being active in collaboration, partnerships and open for discussion. This is handled by the banks in different ways, and there are currently partnerships of different sizes moving forward. SEB have started an InnovationLab where employees, if successful, can work solely with their project for three months. One respondent point out that a start up requires more time than three months to be able to deliver. However, at the same time explain that it is a good way to keep the entrepreneurial sprit and bring ideas to the table, but are not going to create new start ups. Nordea are working to become more agile and learn from innovations outside the bank by organizing hackathons that are done regularly. About half of the respondents explain that whitelabeling will probably be an increasing way of utilizing others' competences and this is important as a lot of innovations come from outside the bank. One of the respondents say that the banks will have to integrate many different suppliers' services with the bank as a hub. Why innovate on your own when others are doing it and perhaps are the people with the highest competencies in the field, is a conclusion from another respondent.

When collaborating with other companies one respondent point out that it is more interesting when a company have existed for ten years than only one year. However, there would be no point in taking a stake in FinTechs that have existed for ten years. Moreover, when taking stake in the start ups it is important not interfere too much and let the start up work as a start up company on their own and assure that they don't loose their entrepreneurial spirit. Some respondents have discussed the concept of neo-banking, and believe that an increasing amount of retail customers will move over to these sort of banks if the current established banks can not match their offer.

One of the respondents says that all FinTechs have the wrong valuation. The majority is valued too high and a smaller minority is valued too low. The latter will probably succeed while the other wont. How to figure out which companies are valued too low and which are valued too high is a complex assignment and can not be sufficiently performed with a rigours due diligence. How to prioritise the companies is of high importance and thereof one should perform a screening process which hopefully gives intelligent insights that results with a larger portion of low valued companies being brought to the table.

## **4.2 The Assessment Model**

From a few of the respondents it was clearly stated that there have to be a standard in how to evaluate companies and that this fuzzy process should be performed more

structured and consistent. However, it was raised that this model also has to be flexible, a clear indication of this was how the respondents wish to comment the results in words. The way of ranking and then aggregating this to a single number was explained as a good step on the way to get a more structured and consistent performance in how the screening process is conducted. However, it was noted that it can be a bit too narrow to just rank an issue then aggregate together into a single number. It was explained that some questions can simply not be answered with a numbering, meaning that a standardised process is good but at the same time the process needs flexibility.

One thing that is discussed by some respondents are the concern of who will be able to use the model, some think the information should be crowd sourced by being set up in a CRM system where persons are notified when they should provide information within their certain area of expertise.

A few of the respondents pointed out that a generic and standardised model can not give you an understanding of an area as complicated as this one. However, they argued that research such as this was of importance and that even though the different scores can not be added up, insight from a model like the one being developed is of importance. But one would need to change the metrics for each different business sector. Moreover, many important metrics can not be valued on a bad to good scale, it can only be ticked off in a box and are simply not gradable. This is something that the model has to accommodate as well, even though one shall use it for prioritisation. An additional point that is brought to the table, a model that tries to understand whether a target should be acquired, partnered with or other sorts of collaboration will be hard to develop, use and draw conclusions from. One of the major reasons for having an assessment model is that you can get an objective view.

Another issue that was raised were that some questions are going to be of higher importance, whereas some are of lower importance. From the interviews one could deduct that there were some questions that were seen as crucial meaning that if this issue is not fulfilled, one should not investigate the target more thoroughly as it would simply be a waste of time since one in the end should reject the company anyhow due to the failure of this particular issue. The questions that were not crucial were still sometimes seen as more or less important. How this should be mitigated was discussed and it was said to be hard to make a clear cut standardisation for this. Indicating that those questions that truly are important should be weighted with a factor of two, those questions that are not of the highest importance should be used with no factor. The model should have a stage I and stage II, where both are gate keepers that decide whether to continue with the company or not.

When interviewing people with more experience from start ups it becomes evident that the single most important factor that makes difference are the people involved. There has to be some sort of assessment of the people involved in the start up. After this the business model and the industry or market structure seems to be of highest importance, if one should grade the different factors of importance. However, as was always emphasised, this is a fuzzy area and everything depends on the situation and it is hard to rank something as more important than anything else.

Some respondents have given almost identical answers saying that people, size of the market, business model and traction is of the highest importance in the valuation. On top of this it is very important to understand stickiness of the business, what sustainable and competitive advantages that exist or can be created, scalability, strategic importance, how much the market is growing, what the competition within the industry is like, how value can be increased for the start up, and from there it is a matter conclusive due diligence and price.

Answers related to how the model should be structured confirmed that grouping the answer into a worse, good and better ranking, and there after refine into a decision of how well the performance are in this group, is a good idea. One respondent also pointed out that the grading between different groups should not be continuously following as worse – 1 2 3, good – 4 5 6 and better – 7 8 9. A better way to do this would be to have some distance between the different groups, such as worse – 1 2 3, good – 5 6 7 and better 9 10 11. This would change the outcome in the way that it would give higher amplitude of the result. Meaning that while in the former model a company that is generally worse off would be ranked as 50 and a good one as 60, in the latter model a company which is ranked as worse would be 45 and a good one 65. This would make prioritisation clearer.

Moreover, a majority of the respondents think that a pre-screening model such as this should be very short. The preliminary models that have been shown and discussed with respondents have in all cases been considered to long, no matter if has been 45, 36, 30 or 25 questions.

#### **4.2.1 People**

By many respondents the people dimension was indicated to be the most important one and often a deal breaker, a fundamental that has to be there in order to sit down at the negotiation table from the beginning. With those that the people dimension was discussed specifically everyone stated that the team had to be complementing each other, a mix of backgrounds, with the ability to bring different competencies to the table. Moreover, how the competencies were divided was discussed and the general agreement was that there had to be someone who knows the business with domain expertise and someone very good in technology. Earlier experience from a start up is beneficial, but did not seem to be crucial. If attractive partners have invested or initiated collaborations with the company this is good as this indicates trust

Moreover, as emphasised by most respondents a proven track record and ability to show success of execution is highly favourable. As a founder a few also pointed out that it is of major importance to be able to align interest and secure partnerships, thus a social skill and proven track record of leadership. If you have the right abilities in the team, you can always twist and change the technology, is one opinion from a respondent. Moreover, this respondent argues that technology is becoming cheaper and cheaper, and therefore the people dimension is of increasing importance as it will only develop and grow stronger. Additionally, the people who are good, will also be able to attract other good people that can execute what is wished. A positive reputation and ability to show good references is therefore of importance, as this is an additional sign of

being able to attract good people. Moreover, the fire and obsession of getting the job done is of the high importance, however one must not forget the raw intelligence of the team. One idea that was given by a respondent was to have a requirement firm perform an assessment of the start up team, with workshops and so forth.

### **4.2.2 Business**

Many of the respondents says that what in the end will make the profit is the cash flows, and the cash flow are dependent on a business model that is making sense. Due to this there has to be knowledge of the specific business domain. One question that many point out as fundamental is an actual value delivered, are there any kind of problems that this start up is solving? Moreover, whether the business model is makes sense is also an indication if the team actually do understand the ecosystem it is operating in. A FinTech company has to understand the financial industry and a business that do make sense gives an indication of whether the team have the right competence and intelligence.

### **4.2.3 Technology**

It is of importance to understand how flexible the technology is and whether the architecture can be adapted easily. One have to understand if the building and foundation is sensible from where the company is today, it does and should not be entirely perfect, this would take to long time and not make any business sense.

It was emphasised by many that you do not invest in the single lines of code that is made, you invest in the people and their competencies. Thus, even though the knowledge and foundation of technology is of importance, it is not what you invest in. It is of value if the target technology is compatible with the acquirer, however this can be changed and one should not search for simple plug and play solutions.

### **4.2.4 Maturity**

Looking at maturity it can be very good if the solution is moved outside of the dominant design and is disruptive. However, this would put higher demands on the people involved and they can not break from the high pressure that might be put upon them. Both disruptive and incremental innovation is needed and it is hard to put a grading on what is good and what is bad.

