

How FinTech-enabled business model innovations are reshaping the investment advisory sector.

Are FinTech-enabled firms like Beterinbeleggen.nl and Vetr disrupting the value chain?

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ABSTRACT

In the past few years, a new trend has been on the rise in the financial services sectors: FinTech. This trend has exposed the financial sector to advancements in technologies, enabling the innovation of business models and better products and services at competitive prices. With the financial markets opening up to new entrants that have built their business model around new technologies, companies may wonder how the FinTech-trend is changing and even disrupting the industry and its sectors. Therefore, this study aims to identify how FinTech impacts the financial sectors and takes the investment advisory services sector as an area of focus. Moreover, the FinTech-trend is compared to a trend previously seen in the telecom industry, where the value chain transitioned to a value network as a result of the entrance of new business models that were built around new technologies. To see how FinTech impacts this sector, the investment advisory and research firms Beterinbeleggen.nl and Vetr have served as case studies, representative for the business model innovations occurring in the financial sectors. At hand of these case studies, it was found that FinTech drives innovations and enables the business models to offer new services, improve customer experience, personalize services, and reduce prices; i.e. FinTech helps to improve the business models' customer-centricity by making products, services and interaction better, faster, easier, and cheaper for customers. It appears that FinTech is similar to the telecom-trend; as such, it can be expected that the more traditional value chain of activities will become a value network of interrelated, FinTech-enabled firms. Yet, even though the similarities are strong, only time will tell whether this will actually happen.

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Keywords

Business models; business model innovation; FinTech; canvas framework; value network; disruption

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1. INTRODUCTION

In the past years, there has been an important trend going on in the financial sector: digital innovations and technology-enabled business model innovations (Philippon, 2016). This trend is disrupting the entire financial industry in all its sectors, changing its structure and providing new ways of creating & delivering financial services (Philippon, 2016; Lee & Shin, 2018). More commonly, this trend is known as FinTech. Recent reports by Accenture (2016) & Holland FinTech (2015) have shown that FinTech-based ventures have raised \$5.3bn already in the first quarter of 2016; a 67% increase in comparison to the same period in 2015. Also, the trend is expected to shift approximately \$660bn in revenues towards the FinTech area and away from traditional financial institutions. These numbers show how powerful the disruption of FinTech on the industry and its structure is and is therefore an important feature of FinTech. It fundamentally changes the way that firms are doing business – for both existing and new firms. Incumbents were taken by surprise and will have to adapt to new technologies and customer needs; whereas start-ups can build their business model around these disruptive innovations and needs. (World Economic Forum, 2017; Financier Worldwide, 2017).

Such disruptive innovations can also be found in the investment management sector. Take for example the rise of robo-advisors such as Wealthfront, who use automation and algorithms to determine the best investments for its client portfolios; or the FinTech firm Ayasdi, which utilises Big Data-driven analyses to optimise investments & portfolios (WEF, 2017). According to a report by PricewaterhouseCoopers, FinTech-innovations like these threaten traditional business models (PwC, 2016). It is impacting the entire ecosystem for investment firms (e.g. in client relationships), through a variety of sectoral trends. These trends include -but are not limited to- increased sophistication of data analysis; omnichannel interaction and distribution models; and alternative, innovative business models that use FinTech to leverage opportunities in the investment marketplace (e.g. through crowdsourcing platforms for investment). (PwC, 2016)

It is exactly these trends that are reshaping the marketplace of investment advisory services; how useful information is collected, analysed and dispersed; inter-actor and -firm relationships; and the distribution of activities (PwC, 2016; Lee & Shin, 2018). Take for example Big Data analytics, which uses algorithms that enable personalised, customer-centric services; or the facilitation of investment communities by social media.

This research will focus on how new, FinTech-based business models change and impact the investment advisory services sector. The business model innovations are said to disrupt the sector, and this research aims at finding out how FinTech enables businesses and business models to do so. Related to this goal is the research question: “*How do FinTech-enabled business model innovations impact the investment advisory services?*”

The research will discuss relevant literature to establish a solid basis, after which the research provides a network structure overview of the traditional investment advisory marketplace and actors. Case studies are conducted to show how FinTech enables firms to disrupt and impact the network structure.

Section two of this paper continues with a literature review of the key concepts: FinTech, Business Models, Business Model Innovation and Value Creation. Section three elaborates on the network structure of the investment advisory industry. Section four contains the results of the case studies. Lastly, section five concludes and discusses the results of the research.

2. KEY CONCEPTS

2.1 FinTech

FinTech is quite a buzzword nowadays, and different institutions and researchers give various definitions to the concept. Seen from the perspective of a firm, a FinTech is defined by the World Economic Forum (2017) as “*a small, technology-enabled, new entrant to financial services*”, thus excluding incumbent financial firms incorporating new technology and large technology firms venturing into financial services from the definition. PricewaterhouseCoopers (2016) suggests that FinTech is a segment of firms that are in both the financial and the technology sectors, which give rise to innovative financial products using the firms’ expertise in technology.

However, most definitions in the literature see FinTech as a phenomenon that occurs in the financial market. Chiu (2016) finds that FinTech is an oftentimes disruptive combination of technological and financial innovation that alters how firms conduct finance. She suggests that there are several ‘waves’ of FinTech that can be put in a historical context, and that the current wave concerns the integration of advanced digital technology into financial activities. The former concept includes, for instance, advanced databases, algorithms and artificial intelligence, while the latter could be lending, investment management or fund-raising.

Philippon (2016) says: “*FinTech covers digital innovations and technology-enabled business model innovations in the financial sector*”, and that these innovations disrupt industries, allow for new products and services, and that through FinTech the access to the financial market is democratised (i.e. greater access to new entrants).

Lee & Shin (2018) make another interesting observation. They see that the current FinTech innovations are the result of a combination of earlier technological advances, those being: e-finance, social networking services, artificial intelligence, big data analytics, and internet and mobile technologies. These innovations allow start-ups to create differentiated business models that are fundamentally distinct from that of traditional financial firms, and that those start-ups have a competitive advantage based on personalised niche services, data-driven solution, and an innovative culture. As a result, FinTech becomes disruptive to the existing financial industry “by cutting costs, improving quality of financial services, and creating a more diverse and stable financial landscape” (Lee & Shin, 2018).

For this study, FinTech is defined as a structurally disruptive change in the financial markets that is enabled through the embedment of digital technology innovations with financial activities, resulting in innovations of the products & services offered in the financial services industry.

2.2 Business Model

In this research, another important concept is that of the business model. According to Ovans (Harvard Business Review, 2015), it is -in a sense- like art: one recognises it when one sees it, but other than that it is quite difficult to define what a business model is. A simple explanation of a business model is one’s plan to make money, according to Lewis (2014) in review of the dot.com bubble.

Peter Drucker (1994) and Magretta (2002) are not as interested in the monetary aspect, but instead agree on the fact that business models are based on a set of assumptions. These assumptions are about “customers and competitors, their values and behaviour, [...] about technology and its dynamics, about a company’s strengths and weaknesses.” (Drucker, 1994). Magretta adds that a good business model answers these questions and explains the underlying economic logic on value creation to customers at a

cost that is acceptable. She continues to add that, essentially, a business model is twofold: in the first part, it is about the activities and processes required to *make* something (i.e. the product or service); in the second part, it is about selling that something. Teece (2010) also finds that the business model is, in its core, a conceptual model that defines value creation for and delivery to customers, after which the value is converted to profits. A well-designed business model, according to Teece, is differentiated and thus more likely to earn higher profits. Again, this differentiation is based on management's perceptions on customer needs and values, and how to best organise the company's activities.

Osterwalder famously built on several similar ideas and created the business model canvas, which outlines the important aspects of a business in which the assumptions need to be made explicit. Once these assumptions are made explicit, the business model "describes the rationale of how an organisation creates, delivers, and captures value" (Osterwalder & Pigneur, 2010).

For this study, a business model is defined as the explicit expression of the assumptions about customers, competitors, markets and the dynamics and values of these, that describes how an organisation creates, delivers and captures value.

