Venture Capitalists' Investment Behaviour Regarding FinTech Business Models

Masterarbeit

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1. Introduction

"Technological innovations will be the heart and blood of the banking industry for many years to come and if big banks do not make the most of it, the new players from FinTech and large technology companies surely will."

– David Brear, CEO and co-founder of 11:FS, former Chief Thinker at Think Different Group, Global Director of Digital Banking at Gartner Institute and Digital Centre of Excellence at Lloyds Banking Group

This bold statement by David Brear, who was named amongst the Top 100 Most Influential FinTech Leaders in 2016 (City A.M. (ed.), 2016), describes well the current area of tension in the financial industry. Well-established traditional players have ignored the shift of the customers' expectations towards digital technologies (Statista (ed.), 2018, p. 64) and the rising demand of convenience and personalisation in financial services, driven by the pervasion of consumer-centric applications in other areas of daily life, introduced by big technology firms as Google, Apple, Facebook or Amazon (Capgemini (ed.), 2018, p. 9). Modern FinTech businesses seek to adopt this disruptive usability to the customer journey of financial services, thus daringly competing with enterprises that dominated the financial market for decades. The global financial crisis from 2008 marks a turning point for FinTech business models since people substantially lost trust in traditional banks and the financial industry in general, such that the demonstrated long-time stability, one of the incumbents' core assets to the customer, faded away in the public perception, opening the consumers' mind for novel solutions (Arner, Barberis and Buckley, 2016, p. 1286). That the rise of FinTech in the recent years was not only a breeze is documented by numbers, as for example, 83% of established financial service providers see various aspects of their businesses at risk due to the occurrence of FinTech start-ups (Lee and Shin, 2018, p. 35). A recent study of the Deutsche Bundesbank shows that even in conservative markets like the German one - heavily reliant on trustful relationships and historically sceptical against the usage of new technologies in monetary transactions - the rise of mobile payment and digitalisation in finance is not passing by. In 2017 the share of cash payments in Germany came under 50% the first time, reflecting the shift towards the cashless economy. The payment services of PayPal, one of these FinTech start-ups that already turned into an established player, are commonly used nowadays, as the Deutsche Bundesbank survey revealed that around 52% of the sample state that they usually use PayPal to pay their online purchases (Deutsche Bundesbank Eurosystem (ed.), 2018, pp. 1, 36). Apart from these few snapshot numbers from the German market, there is a tremendous global FinTech market volume of 3.4 trillion USD with a predicted CAGR of 18.3% to a global market volume of 7.9 trillion USD in 2022 (Statista (ed.), 2018, p. 5). One major ingredient that fuels this enormous

growth of the FinTech industry is venture capital, that provides jump start for many start-ups in that area. Today, the topic of venture investments in FinTech businesses is more relevant than ever since the year of 2018 started fast-paced, with overall global investments across venture capital, private equity and M&As in FinTech already exceeding the 2017's total investments at mid-year (KPMG (ed.), 2018, p. 2). While the American and Chinese venture capital markets are still dominating in terms of funding amounts, lighthouse investments like the 14 billion USD series C funding of the Chinese FinTech Ant Financial in the first half of 2018 are not only reserved for these markets. Examples like the London-based Revolut ($250M series C in 2018) or the German N26 ($160M series C in 2018) show that European FinTech businesses also attract venture capitalists significantly (KPMG (ed.), 2018, pp. 14, 41). Venture capital is an important driver for innovation not only in the financial service industry but for the overall economy in general. For many entrepreneurs venture capital is often the only source of the equity needed to transform ambitious ideas into disruptive solutions for today's customers' pains (Fried and Hisrich, 1994, p. 36). Acting as a catalyst for innovation (Franke et al., 2006, p. 4), venture capital is widely recognised as beneficial to the whole economy (Cherif and Gazdar, 2011, p. 123). Not surprisingly, venture capital has been subject to a wide range of academic research. Although the body of corresponding literature is quite comprehensive, the venture-capitalists' decision-making process, and the criteria applied during the evaluation of investment opportunities as well as the characteristics that finally drive a positive investment decision continue to interest scholars in present times (Petty and Gruber, 2011, p. 172). The combination of the ample field of venture capital research and novel phenomena emerging from the rising FinTech industry offers a variety of open questions to explore. Especially the FinTech sector's peculiarities in terms of the strongly regulated environment and the vast competition in the shape of large market-dominating enterprises create a surrounding that promises to bear many insights that are not only interesting for theoretical research but also accompanied by immense practical relevance. The question that is supposed to be central for the present paper deals with the crucial drivers that convince venture capitalists to investment into FinTech start-up businesses. On the one hand, a better understanding about the crucial drivers of venture capital investments could help entrepreneurs in the FinTech area to improve their funding activities and enhance the quality of their proposals, which is, in turn, an appreciated feature also for investors that evaluate these applications. On the other hand, deeper research of the venture capitalists' decision-making may also enlighten the investors themselves since human decision-making is often affected by subliminal biases and distortions in self-reflection. In order to investigate the venture capitalists' investment behaviour regarding FinTech business models, a qualitative approach was chosen since there is no dedicated research, which examines FinTech-specific peculiarities in the investors' decision-making process. Central for the present study is an