The FinTechs that are disruptive in terms of creating its own new markets such as iZettle are of very high interest, and if these can be identified somehow it would be of importance to have an indicator of this. One interview points out that if you have a start up that creates it own market and is sticky, then you can take a larger market share and reap high profits. However, the market leader can probably not take 100% of the market, but maybe 30%, when researching the company, it is of importance to understand its position in the market and how the market is maturing. An assessment of the market potential is of highest importance together with the market structure.

### **4.2.5 Risk/Other**

If you as a strategic corporation want to invest it is important that you can be associated with the start up without loosing reputation, trust or increase conflict of interest. As a bank, it is of high importance to understand the regulatory and compliance issues that

exist. These are important aspects that have to be met, however if they are met it is often not possible to put a grading on whether it is good or super good. If the firm is able to give the necessary trust that is needed in the business, it might be hard for a recently started firm with low reputation to hold pension savings from people. The company thus have to be able to give trust, this is dependent on many factors. This can come from many different areas, it can be certain people in the team, or collaborations with partners, or technological proof of the business model or technological innovations.

During an informal event at the bank the credit cycle was discussed and inspired to the question of how FinTechs are impacted by this. Banks have the ability to make money on different products are not directly making losses if one solution becomes less profitable. However, a single solutions FinTech do not have the benefit of diversity. How e.g. lending FinTechs will manage the credit cycle is uncertain and an individual assessment of this should be done.

Other risks that the respondents mentioned when it comes to ownership structure was the importance for a company to gain a higher and higher valuation in the investing rounds, as a lowered valuation would give you a debt or hang problem. Moreover, the the majority of the shares should belong to the founding team, if not the risk would increase. Further, is the target aligned with the investors guiding principles of how to make business and what business to be in. Moreover, it is important to look at the churn rate of the firm, as this gives an indication of how sticky the company is and if it is a challenge with a lot of switching users.

## 5. Results and Analysis

*The cross intersectional analysis of the theory and empirical findings have led up to clusters of strategic issues that are discussed in this chapter. This is also used to construct the assessment model in order to perform an efficient analysis of the FinTechs in the pre-screening phase. Thereafter, each and every cluster of ideas are discussed and how they are interchangeably connected to each other.*

### 5.1 Financial Services Industry

Dietz et al. (2015) state that drawing a blueprint of the perfect bank would not be successful as the banks start their digital journey. However, the high profits of many banks could suggest that the interests of other stakeholders are not catered to sufficient extent. In this landscape FinTechs see their opportunity to accommodate customers and give them a new experience. How changes in the financials industry will shape the future is hard to predict, however it is likely that the earlier oligopoly market that have existed will deteriorate and competition will increase. Despite the earlier statement of Dietz et al. (2015), they emphasise the importance of flexibility and managing work efficiently. In the case of SEB the bank search to avoid the suboptimal outcomes of ad-hoc screening, and are therefore aiming to have a continuous scanning process with the ambition to actively engage in monitoring, understanding and assessing FinTechs.

Many respondents at SEB referred to FinTechs as a buzzword in a similar phase as the IT-bubble. If looking at the amount of global investments in FinTechs in a six-year period, from 2010-2015, one can notice that investments have increased substantially. The data collected from Skan et al. (2016) show that investments have increased fourfold, as can be seen in figure 1 in chapter 1.1, from \$4.6 billion in 2013 to \$22.3 billion in 2015. Whether the intense investment growth will pay off for investors is hard to predict, in that sense the uncertainties regarding FinTechs which the respondents explained are supported. However, when some respondents state that FinTechs are not making profit, only loose money and that there are too low revenues etc. this can be understandable due to where the firms are in their life cycle. As Caselli (2010) states, in the start up and development stages firms generally have negative profitability and cash flows. Moreover, the BCG Matrix also explain how firms, denoted stars, in markets with high growth rates demand a lot of investments before turning into profitable cash cows (Grant, 2015). Thus it is not strange that this is the case for many FinTechs, and does not have to mean that the firms have a negative future, as most respondents seem to think. This should also thus not be measured in the assessment model.

The steep increase of firms and investments put emphasise on the necessity to have a continuous environmental scanning. As explained by Babatunde and Adebisi (2012), there is a correlation of the choice of strategic scanning and a firm's performance. Nevertheless, according to Dietz et al. (2015) banks have to beat the FinTechs at their own game, and emphasise that acquiring and integrating businesses are not the right way to stay strong. It is stated that the latest Silicon Valley cycle might be at the top, or at least close to this with very high valuations. This would imply that if there would be a



bubble burst, the valuations would fall and it would be easier to see which companies that actually have the possibility to be successful.

Different financial services solutions can be thought of as different industries, e.g. lending being one and brokerage another. This would mean that the banks span over multiple industries where there also are some niched companies that focus on e.g. fund management. Fund management and lending are both parts of the financial service industry, but it is important to point out that the market structures and dynamics of each service can be completely different and have different attributes. In the industry dynamics chapter the concept of strategic groups is discussed (Anand et al, 2013; McGee & Thomas, 1986), the different groups do not necessarily have to compete with each other. There are two evident strategic groups within the Swedish financial service industry, the big four established banks and FinTechs. By many respondents these two groups have even been given the epithets sharks respectively piranhas. However, what is not mentioned is that sharks are the same species and are unlikely to attack each other. The banks are competing on the market and are to some extent fierce enemies, the market is dominated by four major banks. This structure can be viewed as beneficial for the larger banks. The banks have found their market positions and while banks are profiling themselves a distinct competitive position is created compared to the other banks. In an environment where each bank is allowed to make a hefty profit there is low incitements for the banks to attack each other, however as the climate changes with possibly lowered margins due to FinTechs entry, the banks might become more aggressive. Not to forget are also the other smaller banks that exist in Sweden and the few firms that have specialised in certain areas such as brokerage, private banking or fund management.

As FinTechs compete in small niched segments of the financial services industry, retail customers can use their services fairly easy, e.g. payments, without having to quit using the rest of the services provided by the established banks. The FinTechs most often provide these kind of services at a much lower price, which creates incentives for customers to switch. This gives the customers a higher bargaining power than earlier towards the established banks in these service segments. However, the core banking services, e.g. deposits, provides more perceived safety for the retail customers due to the banks' track records and strength in their brands.

The core banking activities relies on that customers make deposits in the bank (American Bankers Association, 2014) which makes the customers suppliers to the banks. Roos et al. (2004) argue that the power of the suppliers can be determined through the concentration of suppliers in an area. If looking at the financial services industry, the number of suppliers should be considered as large and therefore having a weak bargaining power. Taking in regard the entrance of FinTechs, the supplier power does not change as the large majority of the FinTechs are not allowed to take deposits due to that they are not banks. This was also emphasised by some respondents which further strengthen the conclusion that the suppliers have low bargaining power towards the established banks.

When the FinTechs services are substitutes for the established banks services, they are not welcomed. This kind of FinTechs will be fought by the banks who are likely to increase the already existing entry barriers. The financial industry has some natural entry barriers, the regulations and capital requirements (Roos et al., 2002). However, many FinTechs avoid these by focusing on the non-core services that often have a higher margin. In these cases, the tech solutions require fairly low investments compared to many other industries, which means that the banks can try to increase barriers in other ways. One example for how to increase the barriers, and maintain obtained customers, are to increase switching costs. It is important to find complements that can increase the switching cost, this works for both established banks and FinTechs. For example, for iZettle which created a new market it is important to have some sort of complement, or stickiness that maintain the customers when competitors enter the market. Moreover, the firms have to be willing to spend a lot of money on customers to keep market shares. According to many of the respondents the wholesale financial services is of very high importance, and can be seen as complementing, a few respondents however were of the opinion that wholesale financial services will have a decreasing importance for retail customers. Looking at the theory, economies of scope and other origins of increasing returns are of importance, however how important depends on the industry dynamics. Moreover, the industry dynamics is changing quickly in the financial services industry and how important the scope factor will be is hard to say. It is fair to conclude however that the transaction cost of outsourcing in the financial industry is, in general, decreasing and it will be easier and more convenient for retail customers to use different firms for different services. Banks can try to undermine the safety of FinTechs and explain the security that the customers receive with established banks and the value a wholesale solution has.