2.3 Business Model Innovation

Business model innovation has been found to be a high priority on the list of managers. Amit and Zott (2012) reported that a study by the Economist Intelligence Unit found that 54% of the managers prefer business model innovation of product or process innovation, and that a study by IBM delivered similar results. But what exactly is business model innovation, and why is it important?

Business models have been defined earlier in this research as a conceptual model that explains how a firm creates, delivers and captures value, based on a set of assumptions regarding customer needs and market dynamics (Drucker, 1994; Magretta, 2002; Osterwalder & Pigneur, 2010; Teece, 2010). Whether or not it is implicit or explicit, each firm pursues a business model that allows the firm to create value and thus make a profit (see part 2.1.2 for the review on what value creation is). Additionally, how a firm does its business (i.e. makes decisions about what to sell and how to sell it), also has its implications for its cost and revenue structures (Girotra & Netessin, 2014). If a business model regards a set of key decisions about a firm's value creation, delivery and capture processes, then business model *innovation* refers to changes about these decisions and thus the way a firm conducts its business (Girotra & Netessin, 2014). A firm that innovates its business model is then essentially adapting its business model to a more optimal level, for example to create more total value or to capture a larger share of the value created, and thus contribute to its success (Chesbrough & Rosenbloom, 2002).

This definition implies that business model innovation regards an adaptation to a firm's current operations and activities. Amit and Zott (2012) suggest that such changes then occur in one or more of three areas of the firm: its content (activities that create value), its structure (the linkage of these activities), or governance (about the entities that perform these activities). For instance, the firm can add new activities by performing backward integration; adopt services that facilitate its activities; or, choose to franchise (part of) its products & services to another party. However, adaptations to the business model do not necessarily have to follow an internal change in the way of doing business. Often, business models are adapted following an innovation to a product or service itself as well, similar to Teece's (2010) idea that

business models new to the firm can facilitate or represent the innovation itself. Christensen and Hwang (2008) also find that a potentially disruptive technology new to the firm can create great value when it is embedded within an innovative business model that delivers more affordable or accessible products and services.

The reviews discussed above may give the idea that business model innovation only occurs in existing firms with existing business models, by changing the elements of it or adapting those business models to innovations. Quite the opposite is true, in fact; the ideas of business model innovation discussed in several articles are equally applicable to innovative business models by new entrants (Amit & Zott, 2012) and for new firms that build a disruptive business model around a disruptive innovation (Christensen & Hwang, 2008). There is, however, a fundamental difference in how each group (existing firms or 'incumbents' vs. new firms) approach business model innovation. As Chesbrough and Rosenbloom (2002) note, innovations to the incumbent's business model are influenced by its dominant logic, i.e. a set of heuristics, norms and beliefs within a firm based on previous actions and experiences (Prahalad & Bettis, 1986). This eventually creates a bias towards "new" business models that are familiar to the firm, which may not be innovative enough to ensure that the new technology or innovation creates value for the firm. New entrants or start-ups, on the other hand, are less constrained by such a dominant logic and can build their business model "from scratch" whilst not being held back by these existing beliefs and way of doing things (Chesbrough & Rosenbloom, 2002; Christensen & Hwang, 2008). For example, as Zott and Amit (2001) have noticed in new entrants in the e-business, is that those firms often innovate using new mechanisms, technologies and structures not present in incumbents.

2.4 Value Creation

Throughout the above sections, this research has mentioned the term "value" several times already. In this short section, it is explained briefly how literature views value creation and how various theories explain how value is created in a firm. Porter defines value as: "the amount buyers are willing to pay for what a firm provides them. Value is measured by total revenue [...] A firm is profitable if the value it commands exceeds the costs involved in creating the product." (Porter, 1985). If value expresses a certain worth to buyers, then value creation regards how the firm manages to produce this worth. Taking on this perspective, how a firm creates value is explained by several theories founded in or given by literature.

Porter (1985) developed the value chain analysis to explain how firms create value. His framework explores the configuration and linkage of a firm's activities that enables it to potentially add value, whilst actual value is created by differentiation along this configuration that results in lower buyer costs or raise buyer performance. He further suggests that differentiation and thus value creation is driven by factors such as policy choices (what activities to perform and how), activity linkages (within value chain or with partners), timing, activity sharing, integration and scale (Porter, 1985, as seen in Amit & Zott, 2001). This framework also suggests that value creation opportunities may arise from new combinations of information, products & services, innovative configuration of transactions, and the reconfiguration and integration of resources, capabilities, roles and relationships.

Schumpeterian innovation, as introduced by Schumpeter (1934), poses that new value creation comes from technological change and innovation, which is seen as a discontinuous change resulting from innovation. He also suggests that this innovation is then the

source of value creation. Schumpeter (1934) then continues to add that technology plays a key role in combining resources in new ways, as to deliver new products & services, discover new market opportunities, create new markets, or reorganise the industry structure.

The resource-based view (RBV) takes the view that a firm's unique bundle of complementary and specialised resources and capabilities lead to value creation (Penrose, 1959; Wernerfelt, 1984; Barney, 1991; Peteraf, 1993; Amit and Schoemaker, 1993; Amit & Zott, 2001). An extension to the RBV is the dynamic capabilities approach, which should enable firms to create and capture value (Teece et al., 1997). Eisenhardt and Martin (2000) give some examples of value-creating processes under the dynamic capabilities approach, such as product development, knowledge creation, and alliance formation.

Strategic networks are "stable interorganizational ties which are strategically important to participating firms. They may take the form of strategic alliances, joint ventures, long-term buyer-supplier partnerships, and other ties" (Gulati, Nohria, and Zaheer, 2000). According to several authors, strategic networks can create value in various ways: they allow firms to share risk and generate economies of scale and scope (Katz and Shapiro, 1985; Shapiro and Varian, 1999), share knowledge, and facilitate learning (Anand and Khanna, 2000; Dyer and Nobeoka, 2000; Dyer and Singh, 1998), and decrease the time to market (Kogut, 2000). Strategic networks can prove especially valuable for start-ups as they provide opportunities to use capabilities and information of partners in the network which would otherwise not be accessible for small firms (Baum, Calabrese, & Silverman, 2000).

2.5 Value Creation in the Context of Business Model Innovation

In the sections above, the constructs of business model innovation and value creation have been explained. Business model innovation refers to changes, adaptations or improvements in the business model that allow the firm to create or capture more value. This part of the literature review aims to discuss how value can be created through business models and business model innovation. As discussed before, business model innovation concerns changes and adaptations to the business model that allow the firm to generate or capture greater (total) value. Whether these adaptations follow an innovation or a reorganisation in the way of doing business, the business model changes in order to create more value and deliver more affordable and accessible products and services (Christensen & Hwang, 2008). The name "business model innovation" might appear to be an activity conducted by existing firms, yet it also refers to the development of new models, potentially disruptive, by new entrants (Amit & Zott, 2012; Christensen & Hwang, 2008).

That being said, this study can now look at the factors that enable value creation through business model innovation. In their research on several e-businesses, Amit & Zott (2001) have found that there are four major sources of value creation (or value drivers) that innovative business models can use. They view the business model as an activity system, or a set of activities, and that the presence of these value drivers enhances the value creation potential of such an activity system. The four factors that they have identified are: novelty, lock-in, complementarities, and efficiency (Amit & Zott, 2001). Novelty refers to the degree of business model innovation that the activity set incorporates. This novelty can come from introducing new ways of doing business, or a new way of structuring transactions. This is visible in, for instance, the case of Priceline.com, which introduced the reverse market system. Lock-in regards those activities or offerings of a

firm that create switching costs for the consumer and thus incentivises customers to stay. Think of loyalty programs, trust and customisation options, but also of the lock-in by Nespresso that offers low-cost espresso makers which need Nespresso-produced consumables. Complementarities concern the interdependencies between activities within the system or between products & services offered by the firm. A good example is the acquisition of PayPal by eBay, which enabled consumers without a credit card to make use of the services of eBay. By offering a service which facilitates extra trades, the value created for eBay has been enhanced ever since. Lastly, efficiency regards the cost savings that a firm can make by connecting activities in an optimal manner, or the cost savings resulting from economies of scale, for example (Amit & Zott, 2001; Amit & Zott, 2012).