interview series, conducted with a range of practicing venture capitalists in order to obtain practically qualified results to eventually embed into a theoretical framework derived from the existing literature. The ultimate goal of the interview series is to gather insights about the crucial factors that drive the investment decision and to structure these within a relationship model that finally describes which criteria venture capitalists apply to evaluate proposals in the FinTech context and what actually stimulates a positive funding decision. To derive such model the present paper first introduces the underlying fundamentals and states an overview about venture capital in general (section 2.1) and the FinTech industry (section 2.2), containing definitions about the terms used, a little insight of historical background information as well as current market conditions of the respective area. After conveying this fundamental information, needed to define the study's environment, the paper enlarges upon the existing literature. Based on a comprehensive literature screening a profound theoretical foundation (3. section) is derived by reviewing different existing concepts and abstract insights to eventually create a framework that summarises the current state of academic research regarding the actual decision-making process and the drivers for venture investments in general. Guided by the insights from the theoretical foundation the qualitative approach is introduced by presenting the methodological proceeding (section 4.1) and the descriptive non-analytical results (section 4.2). Based on that, the results obtained from the interview series are discussed and related to the previous theoretical findings, finally leading to the relationship model with the identified evaluation criteria and FinTech investment drivers (5. section). The paper closes by demonstrating the limitations the present study is subject to as well as giving an outlook for possible future research directions. The present paper is drawn up by utilising the Harvard referencing (Anglia Ruskin University (ed.), 2017).

2.   Fundamentals

2.1 Venture Capital

For today's modern knowledge-based economies, emergent innovative and aspiring start-up companies constitute a major source of economic growth and fundamental innovations. Besides providing new jobs across various segments for the overall economy, those start-ups also act as a disciplining stimulus for established corporations, urging them to keep track of their own innovative activities (Block et al., 2016 cited by Block et al., 2018, p. 239). Newly founded start-up firms face extremely high risks as they are operating under high uncertainty in terms of future returns due to an absence of a proven track record as well as a lack of tangible assets which particularly applies for companies in high technology industries (Wang and Zhou, 2004, p. 1).