When conducting a PEST analysis there are some things which are specific for the financial services industry, banks need to give this attention. As trust is such a fundamental factor of the financial services industry the political factors are of high importance, especially the legal aspects (Roos et al., 2004; Nilsson et al., 2002). FinTechs which are not compliant with regulations may put the owners at risk which in turn might harm their brand and trustworthiness, such a FinTech should not be invested in by an established bank. FinTechs are as defined firms that use technology in the financial industry, as a tech firm the solutions are in general scalable and easy to move from different geographical areas. If you have your business in Silicon Valley it is fairly easy to move to Stockholm, compared to if you would be a clothing manufacturer. This means that the geographical boundaries are of lower importance, and are relatable to both the political and economical aspects of PEST.

The PEST model (Roos et al., 2004; Nilsson et al., 2002) involve technology and more specifically also the adoption of technology. For a financial industry company, it is of high importance to gain traction from consumers being open to try new technology. Dietz et al. (2015) draw the analogy of a statement from William Gibson “The future is already here – it’s just not evenly distributed.” and explain that the digital revolution have different adoption rates. Moreover, the economical aspect of PEST include how different regions impact the environment. While Europe have reached longer than the United States, there are different regions within Europe that have adopted digital financial

services quicker, Dietz et al. (2015) mention Scandinavia as having reached much further than Southern Europe. This would imply that Scandinavia is a good test market, and might lead to increased competition from international banks who wish to test what their home markets will find successful, by entering the Scandinavian markets and perform market tests. However, in China the insurance company Ping An built a bank, Orange, from scratch (Dietz et al. 2015). It took only six months to build the bank and within one year, it had 700,000 customers. This is a good example of a known brand, entering the financial services industry and quickly gaining a large number of customers. One must not forget that China is a very large country and 700 000 customers is still only a small piece of the Chinese financial services industry. However, this proves that it is possible to start a bank from the beginning and be able to manage a lot of new customers, with scalable solutions.

Competitor analysis, resource based view and SWOT are tools for analysing specific firms, however in these cases FinTechs are viewed as a strategic group and have to some extent similar attributes. Thereof in order to gain a clearer picture of FinTechs, the tools are used to analyse the FinTechs as a group. Moreover, the assessment model is built on, among others, these tools.

According to Nilsson et al. (2002) cost-leadership strategy can create competitive advantages if a firm has a large market share. Even though FinTechs do not have large market shares, they still are successful. One can argue that they succeed with this due to their in general lower costs, and focus on one particular service. Also due to the agility of the FinTechs and without the pressure from regulations, they are quicker and can create new technological solutions in a much faster pace than the banks. One example that a respondent stated was that FinTechs could have created Swish in a month while it took four years for the established banks, which shows the strengths of the FinTechs strategies. Moreover, as the FinTechs have only one channel, the digital relation, with customers this coordinates information and are more cost efficient.

When looking at the FinTechs from a resource-based view (Wernerfelt, 1984) one can notice that they do not have many tangible resources. Most of the resources consist of the technological solutions and the knowledge of the people within these firms. As Barney (1991) states, a firm's ability to create a sustainable competitive advantage depends on their resources, that must be valuable, rare, in-imitable and non-substitutable. In the case of FinTechs, one respondent stated that in order for venture capitalists to view a start up as an attractive investment object, they need to show among others a mix of competences. Moreover, if the FinTech have the resources needed to create a sustainable competitive advantage they increase their chances to attract capital from strong investors. This enables them to strengthen their financial resources which according to Liao et al. (2008) lowers the probability for a venture to fail.

An important strength of FinTechs, in a SWOT, is the ability to understand customer wishes and the process customers go through, as well as being more efficient, set lower prices and work agile. A major weakness of FinTechs is the lack of legacy and brand. A major threat for FinTechs are banks capital and their access to a customers and

customer data with the information that comes along. A great opportunity is the ability to take market shares in markets that have high margins and compete with firms that are used to a more oligopolistic market and not competition with services. FinTech have the great advantage of utilizing technology not as a necessary mean to meet customer requirement but as a tool to connect with customers and deliver value.

Peppard (2000) argue that financial institutions have historically lacked the culture of organising around their customers. Although they have possessed large amount of information and data of their customers they have not historically exploit these to its full potential. However, according to the respondents the banks have a good understanding the customers and know a lot about them. This can of course be biased since the respondents having this point of view were employed by a bank, but it could also be true since Peppard did not study Nordic banks, and banking culture might differ. Furthermore, the empirical findings give the example of how Klarna have made it troublesome for the establish banks to gather information of their customers purchasing behaviour. In this case Klarna has taken over the source of information and could hypothetically turn it into an advantage towards the banks.

### **5.1.1 Banks Resources and Capabilities**

While established banks do have the capital, strong brands, regulations protection, customer relations and trust, FinTechs do have investor traction and proven to deliver successful ideas with more innovative business models and efficient solutions. The banks do have a stable position in the financial industry, this may also be there fall, as high ground, this could however be a viewpoint of the particular bank. Many businesses that have been disrupted are taken aback. Whether banks will solely deliver a low margin product or continue to deliver results with extremely high margin, only future can tell.

### **5.1.2 FinTech Resources and Capabilities**

According to respondents since established banks are delivering wholesales solutions, they need to deliver value to a broad range of customers. However, many FinTechs have niched strategies which enables them to focus solely on a specific customer segment and increase the value creation in that segment. Dietz et al. (2015) also confirm the observation of respondents explaining that FinTechs tap customers on single deals with a single solution. Due to the established banks' focus on the mainstream customer, the rise of the FinTechs have created a challenge for the banks to identify small segments of customers which have the potential to grow large.

Many FinTechs are located in geographically concentrated areas, e.g. London, Silicon Valley and Stockholm. This can be viewed as clusters (Porter, 1998), where companies are both cooperating and competing at the same time. As FinTechs are approaching different segments within the financial service industry, they can cooperate at a higher rate than they compete with each other. The knowledge spill over and the utilisation of a cluster's scale can increase an individual FinTechs leverage to compete with the established banks. These clusters do also contribute to FinTechs' social network, and start ups' in general, which enables them create partnerships that could bring value into the FinTech. Since many FinTechs deliver a solution that is by nature more international

than the older banks that have the local heritage, when scanning the financial services industry, one should look beyond Stockholm.

While many FinTechs are not interested in becoming banks, there are both major advantages and disadvantages of this. The regulations that do not impact FinTechs is positive for these companies as this means less cost, furthermore FinTechs slip away from the potential risks of having to pay fees if an investigation would show that the FinTech is not compliant with current legislation that impact banks. This means that governance costs are less for FinTechs, and to create a product e.g. an app means less R&D costs as there are other rules for the FinTechs compared to banks.

### **5.1.3 Future Implications**

The theory chapter explain the concept of open innovation, and traditionally this have not been used within the financial industry to any higher degree. Reed et al., (2012), explain that open innovation is not a good thing in markets with high barriers to entry where value is captured anyhow. This has been the case in the financial services industry, but now more and more FinTechs are entering. This increasing competition and need of open innovation within the financial services industry. This is a way for FinTechs to lower entry barriers and something that have to be accepted by the incumbent banks. A single bank can not decline to participate as this would put it out in the cold alone, where the other actors are working together to solve the problems.

The view of one respondent claiming that banks will have to integrate many different supplier and work as a hub sounds like a possible outcome. This could be compared with the gaming industry where Sony Playstation, Microsoft Xbox and Nintendo have others performing the gaming innovation and the console is merely a hub. That banks start being a hub and provide infrastructure with other connected firms being suppliers of financial solutions is a possible future.

According to Bolton (1998), newly acquired customers are more vulnerable to new negative information than customers with previous experience and satisfaction. From this point of view banks are better of as FinTechs lack old customers, however according to one respondent there is in general a misbelief towards banks, even though customers might be satisfied. With this in mind, customers that are satisfied can get very frustrated if there are problems with their financial services, as another respondent point out. This means that the banks can not make too many mistakes before customers start to think about switching banks, according to a few respondents. However, for FinTech it can be so that customers have an increased understanding, as the companies are so new and usually priced lower than banks. The theory here is to some extent in conflict with the empirical findings. This would imply that depending on what negative information customers receive, the reaction is different if it is a FinTech or bank that is the supplier. If customers loose their money and FinTechs have severe issues, the safety of banks are likely to be more attractive for customers who might be hesitant to use new FinTechs. However, if the negative issues would regard e.g. downtime on the website or the smartphone app having some bugs, then customers would get furious with the banks, while the FinTechs might get away with these sort of issues.