Especially the last point is similar to the results of the study by Sanchez and Ricart (2010), which focused on sources of value creation (but in low-income markets). They had found that, depending on the type of business model taken on, value is created through either a focus on efficiency and cost savings or through innovating and delivering new products & services. Teece (1986) also found that, when business models introduce innovative products & services to the market, these innovations need complementary assets to succeed. By offering -for instance- after-sales services, marketing activities, or hard- and software solutions, the long-term value created for the firm increases. In the same paper, he suggests that another value-creating and -enhancing factor is the presence of intellectual property rights, or "tight appropriability regimes" (Teece, 1986). In a later paper, he continues to build on this idea of intellectual property rights as a way of increasing value created and captured. The total amount of value created and thus captured for an innovator who wants to introduce a new concept, offering, business model or any other innovation, is dependent on the tightness of the appropriability regime - i.e. the degree to which intellectual property is protected (Teece, 2010). This is especially true for intangible assets, such as business model innovation. If protection is strong, then innovators may choose to adopt a business model that revolves around creating value and profiting from an innovation by outsourcing the innovation, or part of the activities conducted necessary for the innovation. If protection is insufficient for the innovator, it is seen that the business models focus on the integration of the innovation in its own products & services (Teece, 2010).

2.6 Relevance of the Literature for FinTech

In the sections above, several theories and ideas on value creation and business model innovation have been discussed. The theories and ideas discussed above have come from various authors who have studied business model innovation and value creation in a variety of contexts, such as the rise of innovative business models in the sector of e-businesses. Now it is time to see why these ideas and theories are relevant for the trend of FinTech, and why the ideas and theories discovered in other areas before should be applied to the area of FinTech/financial sector.

2.6.1 Transition from value chain to value network

In the early 2000's, the telecom industry was found to have been profoundly changed, as described in a study by Peppard and Rylander (2006). In their article, the apparent disruption of traditional mobile service providers by new providers of digital content and data service providers is discussed. New technologies enabled the growth of the digitalisation of content and services, which turned out to have a disruptive impact on the industry ecosystem. The incumbents in the industry practically

“owned” the industry and the relationships with customers and consumers, but found themselves disrupted -or at the very least threatened- by new entrants that smartly made use of the new (and disruptive) innovations that enabled them to offer better content and services. Due to this advancement in technology, it was easier for new firms to enter the market (lower barriers to entry), and allowed for stronger price-based competition, for example, even on the niche-level. (Peppard & Rylander, 2006). In an attempt to keep up with the new developments in the industry, incumbents have been trying to adapt themselves and create new content and services that would create value to the customer; results of these efforts had been both successful and unsuccessful. However, established perspectives and ways of doing things (dominant logic) has prevented several firms from innovating their business model and thinking strategically. Peppard and Rylander (2006) had seen that several incumbents made these efforts under the “old” logic of the industry, but that the traditional value chain of the telecom industry had changed profoundly with the arrival of the disruptive innovations, and that it had been transitioned towards a value network. They suggest that firms that are trying to adapt to such changes should develop frameworks that consider different business models, and that recognises the need for cooperation and alliances that are in line with the renewed value network.

2.6.2 *FinTech as a similar trend*

A similar trend has also been visible in the financial industry -as a whole and on sectoral level- in the past years; in the form of FinTech. As discussed before, the FinTech-trend that is currently seen in financial sectors concerns the integration of digital technology into financial activities, which disrupts the financial value chain and enables the innovation of products and services. When dissecting this definition into smaller pieces for comparison to the trend seen in the telecom industry, it becomes visible that the trends are -in fact- much alike.

Just as in the telecom industry, the traditional financial market is being faced with new advancements in technology that enable the innovation of products and services (Chiu, 2016; Philippon, 2016) and even change and innovate elements internal to the firm and its business model such as operations, risk management, channels, distribution and back-office (Schueffel, 2016). Additionally, these technological advancements innovate business models and allow easier access to market for new entrants (Philippon, 2016). In the same way as that the barriers to entry have been reduced, the new technologies embedded within the financial activities allow firms to offer low-cost, niche services which could be personalised as well (Lee & Shin, 2018). Similar to what happened in the telecom industry, the traditional financial services sectors are being disrupted by these innovations that enable new entrants to come with better, low-cost services. Several researchers observe that the FinTech trend has the potential or power to restructure or disrupt the financial services sectors (Philippon, 2016; Schueffel, 2016), or even have begun to do so by disintermediating incumbents (Lee & Shin, 2018). The disintermediation or displacement of existing firms and incumbents is a trait of the FinTech-trend that many authors appear to agree upon (MacKenzie, 2015; Chiu, 2016; Philippon, 2016; Deloitte, 2016; Lee & Shin, 2018). The combination of this disintermediation with new firms entering the markets, and the innovation of products and services, results in a profound change: from a value chain to a value network (Chiu, 2016; Philippon, 2016); just as how the value chain in the telecom industry had changed towards a value network. A very recent observation by Lee and Shin (2018) showed that several incumbents have already begun to adapt themselves to this trend, by developing strategies and frameworks that allow cooperation

and coexistence with the new, innovative entrants. The results of these efforts remain to be seen, however.

2.6.3 *Relating back to the current FinTech-trend*

The trend that has occurred in the telecom industry and the trend that is happening in the financial services sectors currently, are in many ways similar to each other. The financial services firms that are affected by the FinTech-trend can therefore learn from the previous trend or anticipate changes and act on it. In context of the effects of such a trend, the theories and suggestions by various authors (as shown before) can help explain how firms adapt their business model to such a new reality, and how business model innovation contributes to increased value creation for consumers in the disrupted financial services sectors. Moreover, one could even start to draw a theory from the earlier developments in the telecom industry. The theory would regard the impact of technological advancements on the value chain of an industry, with the profound changes in the telecom industry as an example of the effects. One could then say, theoretically, that when technology innovates and provides new opportunities, new business will take advantage of those opportunities by creating a business model around them. These opportunities could be cost-reductions, solutions for niche-markets, better access-to-market, personalised solutions, or radically improved internal processes. These new firms, built around the opportunities brought by the new technology, will disrupt the existing value chain of an industry as the activities in it will become fragmented by, for instance, disintermediation or displacement. Such a basic theory can help explain the effects of business model innovations in the investment advisory sector on the sector’s existing value chain.

3. THE NETWORK OF THE ADVISOR

3.1 Purpose

This section aims at providing an overview of the “traditional” network structure for investment advisors. “Traditional” in the context of this study means that it shows the network structure that was in place before the arrival of any FinTech-enabled new entrants. The network structure shown below is built around the intermediary that provides advice about investments to investors who are looking to generate wealth from those investments. The investments mainly regard financial instruments such as stocks, bonds or options available for trading on the (stock) exchange markets. The overview shows the value and revenue streams (transactions and relationships) between roles in the network, such as investors, intermediaries, and service providers. Interactions are performed by actors, which could be individuals, teams, units or organisations. These roles participate in transactions (activities) and add value to a relationship or activity, often resulting in a delivery of something tangible or intangible (Allee, 2008). For this study, the network structure is partialized and simplified to the degree that it is necessary to understand the network structure and the relationships between roles. The network structure is in further sections used as a basis for analysis of the impact of FinTech-enabled business model innovations on the investment advisory services sector. At hand of case studies, the network structure helps in providing a visual overview of how disruption by FinTech could take place.