6. Limitations and Future Research

Besides a range of common technical limitations of qualitative research, which will be picked up later, the present study is also subject to restraints due to the nature of the actual research object. Several studies show that venture capitalists often rely on intuition and gut feel during their proposal assessments, which is also confirmed by the interview series (Khan, 1987, p. 195; Dominguez, 1974 and Khan, 1987 cited by Zacharakis and Meyer, 2000, p. 326; Khan, 1987 and MacMillan, Zemann and Subba Narasimha, 1987 cited by Zacharakis and Meyer, 1998, p. 56). Among venture capitalists, this is not an uncommon insight as investors are often aware of their intuitive decision-making and also tend to express it in such manner (Khan, 1987, p. 195). For academic research, this reliance on gut feel and intuition is a strong limitation because it impedes objective and replicable analyses and hampers the derivation of valid generalisations (Zacharakis and Meyer, 1998, p. 60). These subjective decisions made out of the investor's personal intuition contribute to a lack of understanding the investor has about his own decisions. Venture capitalists usually do not formalise their decision processes. Therefore, it is difficult to discern the actual investment drivers (Zacharakis and Meyer, 2000, p. 340). Furthermore, the intuition-driven approach applied by venture capitalists may lead to an inconsistent application of their own decision criteria (Zacharakis and Meyer, 2000, p. 328), which in turn negatively affects the validity and replicability of the present research. Concerns may be raised, that the information provided by the investors during the interviews is biased by this lack of understanding and self-perception, as it is often the case in studies on human behaviour (Zacharakis and Meyer, 1998; Shepherd, 1999 cited by Petty and Gruber, 2011, p. 174). Petty and Gruber point out that the interview respondents tend to report information which they expect to be desirable. Concerning the field of venture capital decision-making Petty and Gruber further argue that investors also tend to exaggerate the number of criteria considered within a proposal's assessment (2011, p. 174). Although both the interviews as well as the subsequent analysis have been conducted in all conscience, there is no guarantee that the obtained results do not suffer from such biases. The social judgement theory (SJT) refers to these issues with the so-called lens model. The lens model (Brunswick, 1956), stems from cognitive psychology and is fully applicable to the given venture capital context. The underlying assumption of the SJT is that decision-makers do not access the real or "true" information but perceive that information through so-called proximal information cues. These cues act as information catalysts that unconsciously enrich the actual outside information with personal experiences, mentalities and mindsets (Strong, 1992 cited by Zacharakis and Meyer, 1998, p. 57). The information cues combine the environment on the left side of the model with the actual judgement of the human being in general, or in the given setting, the venture capitalists in particular, on the right. One cue describes one decision variable, for example the quality of the venture team, the product or the market conditions. Figure 19 illustrates the

lens model exemplarily for the venture capitalists' decision-making. In this case, the environment on the left is the respective venture being under assessment. The cues in the middle describe the decision criteria derived from the interview series, and on the right, the judging investor can be found. The cues in the middle are correlated with both, the environment, respectively the proposing start-up on the left and the deciding investor on the right. These correlations are denoted by x_{Ei} for the correlation of criterion i with the environment and x_{VCi} for the correlation of criterion i with the venture capitalist's judgement. In an ideal world, these correlations would equal, such that $x_{Ei} = x_{VCi}$ for all i, which means that the investor perceives the reality-based importance or quality of each criterion i. A higher correlation denotes a greater importance or a more favourable manifestation. Since the majority of criteria are of a subjective nature, in reality correlations are not equal but diverge, meaning the investor may values a criterion as more or less important as it actually is for his decision (Stewart, 1988 cited by Zacharakis and Meyer, 1998, pp. 57 - 59). The model can be interpreted in two possible ways, both with the underlying notion that the real conditions differ from those perceived by the judging investor. Either it is possible to use the correlations as an indicator for the attributed importance of a criterion for the final decision or as the actual and the perceived manifestation of an evaluation criterion. In the first way, the investor would for example report that for him the team criterion is from outstanding importance and therefore attributed with a high x_{VCi}. Subconsciously other factors may be even more important for the investors' final decision such that the real correlation is in fact $x_{Ei} < x_{VCi}$. Secondly, it is possible to treat the correlations as the actual manifestation of a certain criteria. An investor for example appraises the quality of the entrepreneur as very strong, thus x_{VCi} is taking on a relatively large value. This judgement might be biased due to subconscious cognitive processes based on the investors' personal experiences or subjective perceptions, such that the real quality of the entrepreneur is not as high as apprehended and $x_{Ei} < x_{VCi}$ holds. In either way, the lens model shows that there are differences between perception and reality that certainly affected also the conducted interview series and limit qualitative research in general (Zacharakis and Meyer, 1998, p. 69).
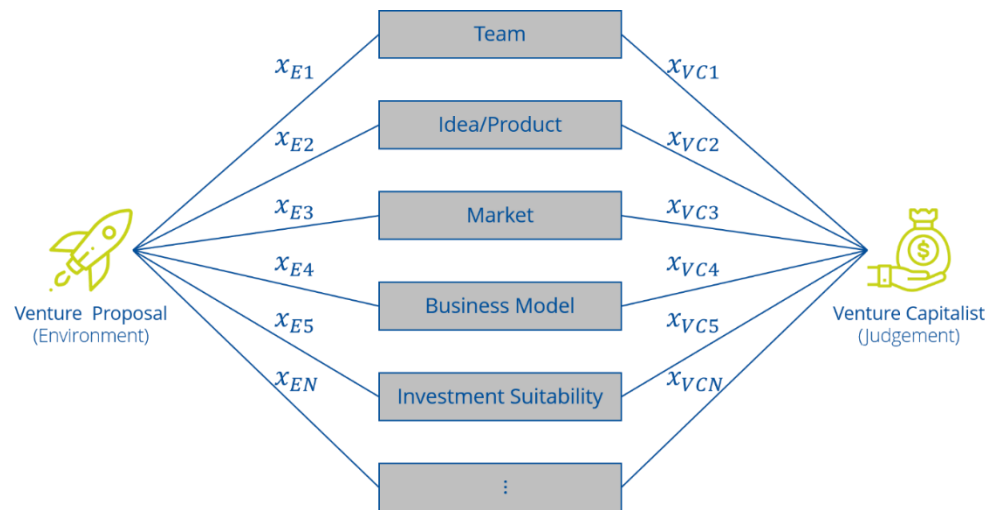
Figure 19: Lens model in venture capital decision-making (Source: own illustration, based on Zacharakis and Meyer, 1998, p. 59)