Due to FinTechs' lack of legacy, it thus seems like they can more easily be involved in risky businesses. For old major banks, a single product delivered with less quality is threatening the entire banks. This makes incumbent firms more averse to risk, while FinTechs have the ability to accept risk to a higher degree. This can result in more radical developments by FinTech, and gives these types of companies a competitive edge.

As a respondent point out regulations will make banks more similar and possibly decrease the innovativeness of banks even further as more time is spent on fulfilling regulations and act as other banks. Another respondent point out that in SEB's budget for IT investment half is eaten up by compliance costs, Elliehausen (1998) also argues that one of the major cost for banks are to be compliant. This says something about how much the banks focus on being compliant compared to how much focus is on being innovative. Moreover, Elliehausen (1998) explain as regulations create higher barriers to entry, competition may decrease between the established banks and might encourage consolidation within the industry.

Respondents have explained that innovation can not solely come from within the bank. Together with the theory of not being first to market, but rather being the best, with reference to Apple in the tech business. The interviews have given the impression that acquiring is of importance, but, what is most important is to understand the FinTechs and where they are heading. Moreover, inter-organizational learning can be increased by minority investments in privately held start ups according to Wadhwa et al. (2016). New technology requires innovations and new capabilities to be created in the established banks. This argues for that the established banks should put more emphasise on venture capital investments with strategic objectives, which enables possibilities to capture some of the value that start ups are creating and at the same time create future competitive advantages. At the same time, if the venture is successful it can create attractive returns for the investor. Therefore, in order to avoid investing in start ups which lack certain important factors and at the same time screen the objects efficiently, an assessment model as created in this thesis are of high relevance.

As new technologies are re-shaping the financial services industry the established banks need to invest in activities and competences which support the shift to these. Moreover, the technical capabilities required by the new technologies must be put into relevance to the old ones, identifying which are competence destroying. Lastly, complementary assets must be created, if not already existing, in order to support the adoption to the new technologies. The interaction between these are argued to be important for firms in order to efficiently shift to new technologies (Tripsas, 1997). The FinTechs and their technical solutions are one main driver of the digitisation in the financial services industry, putting pressure on the banks to change the way they operate. As new technologies require less human interaction, e.g. in Robo advisory services, much of the old competences in the established banks are not required to the same extent. In that sense, the established banks need to invest in new competences and create complementary assets which support activities related to these, in order to smoothly shift and incorporate the new technologies. Therefore, it can be argued that established banks need to invest in, or partner up with, FinTechs which possess technologies and

competences which are considered to be somewhat disruptive for the financial services industry. This approach was emphasised by some respondents as they believe that most innovation will take place outside the bank.

The bankers state that they know what the consumers want, but really do they? If they do know, why wasn't a service similar to Tink provided years ago? If they really do know, how could they let a company such as Klarna enter the payments, or rather lending, business the way they have. How could banks miss out on these two very sought after consumer demands?

We draw the conclusion that the way for established banks to stay successful in the future is to continuously scan the market for future innovations, be open for collaborations and increase the time to connect with both newly started but also established firms, understand FinTechs in terms of how they work, what offer they bring, how clients perceive them and finally how to beat them at their own game. The result of acting in accordance to this would give the bank a way not to beat each and every start up, but beat each and every other established bank in the region. What is important is to understand the technology, customers and deliver the trust that allows you to service the customers as wished.

## **5.2 The Assessment Model**

The assessment model can give an objective view, together with the subjective view that is always used in investments. The example of driving a car can be given, if you drive in 100 km/h on the highway and you have to turn into a smaller road, you can possibly be speed blind. If you have meter that is objective, you will make a wiser decision of how you move forward. Even though the meter might be faulty with ten percent, you will make a better choice when doing the turn.

A fundamental difference between venture capital, private equity firms and corporate venture capital is the exit opportunities. While venture capital and private equity firms are planning an exit as trade-sale or IPO, with a common goal of 20 % internal rate of return, a strategic incumbent firm is not mainly buying in order to exit profitably. This type of firm would rather grow the company and keep it in the portfolio, or potentially incorporate the company into the existing firm. The different views of exit are not only fundamental in the end of whether a company is exited or not, nor is the line drawn during how a company is governed or not. Not even in the negotiation phase when the deal is signed as to whether the company is bought or not. There is a difference of which firms are passed by in the pre-screening process. While a venture capital fund or private equity fund, choose to look at the possibilities to exit with capital gain, incumbent firms shall look at the potential value add that a possible acquisition can give. This can be in terms of new product offering, better service, increased market share, cross-selling possibilities, utilisation of new knowledge or tools, higher degree of information and similar dimensions which increase the companies' resources and capabilities. Moreover, synergies are of importance in strategic acquisitions, however not viable in this case as the FinTech is defined as a start up.

Whereas both interviews and theory explain the need of a standardised processes. The need of expanding or explaining in words as some respondents explained and the theory and interviews statements about flexibility, indicate a trade off. The strong urge of flexibility was decided to be accommodated to some extent. If one should answer the question of what is the market size? Should 100 million be in the worse, good or better group, where should 2 billion be? This question can not have fixed groupings for every investor. As this would be dependent on what M&A strategy an investor has, therefore the questions that are of this type have no predefined grouping.

The addressed fact is that some questions will be of so high importance that unless it is fulfilled one should reject the company had some implications for the construction of the model. First of it was realised that one should divide the assessment model in a first phase and a second phase. In the first phase issues should be addressed that are of such high importance that if it is not fulfilled to the level that is needed, one should reject the entire company. With this in mind the model has been divided into two phases where the first phase will result in a decision of whether one should continue evaluating the company deeper or not. The questions that are addressed in phase two are conducted in order to decide how one should prioritise the company.

The respondents that were shown the model consistently wished for very few questions. As this model first is suppose to decide whether to continue screening the company or not, and then give an indication of how to prioritise there are a need for asking specific questions that can optimise the time for follow up valuations and due diligences. However, asking the right questions is dependent on many different factors and in each and every deal, there are some specifics that are not the same as in others. Martin Whitman, an American investment advisor and founder of Third Avenue Funds, conclude that there are only a few variables that count. Which these variables are is something that a pre-screening model have to find, however, the questions that are not aiding in finding the variables in the specific deal, only contributes with noise.

*"Based on my own personal experience – both as an investor in recent years and an expert witness in years past – rarely do more than three or four variables really count. Everything else is noise." - Martin Whitman*



## 5.2.1 Modules creation and exhaustive model aggregation

Table 2 - Model Overview

<b>FinTech Firm</b>					
<b>Firm Overview</b>					
<b>QUESTIONS TO ASK</b>					
<b>Phase I</b>					
Five questions determining if to continue or drop screening					
<b>Phase II</b>					
<b>Categories</b>	<b>Questions</b>	<b>Explanation of how to grade</b>			<b>Graded answers</b>
		1 2 3	5 6 7	10 11 12	
<b>Business</b>					<b>Average</b>
	Five business questions				Rankings
<b>People</b>					<b>Average</b>
	Five people questions				Rankings
<b>Technology</b>					<b>Average</b>
	Five technology questions				Rankings
<b>Maturity</b>					<b>Average</b>
	Five maturity questions				Rankings
<b>Risk/Other</b>					<b>Average</b>
	Five risk/other questions				Rankings
<b>Total Corporation Grade</b>					<b>Total</b>

The models that have been created were constructed in three sections, which can be seen in table 2. The complete details of the assessment is described in appendix. This as the researchers wished to fulfil the request of giving a quick overview of the company were an assessment could decide directly whether to drop the company or continue further in the screening. Firm overview aims to briefly describe the company and set a context for the assessment. Phase I is open and questions are fulfilled to some sufficiency degree, whereas in Phase II each question is graded with points. Phase II was constructed by analysing the empirical findings with codes, keywords etc. The five most important areas of interest seemed to be the business, people, technology, maturity and risk. Risk were put together with a few other questions of high importance that did not fit any of the areas. The five most important questions within these areas were decided upon depending on literature and empirical findings. When grading the firm an output model that is in the shape of a spider diagram, each spider diagram can then be compared with all other firms that are assessed. By doing this it is possible to see trends that can highlight if e.g. wealth management FinTechs are gaining maturity quickly or if payments FinTech have technology that can outcompete banks in the nearer future. A sample of the output is showed below of three different anonymised FinTechs, figure 5-7.