3.2 Overview of the network structure

In Figure 1 (see below) the network structure has been visualised in a diagram. It shows the roles (nodes), interactions (arrows) and deliverables (text). It is constructed based on directions provided by Allee (2008) and Peppard and Rylander (2006), using information from various sources such as official associations (e.g. FINRA), research reports (e.g. Brondesbury Group) and company websites (e.g. Bloomberg). In the text below, the roles

are explained, together with some insights in the relationships among roles. These relationships are important to recognise and

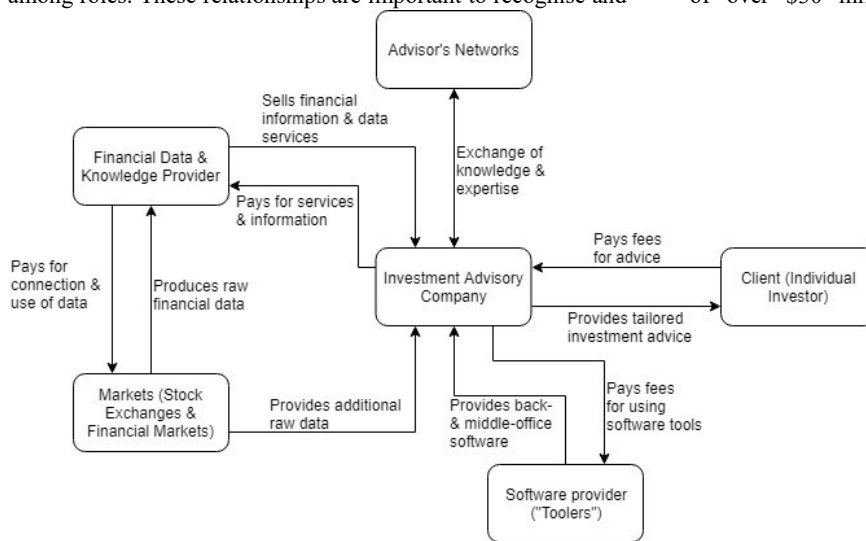


Figure 1. Value Network of the Investment Advisory Company

specify, as this could help in understanding how disruption might take place in it, for example by changing the way that actors interact with each other or by connecting new actors.

3.2.1 Investment Advisor

An investment advisor provides recommendations about securities to clients and who is being paid for giving this advice (FINRA, 2018). An advisor may be an individual that acts as an independent consultant, although an advisor can also be a firm providing the recommendations. Clients of these advisors can be individual investors with different levels of wealth, or a group of investors (InvestingAnswers, 2018). An investment advisor analyses securities based on, for instance, their performance and market conditions. These analyses can then be used to provide individually tailored investment advice or give recommendations on the optimal portfolio (FINRA, 2018). Further, an investment advisor interprets the information available through various sources, and uses the knowledge resulting from this information to provide tailored advice to clients.

Regarding the transactions flowing from advisor to investor, the advisor can perform several activities. In a study on advisor-investor relationships in Canada, the Brondesbury Group (2012) has found that advising on the asset mix and helping in achieving financial goals are the main services expected by investors. For the mass affluent (investable assets greater than \$100,000), advice on the types of investments to buy is the most demanded service, in which advisers are expected to inform and discuss aspects such as risk of loss, alternatives and reasons behind the advice (Brondesbury Group, 2012). The advice is delivered in reports, personal contact, or by running the portfolio. In return for the advice, investors compensate their advisor for the recommendations delivered. Most traditional investment advisors are compensated based on a flat fee (retainer), by the hour or as a small percentage of the assets managed (Larry Light in Forbes, 2012).

3.2.2 Investor

An investor is the client of the investment advisory service, who is paying to receive recommendations on their investments from that service. The investor may be individual investors with different levels of wealth, or a group of investors (InvestingAnswers, 2018). Individual investors can be categorised in different client segments based on their level of

wealth: Ultra-High Net Worth Individuals with investable assets of over \$30 million (Wealth-X, 2017); High Net Worth Individuals with assets of over \$1 million (CapGemini, 2008); the mass affluent (\$100,000 to \$1 million (Schwab, 2004)); and the mass market with less than \$100,000 in investable assets. Investors can have various purposes when they invest their wealth in securities or other tradable assets. An investor's purpose determines the investment strategy and risk averseness (Investopedia, 2018), in turn affecting the investors choice of investment advisor (e.g. specialised in active trading, or in retirement investing). Initially, this study looks at the mass market and affluent client segments for individual investors, as these consumers represent the largest segments in numbers, and are most likely to be benefited by FinTech-enabled solutions in the investment advisory sector.

3.2.3 Market

The term 'market' as used here refers to the collection of (stock) exchanges on which financial instruments such as stocks, bonds or options are traded under regulation. These exchanges are organised and officially recognised, in which investors can buy and sell these securities. Examples of such exchanges include the NYSE (New York Stock Exchange), Euronext Amsterdam, or the London Stock Exchange. The market is then a broad term for a place where, for instance, stocks of firms and bonds of governments are publicly available for investors. It is then the source of information on the securities that investment advisors, among others, use for their business. Being a place where several financial instruments are traded, these markets produce a vast amount of (raw) data that is used by financial firms and investors to price these instruments at market value.

3.2.4 Financial Data & Knowledge Providers

Financial data & knowledge providers collect data from the market (stock exchanges) and other sources. Their role is to collect data and knowledge, transform, bundle and distribute the result to financial firms, traders and other investors. Renowned providers include Thomson Reuters and Bloomberg, but also investment management firms like Morningstar, Inc. The data provided consist of all types of information about companies, both on a quantitative and qualitative level. For example, a typical provider might gather and distribute pricing data about a firm's instruments (shares and bonds), but also about the firm's corporate actions and valuation information (Thomson Reuters, 2018; Bloomberg, 2018). Although several reports and other relevant information are available for sale to individual consumers as well (see website of Reuters and Bloomberg), financial data & knowledge vendors offer extensive professional packages. For example, the data and content services by Bloomberg offer solutions that deliver high-quality data that optimises the data supply chain, streamlines the trading strategy and provides firms with comprehensive reference data (Bloomberg, 2018).

3.2.5 Advisor's Networks

Next to using sources such as financial data & knowledge providers, an investment advisor can use its network to complement his own data and knowledge. Knowledge and

information by other experts, such as colleagues or analysts of companies, can contribute to the quality of recommendations given as they might provide new insights. The actors in the advisor's network can come from personal circles (e.g. connections from college) or from professional associations such as the IAA (Investment Advisor Association). The role of such a network can be to provide new insights, share ideas and discuss new tools or practices. When it comes down to a more informal or personal network, actors might exchange their thoughts as favours or as a benefit to their relationship (Allee, 2008).

3.2.6 Software Providers

Investment advisory firms can outsource part of their internal processes to software providers: companies that provide back- and middle-office software that supports the advisor in analysing investments or assist in customer relationship management. Knowledge (2015) refers to these firms as "Toolers", that do not provide services directly to investors but instead focus on optimising and providing back- (and middle-)office services to advisory firms. Advicent, for example, provides financial planning software to advisors in the financial services sectors. It is then up to the advisor which product to take and how to use it. Another example is ChartLabPro, which provides advisors with the tools to quickly make professional, dynamic charts that can be used to analyse trends and financial information.

4. METHODOLOGY

To investigate how FinTech is disrupting the value network of the investment advisory sector, this study conducts two case studies on firms within this sector. These case studies will be focused on the business model innovations by these firms, which will reflect how FinTech enables these innovations to disrupt the sector. Theory suggests that business model innovation can take place in or come from both incumbent firms and new entrants (Christensen & Hwang, 2008; Amit & Zott, 2012), and it has proposed the idea of waves of FinTech, where in each wave newer technological advancements are integrated into financial activities (Chiu, 2016). In line with theory, this study looks at two case studies that reflect these ideas. The first and leading case study focuses on potential business model innovation by an incumbent firm, whose current business model is based on an earlier wave of FinTech – the digitalisation of financial services. The second case study puts its focus on business model innovation by a new entrant, who builds its business model around more advanced technologies like algorithms and robo-advisors – thus belonging to the latest wave of FinTech. See sections 4.2 and 4.3 for further description. The aim of the case studies is to reveal which aspects of FinTech are enabling business model innovations and, as such, drives the disruption of the traditional value chain of the investment advisory sector. Eventually, it will be discussed whether this disruption is indeed similar to the trend that occurred in the Telecom-industry (see Peppard & Rylander, 2008). At hand of similarities between the two trends in a cross-case analysis, it can be discussed what the disruption of the value chain practically means for the industry.

4.1 Data analysis and collection

For analysis of the case studies, the Business Model Canvas by Osterwalder & Pigneur (2010) serves as a starting point for the case analysis. Business model innovations of the case studies' business models will be analysed and evaluated based on this model. Even though business model innovation can occur in each of the building blocks of the Business Model Canvas, this study puts emphasis on the blocks Value Proposition, Customer Relationships, Key Activities, and Key Partners; primarily because these blocks -disregarding the monetary blocks- are the

most likely to be affected by technological developments. Business data for the analysis of the case studies will be retrieved from both primary and secondary sources. For the first and leading case study, data will be collected in two ways: secondary sources such as the company website, roadmaps, reports, and products will be examined to produce insights, which will be validated by primary sources – semi-structured interviews with the two founders will be conducted. For the second case study, data is derived mainly from secondary sources such as the company website, presentations, reports, interviews and press releases.