Moreover, the qualitative approach comes along with some technical complexities that can be hardly eliminated. Although the multi-cycle coding is supposed to create a strong level of objectivity the final selection and categorisation of the codes remains a subjective activity executed by the researcher. Especially with respect to the differentiation between applied evaluation criteria and the actual investment drivers it remains a highly complex endeavour to group and distinguish unambiguously, in particular as some drivers or criteria neighbour on each other or even have an overlapping intersection. Also, the classification of interview statements according to certain codes or categories might remain a subjective activity, which again hampers a study's replicability. A possibility to mitigate these problems might be to structure the interview guide more precisely with more targeted and less open questions. The immediate disadvantage of such proceeding is, in turn, the risk of losing information and provoke suggestive questions (and responses) as well as dismissing the study's explorative character that was identified as necessary in the preparation of the present study. Since the finally postulated propositions differ slightly from the identified drivers during the textual analysis there might be space for improvement with respect to the conducted coding approach. An additional coding cycle after the initial context analysis may help to maintain the deviations between the mere textual analysis and the subsequent deep contextual analysis. During the process of in-depth analysis of the findings obtained by the interviews, new cross-relations or unseen patterns may appear that have not been obvious during the coding at the first sight. A profound mitigation would therefore include, besides more dynamic re-coding, a multi-personal debate that would probably reduce subjectivity and might increase the coding quality. Although there is the awareness about this possible processual weakness, the final propositions of the present study are based on a solid foundation and deep analysis and the suggested adjustments would rather contribute to an improved methodology and may create

a better replicability instead of changing the ultimate result. Nevertheless, qualitative research can always benefit from inter-personal discussion and so this study would do too.