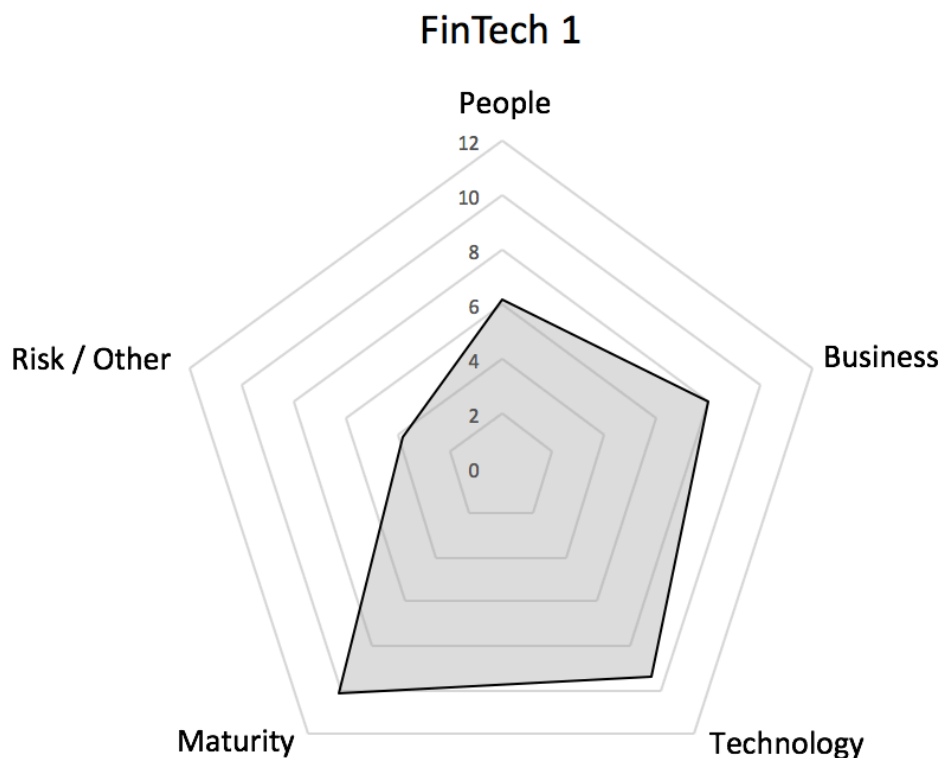


Figure 5 – Assessment of FinTech 1

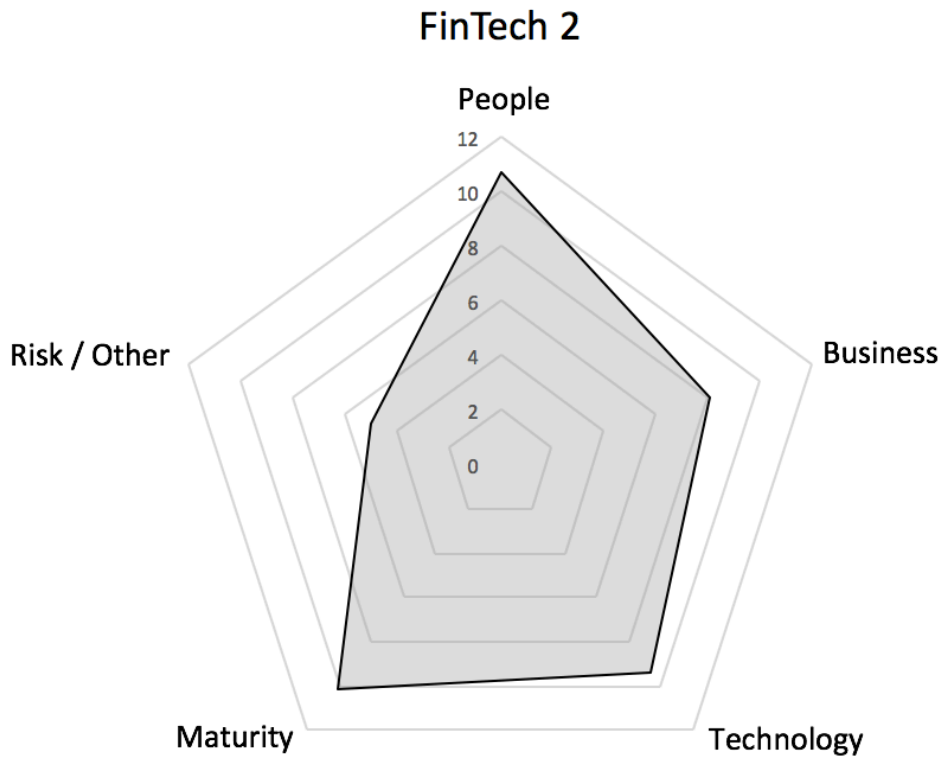


Figure 6 – Assessment of FinTech 2

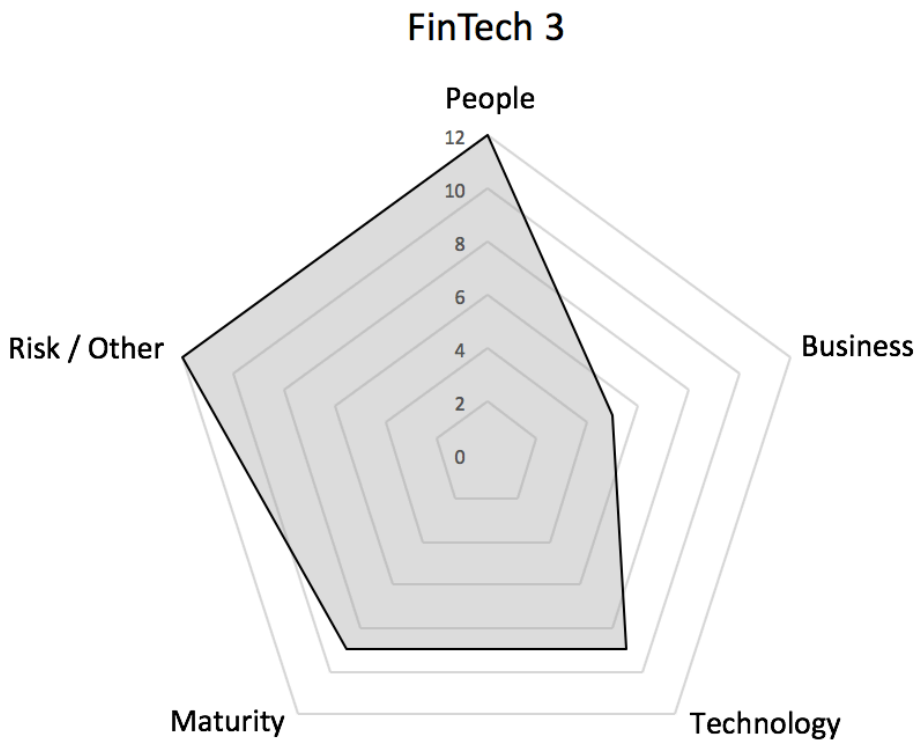


Figure 7 – Assessment of FinTech 3

## 5.2.2 Business Models

One major challenge for FinTechs are to prove that their business model is sustainable. Both theory and the respondents stress that a solid and competitive business model must deliver some actual value to the customer. There has to be an understanding of what problems customers, as well as possible customers, have and what the solutions might be. A service not delivering value is not viable long-term. As stated by Teece (2010), in order for a business model to be sustainable it must be hard to replicate. FinTechs which are sustainable have a business model that are solving a problem and deliver value for customers as well as consists of elements which are rare. These may include valuable partnerships or financiers with a successful track record. As these are indicators of FinTechs with competitive advantages, the banks need to identify these early in the screening process. If these investment opportunities are missed out, these FinTechs may constitute threats for the banks in the future. Furthermore, another important aspect of the business model which should be assessed are how well the customers are engaged by a FinTech, since it can provide economical benefits. Customer engagement can be done through loyalty programs which Verhoef (2003) argue can have positive effect on the relationship with the customers which in turn can contribute to a firm's profits. Therefore, continuous scanning of the environment is favourable for the established banks in order to keep track of these ventures, also argued by Babatunde and Adebisi (2012).