4.2 Case Study 1: Beterinbeleggen.nl

The first leading case study is on Beterinbeleggen.nl, a leading online investment advisor in The Netherlands. In this study, the case represents the first type of business model innovation (business model innovation by an incumbent) given that it has been in existence for over 10 years and has a solid customer base. Additionally, one can consider this investment advisor to be traditional or incumbent when one takes the idea of waves of FinTech by Chiu (2016) as a mental frame; Beterinbeleggen.nl appears to be part of an earlier 'wave', where the digitalisation of services towards online (such as the investment advice of Beterinbeleggen.nl) was a central part of innovation (B. Kijl, personal communication, May 30th, 2018). Founded in 2007, Beterinbeleggen.nl is a Dutch online investment advisor that provides analyses and reports on selected well-performing stocks, whilst also maintaining their own example portfolio based on the firm's own analyses. The core of their advice and investment strategy is found in the philosophy of value investing and value stocks: stocks of firms with a strong competitive position that are undervalued by the markets -due to fluctuations- and that can deliver above-average returns on the long term (La Porta, Lakonishok, Shleifer, & Vishny, 1997; "Over ons", Beterinbeleggen.nl, n.d.). Beterinbeleggen.nl adopts a freemium revenue model to attract customers and earn money from paying users. The company offers an e-book on Warren Buffett's Value Investing philosophy for free, as well as a weekly, column-like newsletter (called ValueLetter) with updates on value investing and opportunities in the market. Using this freemium model, the firm has the largest value investing subscriber base in the Netherlands (B. Kijl & H. Oude Nijhuis, personal communication, May 30th resp. June 6th, 2018).

4.3 Case Study 2: Vetr

The second case company is Vetr; an American-based, platform business model that has relatively recently entered the market of investment advisors. This firm represents the second type of business model innovation as it introduces a new business model to the market, that is built around the latest developments enabled by FinTech. Because of this, Vetr is considered to be part of the latest wave of FinTech, where advanced technologies -such as aggregation algorithms and artificial intelligence- are integrated in financial activities by a firm's business model. Vetr, founded in 2013, is a platform that provides consumers with investment research. The firm uses several innovative technologies to deliver crowdsourced star ratings, much like Yelp and TripAdvisor provide ratings by the crowd about restaurants or hotels ("About us", vetr.com, n.d). According to Vetr, self-driven investors can gain insight in investment opportunities based on the community intelligence that its platform provides. The platform of Vetr not only provides individual investors with insights and an aggregated rating on certain stocks and its future prices, but also with the possibility to contribute to the ratings themselves and to follow other investors.

5. ANALYSIS AND RESULTS

This section contains the results of the analyses of both case studies. Both case companies are examined for FinTech-enabled innovations in their business model blocks, especially in the emphasized building blocks: Value Proposition, Customer Relationships, Key Activities, and Key Partners. The results of the case studies may display how FinTech-enabled innovations affect the value network, and which value-creating aspects of FinTech play a role in this.

5.1 Case Study 1: Beterinbeleggen.nl

This case company's business model innovation will be described by briefly comparing the firm's current building block designs with potential building block designs that could be enabled by FinTech. This will be done for each of the building blocks that are put emphasis on (see above). The firm's current building block designs are based on the earlier FinTech wave of digitalisation of services, whereas the potential designs are triggered by the newer wave of FinTech.

5.1.1 Value Proposition

Osterwalder and Pigneur (2010) describe the value proposition as those products, services and offerings to the customer that create value for him/her and drives the customer to interact with the company. Considering this definition, Beterinbeleggen.nl's value proposition is, shortly, described as follows. Beterinbeleggen.nl is an online, freemium platform that offers general investment advice and helps customers to become better investors. It does so by offering a free weekly column, a free (audio)book on value investing and paid-for investment advisory services (Innovation Roadmap Beterinbeleggen.nl, 2017). The company offers four gradations of paid-for services based on annual fees, ranging from generic monthly advice on three stocks to a model portfolio based on value investing. The products and services from Beterinbeleggen.nl all have in common that they consist of reports in PDF, only online available on the company's members-only website ("Abonnementen", Valueselections.net, n.d.). According to personal communication with B. Kijl (May 30th, 2018), founder of the firm, the approach of providing general (i.e. non-personalised) quality advice online, using the opportunity for economies of scale, allowed the firm to reach the mass market and offer their services at a competitive price.

However, developments in technology -such as robo-advisory and Big Data analysis- and changing customer preferences (World Economic Forum, 2017) can render the firm's value proposition obsolete. In order to prevent this from happening, Beterinbeleggen.nl may extend their value proposition to robo-advisory services and possibly even robo-enabled asset management. The technological capabilities of robo-advisors allow the firm to offer highly personalised investment advice and management services while still maintaining a low cost to customers; resembling mass-customisation of investment advice. (B. Kijl, personal communication, May 30th, 2018).

Effects on the value network

According to personal communication with B. Kijl (May 30th, 2018), the original design of the value proposition -providing generic advice and tools to learn about investing (e.g. book on value investing)- has led the firm to become a knowledge provider and an educator in the value network. The knowledge provided contains generic advice on which stocks to invest in, not based on any personal inputs from customers to whom the advice can be customised. Should the firm adapt the value proposition to FinTech-enabled developments, however, then this also has its effects on the position of Beterinbeleggen.nl in

the value network. Beterinbeleggen.nl could start using robo-advisory technology in order to offer asset management in addition to investment advice. By taking on the task of asset management (investing the client's assets) as well, the role of Beterinbeleggen.nl extends towards investor, in addition to knowledge provider and educator. This new task and the changing role of the company would mean that it would compete in a nearby, related area -asset management- and may therefore be part of another, new value network. This would also mean that to be able to manage the assets of their customers, the value network around Beterinbeleggen.nl will grow as several key partners are added that provide relevant services (see the section on Key Partners for further review). Regarding this potentially changing role of Beterinbeleggen.nl, B. Kijl (personal communication, May 30th, 2018) considers this change to be somewhat disintermediating to traditional investment advisory services in the field of personal advice; albeit not directly a replacement, yet a powerful addition to these services.

5.1.2 Customer Relationships

This building block focuses on the relationships between the company and its customers and is important as it constitutes and forms the experience of the customer when interacting with and approaching the company (Osterwalder & Pigneur, 2010). For Beterinbeleggen.nl, the original building block design is a simple yet powerful construct. The company has built its online presence in the form of a website and this has been the main channel for communication for the firm until now. Through their website, Beterinbeleggen.nl engages the customer by making available the online content that their value proposition promises: free columns and a free book, with the possibility to upgrade to paid-for, general advice. Once customers have signed up for the free book, their email-address is used for sending the ValueLetter – Beterinbeleggen.nl's weekly column. Besides the ValueLetter, the free book, and the paid-for services, Beterinbeleggen.nl also has a Facebook-page. This page, however, appears to be very inactive and unknown, given that the page does not contain any messages and has only 88 followers (Facebook-page Beterinbeleggen.nl, n.d.). Even though Beterinbeleggen.nl's touch points are limited to a few channels (i.e. ValueLetter and website), this design has been fairly aligned to their customer's needs until now. The (paying) customers of Beterinbeleggen.nl are looking for an investing method that delivers results without spending lots of time and effort, i.e. continuously analysing the stock market and trading every day or week (H. Oude Nijhuis, personal communication, June 6th, 2018). The value investing method, used as a basis by Beterinbeleggen.nl in their advice, offers a solution by providing monthly analyses for investing focused on long-term results.