In addition to these limitations, that are rather technically based on the qualitative research approach, there are a few further contextual difficulties that occur due to the FinTech sphere. One critical fact is that within the FinTech context there is no consistent framework of terms and notations. The conducted conversations revealed that also the interviewed investors have a divergent understanding of FinTech and the terms used in that context. While talking about FinTech, some interviewees referred mainly to B2C start-ups in the banking area, which is basically only one sub-segment of the whole FinTech landscape. The different understanding of the terms is not only a limitation on its own but also points towards another difficulty. Since FinTech is a wide and diverse field, with multifarious start-ups operating in very different domains, a theoretical generalisation across all segments seems to be not feasible. Start-ups operating in the B2B area are facing different challenges compared to firms targeting B2C markets. Most likely, such differences are also affecting the investors' decision-making process as well as the actual criteria applied. If this is indeed the case, that could be a task for future research. The impressions collected from the conducted interview series suggest that it is a reasonable consideration to investigate, for example, B2B and B2C businesses separately. The situation is similar with regards to the various phases in which the start-up is in progress. Seed or early-stage investments differ from investments in later stages, and so do the criteria applied to assess the proposal. With increasing age of the respective firm, more numbers and KPIs become relevant since the company build up a performance history over time. So, a separated investigation of early- and later-stage investments may also deliver further insights. In general, it appears to be a vast challenge to unequivocally define which characteristic particularly drive FinTech investment and which features are generally expected independently from the industry the evaluated start-up aims to operate. The borders are blurred, and the interviews did not always show whether an investment driver mentioned by the investor is FinTech-specific or not. There is also the possibility that interviewees temporarily perceive certain factors as particularly important for FinTech firms because they are discoursing in an industry-specific context. An analogous study investigating another industry would be highly revealing to compare the results and better separate generally desired factors and industry-specific drivers. Although there are some FinTech peculiarities mentioned by the interviewees, the initial expectations regarding the FinTech industry as being highly specific with respect to venture capitalists' investment behaviour have not been completely fulfilled so far. The question arises whether there are industry-specific differences in the investors' evaluation at all. An alternative approach could start with deriving a general model and based on that specifically asking for the desired industry-specific manifestations of these general criteria. The examination of the venture capitalists' investment behaviour, for

example, with respect to the automotive or pharmaceutical industry, might come to similar results since peculiarities like relatively comprehensive regulation, large established incumbent competitors or a comparably high demand for capital to enter the market most likely apply in these branches too.

Although the research on venture capital decision-making in the FinTech context is subject to a range of limitations, it offers at the same time several possibilities for further research. As mentioned the distinction between B2B and B2C business as well as the investigation of the impact of investment stages with respect to the venture's lifecycle offers a multitube of possible connections for future research. Based on the present study these specifications can be examined separately in order to gather further insights to finally see how a focus on a certain stage or business segment affects the major investment drivers. Furthermore, a quantitative validation of the present results is recommended. Although, the present paper already added a brief quantitative validation procedure, this should be expanded on a larger scale to test the external validity of the proposition that a finance industry experienced founders team is a strong driver for FinTech investments. Since the present interview series is limited to German venture capitalists another conceivable proceeding of the research was to expand the geographical scope and add for example American or Asian investors to the sample in order to see whether similar results will be obtained, or some regional differences occur. Subsequently, this expansion could also be followed by a quantitative approach. A further interesting approach was to change perspectives and ask the start-up side how founders perceive the evaluation of their businesses and what they think the crucial investment drivers are. An analogue study with founders instead of investors may deliver further insights and allows for a comparison of both outputs, which in turn offers further access points to deeper analyses. Apart from the interview series as the qualitative research instrument of choice, a case study approach may also reveal promising insights. Therewith, the possible biases due to the personal perception of the interviewees might be mitigated. A case study design could, for example, systematically analyse successfully funded FinTech start-ups in order to derive certain commonalities or specific features that objectively stick out at venture-backed start-ups. A combination of both the case study approach and an interview series was also a comprehensive research design that appears promising in the light of the findings of the present study. In such combined research design, the derived investment drivers from the case examination could be challenged within an interview with an investor who actually invested into the respective company, to compare the investor's perception with the research's outcome. In this way, a range of firms could be analysed to finally integrate the findings of the different approaches in one major research project. A reference to research dealing with the critical success factors of FinTech start-ups may also deliver valuable insights to see, for example, whether the actual drivers of a start-up's success match witch the VC

investment drivers. All in all, the field of FinTech offers a wide range of further opportunities for academic research since there are many niches that are not well illuminated so far. Since nowadays the first FinTech start-ups slowly start to turn into established players themselves, there occurs a first batch of companies that can be examined over a full lifecycle from the company's foundation until their current market establishment. The FinTech area constantly explores new domains of daily life and by now the steady flow of novel business models did not recede. Therefore, FinTech in general is expected to remain an interesting topic for science and research, with particular focus on the area of venture investments within this space, as venture capital denotes the actual foundation for the fast growth of the whole industry. This comes along with a high degree of practical relevance which is always a desirable feature for academic research.