## 5.2.3 Technology

The business model can not solely create any value for customers if the technology behind it is not perceived as satisfying. Rogers' (2003) five characteristics can help indicate if a new technology is communicated properly with the customers in mind. If a technology has a strong relative advantage, i.e. it must be perceived better than existing technologies. Moreover, the technology must be compatible, less complex, easy to try and observe. If a FinTech's technology fulfil these requirements it increases its chances to be perceived as good by customers and be adopted by a wide range of users.

In regard to the compatibility of a technology, Rogers (2003) argue that it must fit with other components which are of importance for the users. Even though a technology is good, if it is not compatible it may not be adopted. If a FinTech is in this situation, they must rely on external changes to happen, if their product are to become relevant for the market.

The empirical findings explain that the flexibility of a FinTech's the technology is of importance to understand. Moreover, Porter (1983) argue that when products, or in this case technologies, are becoming more incremental and the design reach a level where they are most attractive for the customer. When screening FinTechs, this should be emphasised as a technology which is in line with the dominant design of the market have the ability to attract a large portion of customers. Furthermore, Klepper (1996) argue that actors which can not provide the dominant design to a competitive price might loose their business, this matter is further emphasised.

One aspect which was emphasised in the empirical findings was whether the technology developed by a FinTech is relevant to the where the company is today. This mean that if

a FinTech has focused on building the technology too good compared to the position of the market, they have spent resources on things that are not required. This may indicate that lack a business mind-set within the FinTech's team, which in turn must be solved if the company should be invested in. Moreover, when assessing FinTechs this must be identified because if not, an investment in such a company might be devastating due to that the firm create technological solutions which have no value for neither the investing firm or the customers. However, the technology must be able to scale in order for an established bank to find it attractive to invest in since their customer base is so large. One respondent stated that the venture's technological capabilities is therefore important to assess. By understanding the business environment requirements and turn these into technological development at the right point of time should be regarded as an indication of competitive FinTech.

Pisano and Teece (2007) explain that the different part of a decentralised system must be modular in order to create any value. This put pressure on the architecture and standards to meet the requirements. A technology which has a solid architecture can more easily make changes due to a modularity in the system. When evaluating a technology, one should consider this as an important aspect, since a FinTech with a good technology could make changes in an agile way and thereby fulfilling new demands when it is required.

By using the TRIZ framework, technologies can be forecasted (Fey & Rivin, 2005). The innovativeness of a technology can be identified when assessing from a TRIZ perspective. That could be if the technology is performing more functions than existing technology, if it can perform more actions with less operations, or if it requires less interaction with humans and thereby is more cost efficient. If technologies fulfil some criteria in the TRIZ framework it should be further addressed as a substitute to the current technology used.

#### **5.2.4 People**

Literature put much emphasise on the team and people behind new ventures, which was also found to be of high importance in the empirical findings. Many of the respondents was mainly concerned about what previous experiences that the founders had, which Cooper et al. (2014) explain as a part of the concept of human capital. The respondents most often referred to the previous experience of the people which concerns general human capital. Moreover, a few respondents stressed that the mix of competences within the team was of importance in order for a venture to have a chance to be competitive and sustainable, which literature refers to as management know-how (Cooper et al., 2014). Furthermore, according to one respondent the ultimate founder team would consist of one person being an expert in a certain domain, and the other having very strong technological know-how. The mix of competences together with specialised knowledge in a particular field constitute the third type of human capital, i.e. industry specific know-how (Cooper et al., 2014; Davidsson & Honig, 2003). Literature also present the concept of social capital, i.e. a team's ability to take advantages of their social network for the benefit of the venture (Adler & Kwon, 2002; De Carolis et al., 2009; Davidsson & Honig, 2003). Few respondents pointed this out as being an

important aspect in an evaluation of an investment object, and explained that this will attract intelligent people.

One respondent stated that dedication of a team is essential for a start up to be an attractive investment object for venture capitalists. This is also stressed by MacMillan et al. (1987) which argue that staying power is essential for a start up in order to have the chances to become successful. If a team lack the obsession and fire of getting work done, it will not contribute to any value into the investing firm nor achieve any attractive returns as they lack the ability to go through turbulent times.

Another people related factor that indicates whether a FinTech may be an attractive investment object are not, are the already existing financiers. One respondent explained that a start-up with a strong well-known business angel can indicate that the FinTech may have potential high future value. This also goes if the another venture capital firm have founded a start up. Moreover, well-known financiers indicate that a FinTech have legitimacy in their statements and that there is a belief in what they claim they are able to execute, which should be regarded as a strength.

Although the respondents' view of the people dimension was more narrow than literature's, it shows some extent of insights of its importance. Roure and Maidique (1984) stress that another important factor behind competitive start ups is that the founders have had previous jointly working experience. If they have been successful on previous projects, it contributes to a stronger track record and human capital. This make the investment object more attractive as they have shown an ability to execute successfully. However, as people are presented as one of the most important factors of a successful venture, there is a need to emphasise this in the assessment model. As one respondent stated, as long the team consists of the right abilities they can change and twist technologies and business model when it is required. Therefore, new ventures that show great extent of both human and social capital have the ability to survive longer and become successful by developing solid technological solutions while utilise these in competitive and sustainable business models.

One respondent stated a competitive business model shows that the founders of a venture have good insights of the ecosystem which they are operating in. Moreover, good insight into how developed a product is in terms of e.g. scalability, imply the professional level of the technological knowledge is high. Not to forget is Teece (2010) arguments about how business models do not have to include new technology, it is rather the founder's understandings of the market and customers which are essential in order to create a successful venture.

### **5.2.5 Maturity**

Dotzler (2001) argue that market size of a start up's business is of importance for venture capitalists before deciding whether to invest or not. This goes for corporate venture capital as well, which the respondents stressed. If the potential growth of the market is low, the chances of yielding high financial returns are low. Furthermore, if the market is small the investing firm might not receive any strategic insights that can

applicable and competitive at the markets where they are presents. This put emphasise on that the arguments of the respondents and Dotzler (2001) are relevant in the case of established banks when screening FinTechs.

In cases where a FinTech is alone in its market it must show some kind of stickiness which were argued by a few respondents. If a market lacks a track record and do not show any signs of growth potential or stickiness, the value to be capture are considered to be small. If there is a clear sign that competition exists in the market where a FinTech is present, it indicates that there are profits to be capture within that market. Dess and David (1984) explain that being part of a strategic group, i.e. share similar strategies in a market, correlates with growth and profitability. Therefore, the track record of a business segment can determine whether a FinTech compete in an attractive market or not.

### **5.2.6 Risk/Other**

For now, regulators have accepted the moderate risk profiles of most firms. This might change as scalability increases and/or when there are some high profile failures within the industry. Some respondents stressed that if investing in a FinTech it must either be compliant or show the ability to become compliant when required. Otherwise, if an established bank were to invest in a FinTech which to not follow the regulations it might be dangerous and hurt the reputation of the bank.

Corporate venture capital investments aim to provide inter-organisational learning according to Wadhwa et al. (2016). Therefore, it is relevant to see whether an investing bank can provide a FinTech with its resources and capabilities and vice versa in order to create value which they can not solely create at their current state. If there can be no exchange of competences between the investor and the FinTech they must be acquired in order to yield any strategic insights. Moreover, the long-term economics of the Fintech sector are still untested. We need to go through a credit cycle first before we can see the true underlying strength of Fintech.