However, the World Economic Forum (2017) sees customer needs and preferences changing, in part due to demographic developments: consumers are increasingly expecting more, expect to have control and more transparency, and are more willing to use robo-advisory technologies. B. Kijl (personal communication, May 30th, 2018) agrees on these changes in customer preferences and needs, and that it is necessary for a company to adapt to these changes: if one does not adapt to the customer needs, customers switch to firms that *do* satisfy their needs (more fully). These shifts in customer needs and preferences may drive Beterinbeleggen.nl to adapt its customer relationships design towards a customer-centric and personalised service. In order to increase customer engagement through multiple channels, the firm could potentially start using high quality videos, for instance, which offers a simplified, customer-centric experience on value investing. Moreover, in response to the need for control, the online platform could be expanded to an

app, that allows the customer to have the information ready at their fingertips. The front-office-focused improvements to the customer experience would then be built around the new technologies discussed in the section on the value proposition.

Effects on the value network

The company's original design of customer relationships is primarily based on their weekly column (ValueLetter) to the signed-up email-addresses and online content on the company's website. This has led the relationship to be of a self-service nature (Osterwalder & Pigneur, 2010); the customer pays a fee and receives the company's (generic) advice in return, with little further interaction. So far, customers have felt satisfied so far (H. Oude Nijhuis, personal communication, June 6th, 2018).

A potential new set-up of the building block for customer relationships would aim at increasing customer engagement and interaction through multiple channels, such as the website, app and social media. Would the value proposition extend itself to offer more services, the content available through the channels will also increase, both in quantity as in variety. If Beterinbeleggen.nl offers a greater variety of services -as described in 5.1.1- and content, the relationship between Beterinbeleggen.nl and its customers turns into one with an automated services nature (Osterwalder & Pigneur, 2010). For this building block, too, it applies that the value network is extended as new partners are needed; for instance, to build and maintain the mobile application mentioned before.

5.1.3 Key Activities

Key activities are described by Osterwalder & Pigneur (2010) as the most important things a company must do to successfully operate, i.e. to create and deliver the value proposition and earn revenues with it. When looking at the original building block design of Beterinbeleggen.nl, the company's main activities consist of analysing potential investments (stocks) based on the value investing-philosophy and composing the ValueLetter each week. According to personal communication with H. Oude Nijhuis (June 6th, 2018), the analyses, recommendations and reports are now done and constructed "manually" with some basic analytical tools. This way of working has come under pressure by the possibilities and opportunities enabled by FinTech. As B. Kijl (personal communication, May 30th, 2018) suggests, FinTech-enabled solutions like robo-advisory technologies and algorithms can do the work faster and perhaps more efficient, thus cheaper. There is a possibility, or a threat, that these technologies disrupt the original business model and building block for Beterinbeleggen.nl.

In order to prevent the company from being disrupted by these technologies, Beterinbeleggen.nl could possibly start using such technologies: new key activities would then revolve around the use of technologies that do the work necessary for creating and delivering the value proposition of Beterinbeleggen.nl. Robo-advisory solutions could form the core of these technologies. So, for instance, should the company choose to provide asset management services, it then must manage and maintain a robo-advisor that does the analysing and management for the optimal investments. The adoption of robo-advisors would entail the optimisation and development of the algorithms and systems, so they become more accurate, profitable or efficient; in case of adoption, this could be another key activity for Beterinbeleggen.nl.

Effects on the value network

When reviewing the potential development of this building block it becomes clear that most of the core activities would then be automated to a great extent. This automation (enabled by

FinTech) has two implications. Firstly, software partners that provide robo-advisory systems or algorithms would be added to the network of the firm (see section on Key Partners). Secondly, to properly use the robo-advisory technologies, the company would need to be connected to big data feeds. This also would create new linkages within the value network around Beterinbeleggen.nl.

5.1.4 Key Partners

According to Osterwalder & Pigneur (2010), this building block outlines the most important external parties that play a key role in making the company's business model work. Partnerships are often created to optimise efficiency, reduce risk or uncertainty, or to access specific resources and capabilities. For Beterinbeleggen.nl, the original design of its business model and key activities have led to a few key partners that either perform some of the activities or play a key role in delivering the resources to perform the activities. A first key partner of the company is the web host and developer that maintains and develops the website Beterinbeleggen.nl. As the website is the main communication channel and an important source for engagement, it is crucial that the website stays up-to-date, safe, and is working. An example of another important key partner, especially in the past, has been the publisher of the (free) e-book. In hindsight, this collaboration has been and still is a success to both parties: the free book leads to new customers for Beterinbeleggen.nl while it attracts sales of the paperback book for the publisher, making it a bestseller for this publisher (H. Oude Nijhuis, personal communication, June 6th, 2018). Another key partner to Beterinbeleggen.nl are the financial data & analysis providers, whose products and services are important to the investment advice by Beterinbeleggen.nl. These providers are not so much partners as they are sources of information (resources) in the original design (H. Oude Nijhuis, personal communication, June 6th, 2018).

The hypothetical changes in the aforementioned building blocks would entail changes to the Key Partners block as well. Firstly, the potential adoption of robo-advisory technologies for investment advice & management requires partners that provide these technologies and algorithms. In order to make the robo-advisory services usable and have them successfully implemented, Beterinbeleggen.nl could start collaborating with such partners. Suitable partners would offer specialised capabilities (in robo-advisory) that complement the value investing expertise by Beterinbeleggen.nl. Secondly, if the firm adapts robo-advisors, these would need input from which to produce the analyses and recommendations. The financial data & analysis providers would then transform from sources of information towards key partners. A potential partnership could be based on the delivery of crucial information that is necessary to make the key activities work. Thirdly, should the firm choose to offer investment *management* as well, then it would have to take up partnerships with banks or brokers for processing the transactions that are necessary to execute clients' portfolios. Lastly, if Beterinbeleggen.nl were to develop a mobile app -that allows for better customer engagement and interaction-, it would then require specialised capabilities by a software developer. Such a software developer would be key to delivering a better customer experience of Beterinbeleggen.nl and maintains and improves the application.

Effects on the value network

It is fairly easy to see how the potential restructuring of the Key Partners building block could affect the value network around Beterinbeleggen.nl. If the company chooses to adapt new technologies like described before, the network will become

more extensive as multiple parties are necessary to make the redesigned business model work. Next to partners being added to the value network, a current actor in the value network would also change in their role: the financial data & analysis providers would become a key partner concerning data delivery for the robo-advisory technologies, rather than a just a source or input of information.

5.2 Case Study 2: Vetr

Just as with the case study on Beterinbeleggen.nl, this case study analyses the building blocks of Vetr's business model by looking at the innovative, new designs of these blocks enabled by FinTech. This firm and its business model belong to the latest wave of FinTech, as it uses advanced technology to build and run its platform. As it concerns a new entrant with no previous building blocks, the case study looks at how the business model affects the sector.

5.2.1 Value Proposition

When looking at the value-creating products, services and offerings of Vetr that drive customer interaction with the company, it becomes clear that Vetr is the Yelp of investment research (P. Williams, 2015). Vetr describes itself and its offering as follows:

"Vetr is [a] community-driven consumer ratings platform for investors that mobilizes the crowd to more accurately predict future stock prices in order to help people make better investment decisions." – About Vetr (n.d.)

(<https://www.vetr.com/about/story>)

Related to the comment before, Vetr's offering is similar to those of Yelp or TripAdvisor: crowdsourced star ratings, but then for stocks and ETFs, which are aimed at making investment research and decision-making for individual or retail investors that are self-driven and are looking for easily accessible investment insights (About Vetr, n.d.). Acting as an investment research platform, Vetr allows investors to rate stocks and ETFs by predicting the future stock prices and changes, called the target price, over a specific timeframe. Vetr then aggregates all these ratings by individuals into a single star rating *with* an actionable advice for that specific stock or ETF, using an extensive algorithm that takes an investor's track record into account. These ratings then show what the crowd is thinking what a stock or ETF will do in the future, providing investors with the intelligence to make better investment decisions. (M. Vien, 2017; Vetr video, n.d.)