Another important aspect when screening FinTechs are to identify their reputation among customers. McKelvey (2002) describe that when investigating an investment object, the customers' view of the object can provide valuable insights for the investor. When screening firms, the customers can help identify whether a FinTech's products and services are satisfying the customers. If clients view of a FinTech is positive, it should be regarded as a strength and must be identified in the assessment model.

## **5.3 Blockchain Technology**

It was found from the interviews that blockchain is something that is going to have large impact in the financial services industry. The researchers share an aggregated view of that blockchain is an important aspect to be aware of since it is tightly connected to the rise of FinTechs. Treat et al. (2016) argue that the blockchain technology will mature in 2025 and thereby have been adopted by the mainstream market and an integrated part of the capital markets ecosystem. Since this thesis mainly focused on developing a pre-screening process for established corporations. However, there is of value to discuss

blockchains in short due to the level of impact it may have on the financial services industries. The strength of the blockchain technology are that it provides the users with real time transactions and settlement as well as it assures transparency and consensus of data. However, the respondents stated that there are challenges for established banks to adopt to blockchain such as that there are no viable standards yet and it will most likely result in regulations. Moreover, blockchain will also disrupt current business models not only concerning payments.



## 6. Conclusions and Recommendations

This thesis has had an academic purpose as well as a practical one. The purpose of conducting further research within the area of “incumbent firms’ process of capturing knowledge and information in corporate venture capital investments” have been carried out, which is needed according to Maula et al. (2013). The other strategic purpose of setting the standard for how SEB shall monitor, understand and evaluate FinTechs have also been fulfilled.

Charles Darwin stated “*It is not the strongest of the species that survives, nor the most intelligent, but the one most responsive to change*”. When an industry is transforming and new entrants begin to compete with viable solutions, incumbents have to realise that there is a need of change in the industry and act accordingly to prosper in the future. In the end it is not the number of FinTech that is the threat, it is the potential value that FinTech can create. From this thesis the conclusion is drawn that even though many FinTechs can appear to have an unclear business model, there is a large amount delivering value and which will become more and more competitive in the future.

It is of high importance that the established banks understand the urge of innovation and change. Moreover, as it is likely that innovation will foremost take place outside the banks, incumbent companies should in order to avoid a future market share loss first and foremost monitor the market and future innovation. Have dedicated professionals working with a clear cut aim of what the venture capital division is suppose to achieve. This should be done both through a structured continuous screening process of the market, but also give the ability for trend scouts to dive deeper in the underlying business model and technology to understand the fundamentals. While FinTech is a large threat for incumbent banks, the banks also need to keep an eye on neo-banks. Banks must prepare for neo-banks to enter and in the view of the researchers, banks should look at what telecom companies have done. To learn from other industries is important and in this particular case telecom companies have created subsidiaries where the firms are creating their own solutions. Moreover, it is increasingly important to understand customers and gain customer insights, but also utilize other firms and collaborate with partners. Thus banks should start to look at other stakeholders’ demands and wishes, this is likely to take a large effort for some banks.

This thesis concludes that an assessment model in a pre-screening stage should consist of two phases. In the first phase the investigated start up must be evaluated on certain variables to even be considered for furtherer screening. The second phase constitute of variables which will help indicate how well a start up may deliver value to an investing firm. As this model is a decision tool for whether a more thorough due diligence should be considered or not, the variables are indicators that distinguish potential successful start ups from unsuccessful. From the analysis of the findings, this thesis concludes that the five parameters which should be evaluated are business, people, technology, maturity and risk/other. However as is stated by Martin Whitman there are often just a few variables that matter, while the other parameters just are noise. In order to correctly

assess a FinTech one must therefore decide which parameters that in a specific case is of highest importance and give most emphasise to these.

For future academic research it is recommended to study how corporate venture capital can tie equity-linked incentives to the holdings performance, as Venture Capital and Private Equity companies often do. Complications arise when integrating company in the ownership company. More research has to be performed in terms of how a governance model should be implemented for using an assessment model similar to the one developed in this master thesis. Also, further research has to be performed in order to understand the specifics for certain high technology segments. In order to evaluate e.g. wealth management FinTechs or online casino gambling platforms, it is recommended to add modules upon the constructed model.

In order to understand how the future of financial services are likely to evolve, and what the end state possibly might look like there are numbers of area that are of importance, for the Swedish market in particular the following might be of particular importance. To understand how incumbent firms, that have been able to reap the benefits of being in what can be interpreted as an oligopoly market, act when new entrants move to market and start to take market share as well as lower the general margins in an industry. In order to understand this, many different cases can be studied. Certainly those industries that are moved forward through innovation, but also the cases which are impacted by the globalisation can yield understanding of what mechanisms are impacting in similar cases.

For FinTechs it is recommended to focus on the customer experience, which is exactly what most FinTechs does. Moreover, FinTechs should entertain a lot of connections and collaborate with other firms in clusters. By focusing on groups that established banks currently are not interested in the likelihood of success can also increase and the opportunities to gain traction can be higher, however as the customer segment would increase banks would gain higher interests as well. FinTechs should also utilize the advantages of being small and let customers create a connection to the brand that is more of a collaboration than two sides of a deal, this has been successfully performed by e.g. GoPro and Sonos. This is something that the banks will never manage to do and will be a huge advantage for FinTechs.

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# Appendix 1: The Assessment Model

FinTech Firm			
Category			
Established			
CEO			
Location			
Latest Interim Revenue			
# of Clients			
Contact Information			
Current Ownership Structure			
QUESTIONS TO ASK			
Phase I			
			Sufficiency
	1 What is the market size?		
	2 Are the business model fundamentally making sense?		
	3 Are the team energetic and complement each other with different profiles, where the domain expertise and the		
	4 What is the customer acquisition cost and with the present stage in mind, is the traction and momentum repr		
	5 In an overall assessment is the conditions for this firm providing a positive outlook?		
Phase II			
Categories	Questions	How to grade	Graded answers
		Points can be given between 1-12 where 1 is the worst and 12 is the best. Please use; worse, average, better. As a foundation in order to set into performance category and thereafter refine within the category	
		1 2 3 5 6 7 10 11 12	
Business	Importance of question	No value	
Business	1 How well is value created for someone? Little to non vValue are cre:Value are create		
	2 How well are customers engaged? To a low exte Consumers arConsumers are e		
	3 How have the customer base evolved, is the churn rate reasonablHigh churn raThe customerLow churn rate		
	4 How well is the business model a good fit with the pIs lending lev:The business The business The business m		
	5 What is the current status of different relationships, such as partnThere are no There have beMany good relat		
People		No value	
People	6 Do management have business as well as domain expertise and e:The business To some exte There are multi		
	7 Do management and owners have technology-experience, track rThe technoloTo some exte There are multi		
	8 Do management have previous jointly work experience and can shNot at all Less than halfMore than half		
	9 How dedicated, driven and hard-working is the team? Not at all Team are woEngaged and de		
	10 Are financiers well known and acknowledged business angeles or \Investors are Have investoInvestors are ve		
Technology		No value	
Technology	11 How flexible and compatible with the dominant design is the tech Dominant de:There are uncArchitecture is f		
	12 How well are the product recieved by customers, in terms of likea Customer useCustomers thCustomers like t		
	13 How well are technology built in comparison to where the compa:Technology srTechnology ciThe technology		
	14 How well are the technology performing, and are the choice of te:The advantagThere are sonFrom an effici		
	15 To what extent can technology be built upon to enhance safety, cTo change daIt is possible tTechnology is ba		
	16 Do external technological changes need to happen or only internaTechnologicalTechnologicalTechnological in		
Maturity		No value	
Market	17 How has the consumer base of the market evolved? Low interest lConsumers h:Attraction is hig		
	18 What is the total expected market? Not sufficientSufficient, M:The market has		
	19 What is the status of compliance? Poor Currently Overseasable fut		
	20 What are the expectation of new regulations or standards e.g. ISCA lot of uncerIt is an open rModular compo		
	21 Track record of business segment? No track recoTrack record rTraditionally the		
Risk/Other		No value	
Other	22 Depence of external factors? In order for ciLarger firms iiCompany have s		
	23 To what extent is the company affected by credit cycles? Company is h Affected to scEither not affect		
	24 Clarity and legitimacy of management, owners and firms statmen! Companies poThe companyThird party or re		
	25 Are there any evident possibility of acquirer to eliminate a bottlerInvestment is Acquirer haveAcquirer have g		
	26 What are clients of the target saying about the company? No client opirClients can prClients are very		
Total Value of Corporation		No value	

## Appendix 2: Detailed Sections of the Assessment Model

### Firm information

- Category
- Established
- CEO
- Location
- Latest Interim Revenue
- # of Clients
- Contact Information
- Current Ownership Structure

### Phase I

1. What is the market size?
2. Is the business model fundamentally making sense?
3. Are the team energetic and complement each other with different profiles, where the domain expertise and technology knowledge is represented?
4. What is the customer acquisition cost and with the present stage in mind, is the traction and momentum representable?
5. In an overall assessment is the conditions for this firm providing a positive outlook?