Effects on the value network

Vetr's value proposition of a community-driven, consumer ratings platform that combines the opinions of the crowd to predict future stock prices is an idea similar to a prediction market - forums where a large amount of people trades contracts that are based on the outcome of uncertain events (Arrow et al., 2008). The entrance to the investment advisory sector of such a crowdsourced platform that is focused on predicting stock prices, offers a valuable addition to the network for investors looking for advice. Moreover, crowdsourced platforms such as prediction markets generally represent a wide variety of opinions and ratings, so they offer a quite effective prognostic tool with a lower prediction error than traditional forecasting methods (Arrow et al, 2008). For the value network within the investment advisory sector, Vetr can take on the role of an accurate and easy-to-access community-driven platform for investment advice (P. Williams, 2015), where investors cannot only retrieve information from but also provide information to other investors. In their role of providing an advice-providing platform, Vetr brings individual investors together; Vetr also provides a free and

useful tool for stock ratings and actionable advice given by similar investors, thereby possibly circumventing investment advice firms that specialise in analysing and rating stocks to provide advice.

5.2.2 Customer Relationships

As a community-driven platform where investors share their thoughts and opinions on the development of stocks with the community, a great portion of Vetr's strength and value lies in the network effect; i.e. the more people join the platform and participate, the more valuable it gets (Metcalfe's Law). For Vetr, this means that the company must attract members and gain brand recognition. Vetr uses channels like their website, Facebook and Twitter to establish a touch point with (potential) users, but the company's CEOs have had interviews on investment-related TV- and radio-shows (2015 & 2017) as well. However, Vetr has another method of creating interaction with users, possibly not innovative yet an effective way of getting in touch with potential users: its University Challenge, which stimulates students to become the "collegiate champion of stock pricing" (StreetInsider, 2015). The winner can even earn an internship with the company.

When looking at the relationship with active users of the platform, it is clearly in line with the platform model that Vetr takes on. Based on the Customer Relationships categories by Osterwalder & Pigneur (2010), the type of relationship that Vetr has with its customers is very much like a community, which allows users to exchange knowledge on stocks facilitated by the platform. The relationship, however, is also close to one in which co-creation takes place: the platform that Vetr created engages customers to give ratings to stocks, thereby co-creating value for other users which are following that specific stock.

Effects on the value network

A very interesting observation that one could make from the relationship that Vetr's platform model creates, is that the platform manages to turn *users and consumers* of investment research information into *co-producers* of this information. By providing a platform that aggregates investors' stock ratings and price predictions using an elaborate algorithm, all these investors together are co-creating a single rating which could potentially even be more useful or accurate than that of individual analysts (see Surowiecki's book "The Wisdom of Crowds"; Arrow et al., 2008).

5.2.3 Key Activities

Considering the activities that Vetr must perform to make its business model work, one could argue that its key activities revolve around making the platform itself work properly. According to Osterwalder & Pigneur (2010), platform-related Key Activities can include platform management, service provisioning, and platform promotion. For Vetr, a crucial resource in their business model is the algorithm that aggregates all the individual ratings into a single stock rating. Therefore, continually refining and optimising the algorithms that determine the stock ratings and actionable investment advice should be one of the core activities and concerns for Vetr (M. Vien, 2017). The optimisation and management of development of the algorithms are important for a platform like Vetr to stay competitive and trustworthy as a provider of crowdsourced investment research. Another key activity relates to what Osterwalder & Pigneur (2010) call *platform management*: continuously developing and maintaining the platform of the company, usually aimed at improving user experience. For Vetr, this means that their website must be finetuned continually to the preferences of their users. Being founded on the belief that financial research is too

difficult to navigate for an individual investor, Vetr aims to offer an intuitive platform that offers simple and actionable insights into the stock market (Book Video Club, 2015). Therefore, any platform management and development must revolve around making the website as easily accessible, usable and understandable as possible.

The last point regards the platform promotion activity for Vetr. In 2015, Vetr won the Benzinger FinTech Awards for “Best use of the crowd” (BusinessWire, 2015). Having won this award, Vetr has leveraged this to promote their platform and unique method of crowdsourced star ratings for stocks. Further platform promotion takes place by radio and TV interviews, such as the ones by former CEO Patrick Williams (2015) and current CEO Mike Vien (2017).

Effects on the value network

The Key Activities that Vetr performs to make their platform work, driving the success of the platform, contributes to reshaping part of the value network. Platforms are so powerful because users create value for each other, thereby changing who creates value for whom: the actor of the value creator changes from a professional investment advisor to the crowd – or more specifically the aggregated opinions of a great number of individuals. By promoting and managing the platform (i.e. improving the website of the platform and optimising the algorithms behind the ratings), the platform becomes more valuable and thus attractive for potential users. The more users are connected to the platform, the greater the competitive threat the platform forms to professional investment advisors for the mass market.

5.2.4 Key Partners

When reviewing the most important partners of a firm, one must relate to the key activities that are necessary to make the model work. For Vetr, key activities revolve primarily around making the platform work and continually develop the platform to optimise user experience. For the platform development in which Vetr continuously improves their algorithms, the company cooperates with outside experts on algorithms that are able to aggregate all the ratings and combine them into a useful, valuable single star rating (M. Vien, 2017). Obviously, Vetr has in-house software engineers and experts too that oversee and build out the technology that runs the platform (About the team, n.d.). When considering development of the platform and its workings, Vetr has participated in the FinTech Sandbox program; a six-month program by a non-profit organisation that connects data vendors with start-ups to build better products and services (Vetr Blog, 2016). This had helped Vetr to build further partnerships with not only data vendors such as Thomson Reuters, but also with infrastructure partners such as Amazon. These partnerships have assisted Vetr in increasing value, making better products, and advancing the capabilities that drive the investment network and prediction engines (Vetr Blog, 2016).

Further key partners include social media such as Facebook, Twitter and LinkedIn, which users of the platform can connect with Vetr. This feature is important to the platform promotion as the platform is promoted through various social media; users can share their ratings and performances on Vetr with their social network. Lastly, Vetr partnered with TD Ameritrade (Vetr, n.d.), an online broker, so users of the platform start trading as well. Such complementary services are likely to add value for the user, as described by Amit & Zott (2001).

Effects on the value network

Especially the cooperation with algorithm expert firms is a notable shift in the value network. This collaboration brings technology-focused companies or experts into an originally

primarily financial area. Of course, this is a shift that is representative for what FinTech is: the convergence between financial activities and technology sectors, that gives rise to technology-enabled financial innovations (PricewaterhouseCoopers, 2016; Chiu, 2016) with the potential to disrupt industries by the integration of technology (Philippon, 2016; Lee & Shin, 2018).

5.3 Comparing the cases

The case studies conducted above, on Beterinbeleggen.nl and Vetr, have shown some interesting insights into the effects of FinTech on business model innovations. As mentioned in each case study, both companies -theoretically- belong each in another wave of FinTech; Beterinbeleggen.nl’s business model can be fitted in an earlier wave that revolved around the digitalisation of services, whereas Vetr’s business model fits in with the latest wave where advanced technologies are integrated in financial services. When compared to each other in the context of these waves, the impact of different waves on business models and the existing value chain can be seen.

In the earlier or first wave, when Beterinbeleggen.nl entered the market with its new business model based on digitalisation, the firm had started to compete with banks and challenged the old-fashioned way of doing business: banks were in control of many investment-related activities along the value chain and were performing those activities mostly themselves (B. Kijl, personal communication, May 30th, 2018). Making use of new technologies to digitalise their services, Beterinbeleggen.nl was able to offer investment advice at a low cost -albeit generic advice-, thereby starting to fragment the value chain by competing with banks on one activity along the value chain. By providing such services through digitalisation and in their new role of online knowledge provider and educator, Beterinbeleggen.nl had partially replaced banks (B. Kijl, personal communication, May 30th, 2018).

In the second or latest wave, the case studies on potential innovations by Beterinbeleggen.nl and the actual innovations by Vetr show that the value chain -if still existent- becomes disrupted and fragmented even further. The potential innovations to the business model of Beterinbeleggen.nl make it possible for the firm to offer better content and services at lower prices – similar to the effects of the developments in the telecom industry. The greater disruption, however, is caused by innovations brought by Vetr, whose platform business model uses newer technologies like crowdsourcing, algorithms and artificial intelligence to break down the value chain even more. It manages to turn consumers of advice into co-producers of advice, and its platform creates a network of consumer-producers of advice. A platform like Vetr with its users may even partially displace Beterinbeleggen.nl (B. Kijl, personal communication, May 30th, 2018). Features like these, enabled by the second wave of FinTech, may have the power to disrupt the value chain and drive the transition towards a value network.

6. CONCLUSION AND IMPLICATIONS

6.1 Conclusion

This study aimed at understanding how FinTech drives innovations of business models in the investment advisory services sector, and thus reshapes this sector. These so-called FinTech-enabled business model innovations are said to be disruptive to all financial sectors in general. According to literature, FinTech could be a disruptive combination of technological and financial innovations (Chiu, 2016) which affect all aspects of the financial sectors. Concrete examples of these effects include: the production of new products & services (World Economic Forum, 2017), democratisation of access for

new entrants (Philippon, 2016), the cost-cutting nature of the innovations and the improvement the quality of services (Lee & Shin, 2018). Predominantly, the literature on business model innovation and FinTech reviews the phenomena in a more general sense – i.e. not specified to certain sectors. Here in this study, two FinTech-affected business models in the investment advisory services sector were taken as an example to analyse the effects of business model innovations on the value network in this sector. The two business models both had a different basis: the first and leading case study was about potential improvements to its existing business model, which could be placed within an earlier wave of FinTech; whereas the second case study concerned a new entrant that built their business model around these new technologies, fitting the latest wave of FinTech. These case studies resulted in some interesting findings and observations.

The case studies have shown that (possible) innovations in the business models enabled by FinTech can lead to improved products and services at competitive prices with higher customer engagement. By using newer technologies, the content and services can even be personalised and easily accessible. For example, advancements in technology even enables Vetr to build platform that creates a network of consumer-producers of advice by aggregating individual opinions. The innovations within the business models therefore primarily concern the offerings of firms in the Value Proposition, as these offerings can be made faster, more accurate, easier or cheaper to customers through the technologies. Any changes in the Value Proposition is of course accompanied by the necessary adaptations in the other building blocks. Key Partners are usually added as expertise to handle new technologies is necessary to make the model work, and Key Activities shift towards the management and optimisation of the technologies used. Lastly, especially in the case of the platform of Vetr, the Customer Relationships become more personal and engaging for customers as interaction increases.

When considering the results from the case studies, one can observe and distinguish a few general features of FinTech-enabled business model innovations. All the technology-enabled innovations in the reviewed business model building blocks are concerning customer-centric improvements to the business model. The quality of services is improved, personalised, more easily accessible over multiple channels, or available at a lower cost. Technology aids in making investment advice more accurate; making advice more fitting to the individual customer's needs and preferences; making the advice accessible through a mobile app and dashboard in addition to a website; or making it available cheaper than before or than a competitor. These developments have the side-effect that FinTech-enabled business models can now serve niches, that previously could not have been served by companies – very similar to the Long Tail effect, for instance visible when eBay came into existence. Essentially, financial services become faster, more accurate, easier, or cheaper to users and customers; which is in line with the suggestion of B. Kijl from Beterinbeleggen.nl (personal communication, May 30th, 2018).

6.2 Breaking the Value Chain?

In the beginning of this study, section 2.6 discussed the relevance of the reviewed literature and theories for the FinTech-trend. More specifically, the section contained an analysis on characteristics of a prior trend in the telecom industry and the FinTech-trend, and the degree of similarity between the two trends. The comparison had led to the conclusion that the two trends are, in fact, very much alike in terms of characteristics and disruptiveness of the entrance of innovative business models.

The changes described in both trends have been viewed as being disruptive to the ecosystem or structure of the industries. Disintermediation of incumbents by new entrants with innovative products and services at lower cost has led to a shift towards a value network in the industries. Technology-enabled start-ups and new firms enter the market with an innovative business model that creates more value for the consumer, while incumbents struggle with adapting their business model and activities to the new reality. When combining empirical findings with the comparison from section 2.6, it indeed is visible that, also empirically, the same things are happening in the financial sector as they were in the telecom industry earlier. Peppard and Rylander (2006) have seen that advancements in technologies improved content & services, and it was easier for new firms to enter the market and compete based on prices, even on the niche level; the case studies in this study have yielded the same empirical findings.

The part above describes how business model innovations driven by new technologies have disrupted the value chains in the telecom and financial industries. The basic theory constructed in section 2.6 based on the trend seen in the telecom industry, describes this disruption through the introduction of new business models based on technological developments. These new entrants disrupt or fragment the value chain by disintermediation or displacement. Given the empirical findings, one could say that this basic theory may very well be applicable to the investment advisory industry as well and may be complemented by the idea of the waves of FinTech. The case studies show that when technological advancements drive and stimulate a new wave of FinTech, the innovations driven by that wave of FinTech start to fragment the value chain and transition the value chain towards a value network. This has occurred when Beterinbeleggen.nl introduced their new business model and challenged traditional banks in the area of investment advice, thereby disrupting the existing value chain traditionally performed by the incumbents; and this has occurred when Vetr, based on new technologies, introduced a network-based platform for co-producing advice with users and investors, fragmenting the value chain even more. Thus, the empirical findings from the case studies clearly show the waves of FinTech as suggested by Chiu (2016), which in turn drive business model innovations to disrupt the value chain and transition it towards a value network.

So far, combining the empirical findings with the theories and ideas described before has led to the conclusion that the FinTech-trend is very similar to the trend previously seen in the telecom industry. Disruption of the value chain and the sector is driven by business model innovations that can offer better products and services at competitive prices with higher customer engagement. This disruption takes place by fragmentation of the traditional value chain. If the trends are truly similar, then the newest FinTech-wave has fragmented the value chain to such an extent, that it has introduced the value network: a network of companies that each perform a part of the activities, previously carried out by an integrated firm.

6.3 Theoretical and Practical Implications, Limitations and Suggestions for Future Research

This study has sought to contribute to the knowledge on the developments in the investment advisory sector brought about by FinTech-enabled business model innovations. The greatest value of this study lies in the empirical findings on the changes and developments in the investment advisory landscape, and how these changes are driven by FinTech-enabled business model

innovations. Even though FinTech is a hotly debated and newly researched trend and there is a considerable amount of research available on business models and business model innovations, there has been little actual research into the effects of FinTech on the investment advisory industry. From a theoretical perspective, this study has therefore positively contributed to theory development by combining insights from FinTech-enabled business models with earlier work from, among others, Osterwalder and Pigneur (2010) and Amit & Zott (2001; 2012) concerning business models, and with work from Peppard and Rylander (2006) regarding the disruption of value chains within industries.

From a practical perspective, the results of the study can be useful for firms in this area to extend their perspective on the developments, especially with regards to the emergence of value networks. With the value offerings of others in the sector getting evermore competitive by improving the quality, the relationships getting more personal, the interaction and experience being mass-customised just as the products, and the cost of doing all this diminishing, it is relevant for firms to look for ways in which value can be co-produced to sustain their business model.

This study, however, is subject to a few major limitations to what this study has suggested so far; these limitations give rise to suggestions for future research. It has been restricted in its time and scope, leading to an analysis on only four major building blocks for each of the case studies' business models. It would be interesting to study the residual building blocks with the same depth in order to fully understand the impact of FinTech on business model innovation. The same time and scope restrictions have also limited the range of case studies to two companies in the sector; one incumbent from the first FinTech-wave innovating their existing business model and one new entrant. Although two different types of companies were analysed, these companies and their business model innovations may not fully reflect all the developments that are going on in the sector and that are influencing the network structure of the investment advisory sector. With this limitation in mind, future research can possibly extend the scope towards multiple case studies in order to give a more representative result of the effects of FinTech on the sector. Further, given that primary data for the leading case study came from interviews with the founders of the company, the data may have been slightly biased. Lastly, the study has shown that there are strong similarities between the trends in the telecom and the financial services industries: the drivers of the change in the telecom industry (i.e. technological advances enabling better products and services) are alike those in the financial services industry. Because the drivers appear to be similar, the study assumes that the change that follows (i.e. disruption of the industry by fragmentation of the value chain, allowing a value network to grow) in the financial services industry will be the same. This is not necessarily true, although very likely given observable changes and the consensus by many researchers. Therefore, future research may be a longitudinal study looking into the long-term effects brought about by FinTech, so it can be confirmed or rejected that the drivers of both trends are indeed similarly causing the change.

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