### Phase II

#### People

1. Do management have business as well as domain expertise and experience, track record, that are relevant?
  - a. The business experience is fairly poor
  - b. To some extent managers have business experience from banking or financial services
  - c. There are multiple persons who have banking or financial service experience with good insight in the specific business
2. Do management and owners have technology-experience, track record, that are relevant? E.g. FinTech, architecture or other technology
  - a. The technology experience is fairly poor
  - b. To some extent managers have technology experience in relevant areas
  - c. There are multiple persons who have relevant technological experience with good insights
3. Do management have previous jointly work experience and can show successful team track records?
  - a. Not at all
  - b. Less than half of the team have had previous jointly work experience

- c. More than half of the team have had previous jointly work experience
- 4. How dedicated, driven and hard-working is the team?
  - a. Not at all
  - b. Team are working with engagement but lack the extra spark and do not engage 100 percent
  - c. Engaged and dedicated to 100 percent, incitement is given by personal excitement and high degree of equity in the venture
- 5. Are financiers well known and acknowledged business angels or VC investors?
  - a. Investors are mostly family, friends and fools
  - b. Have investors which are engaged and believe in the start up
  - c. Investors are well know and have good track records

### **Business**

- 6. How well is value created for someone?
  - a. Little to non value is created
  - b. Value are created in one dimension to some extent
  - c. Value are created with multiple drivers in several dimensions, or in one dimension extremely well
- 7. How well are customers engaged?
  - a. To a low extent, there is not enough clarity in how to reach service desks, or availability is poor
  - b. Consumers are interactive with the service, Consumers have good serviceability where it is possible to reach consumer services
  - c. Consumers are engaged through network effects or are socially impacted, and customer service is taken to new levels
- 8. How has the customer base evolved, is the churn rate reasonable and can traction an momentum be achieved?
  - a. High churn rate
  - b. The customer base is evolving and churn rate is within acceptable ranges
  - c. Low churn rate and company have or are about to gain traction and momentum
- 9. How well is the business model a good fit with the purpose?
  - a. The business model is by definition not able to compete with other business models due to a poor fit
  - b. The business model is nothing out of the ordinary, but it is a good business model that is credible
  - c. The business model is innovative and competitive, or is very efficiently utilizing an older business model with leverage
- 10. What is the current status of different relationships, such as partnerships, accelerator program, cluster or have other references?

- a. The business model is innovative and competitive, or is very efficiently utilizing an older business model with leverage
- b. There have been collaborations with successful results and the company's is attracting companies, many good relationships, with external networks
- c. Many good relationships, both horizontally and vertically, with external networks also on personal levels. Interest from many program administrators have risen collaborations are increasing

## **Technology**

11. How flexible and compatible with the dominant design is the technology?
  - a. Dominant design is not set yet or the architecture is not within the limits of dominant design
  - b. There are uncertainties of the dominant design, but the architecture is flexible and relevant for the future
  - c. Architecture is flexible and compatible with the current dominant design
12. How well is the product received by customers, in terms of likeability of technology?
  - a. Customer use the product to solve the problem but do not think about the service in itself
  - b. Customers think the product is convenient and are satisfied
  - c. Customers like to use the product and are engaged in the process
13. How well is technology built in comparison to where the company are now, are the priorities of trade offs sensible?
  - a. Technology solution is overlapping with other interfaces or is difficult to untangle from other perspectives such as compliance, IP etc.
  - b. Technology can be adapted to work with other solutions but lack a standardized interface
  - c. The technology is built in a modular way that creates possibility to attach with other components
14. How well is the technology performing, and are the choice of technology a good fit for business model, is it efficient?
  - a. The advantages from an operations perspective is low
  - b. There is some advantage, but also disadvantage, within either speed, cost or flexibility
  - c. From an efficiency point of view there are advantages of high magnitude within either speed, cost or flexibility
15. To what extent can technology be built upon to enhance safety, compliance and security, can future threats be mitigated through technology changes in a favourable way?
  - a. To change data is complicated and takes a lot of resources

- b. It is possible to perform changes, however neither more complicated or easily than anything else
  - c. Technology is based on a more modular setting or gives the possibility for many adaptations fairly easy
16. Do external technological changes need to happen or only internal for the company to be viable?
- a. Technological improvements have to be done outside of the firm in order for the firm to be viable
  - b. Technological improvements have to be done within technology that is used internally for the firm to be relevant
  - c. Technological improvements are incremental and the foundation of the offer is working

### **Maturity**

17. How has the consumer base of the market evolved?
- a. Low interest from consumers have been showed, and the willingness to pay is low
  - b. Consumers have shown appreciation of the solution, but willingness to pay is not turning profitable for the solution
  - c. Attraction is high of the solution and consumers are quickly adopting and spreading word of the product
18. What is the total expected market?
- a. Not sufficient, there are few who is interested in paying for the service, and those who can imagine to pay are not generating any higher profit
  - b. Sufficient, Market are likely to grow, but the growth is quite slow
  - c. The market has large potential is growing quickly and the solutions is requested by many users with a high willingness to pay, total market is more than sufficient
19. What is the status of compliance?
- a. Poor
  - b. Currently
  - c. Foreseeable future
20. What are the expectation of new regulations or standards e.g. ISO that can change the business climate?
- a. A lot of uncertainties a no standards are expected with a dominant design not settled yet, or dominant design and standards are in conflict with solution, Regulations are expected to change a lot, or be very dramatic, resulting in a high cost of change or not being able to be compliant
  - b. It is an open market with fairly low regulation but the dominant design is settling towards standards that can be supported by company's



resources, there are some efforts that is needed in order to comply with future expected regulations, or there is possibly future regulations limiting profitability in this market

- c. Modular components and interfaces support a standardized system; Target is expected to continue being able to stay compliant in every measure

21. Track record of business segment?

- a. No track record of business segment or signs of similar business being profitable
- b. Track record of business being viable, but not delivering higher returns
- c. Traditionally the segment have been profitable, increased innovation have enabled higher returns or similar businesses have proven to be highly profitable

### **Risk / Other**

22. Dependence of external factors?

- a. In order for company to have viable solution other external technical progress have to be achieved
- b. In order for company to have viable solution other external technical progress have to be achieved
- c. Company have a viable solution and can successfully show results

23. To what extent is the company affected by credit cycles?

- a. Company is highly affected by credit cycle and risk bankruptcy over an entire credit cycle
- b. Affected to some extent and might not be able to generate profit during certain credit cycle periods
- c. Either not affected at all, or to a very low extent

24. Clarity and legitimacy of management, owners and firm's statements?

- a. Company's position is unclear
- b. The company is perceived as legitimate and clarity is shown
- c. Third party or recent institutional owners, that are credible, can vouch for company and its legitimacy

25. Is there any evident possibility of acquirer to eliminate a bottleneck or leverage with firm resources and capabilities?

- a. Investment is mostly from a monetary point of view
- b. Acquirer have some knowledge and can give certain benefits for the company
- c. Acquirer have good possibilities of delivering advisory and govern actively

26. What are clients of the target saying about the company?
- a. No client opinions can be provided or the opinions are reflecting the company negatively
  - b. Clients can provide fairly good opinions that show company performance in a neutral way
  - c. Clients are very satisfied and provide strong recommendations