Fintech – Stick or Carrot – in Innovating and Transforming a Financial Ecosystem

Toward a Typology of Comfort Zoning

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Fintech – stick or carrot – in innovating and transforming a financial ecosystem: toward a typology of comfort zoning

Romeo V. Turcan and Bernadett Deák

Abstract

Purpose – *Fintech is an "untilled field" in which the relation between Fintechs and incumbents is yet to be understood. This paper aims to explore this relationship and advance its theoretical and practical understanding. It further contributes toward Fintech paradigm and research domain emergence that both to date remain yet elusive.*

Design/methodology/approach – *This paper adopted a multiple-case study strategy for the purpose of theory building. Seven players from the Fintech ecosystem in Quebec (Canada) were selected, representing financial institutions, Fintech start-ups and Quebec's financial cluster. Primary data was collected via in-depth interviews with ten respondents at the level of vice presidents, Managers, directors, chief executive officers and founders, and unobtrusive data – in the form of running records, mass-media news reports, presentations and proceedings from Fintech events. Data analysis was informed by grounded theory methods and techniques.*

Findings – *Grounded in data, this paper puts forward a typology of "comfort zoning" and its four types: nimbling, imperiling, cocooning and discomforting.*

Research limitations/implications – *Following the tenets of the grounded theory, four criteria are used to evaluate the emergent theory: fit, relevance, workability and modifiability. It is expected the interpretation and adoption of comfort zoning typology will be challenged, modified and enhanced by Fintech researchers and practitioners.*

Practical implications – *The comfort zoning typology would aid practitioners in their efforts to define and refine the domain of Fintech, problematize it and eventually enhance the relationship between Fintechs.*

Originality/value – *This paper fulfills an identified need to explore the relationship between Fintechs and incumbents and advance the theoretical and practical understanding of this relationship.*

Keywords *Innovation, Theory building, Ecosystem, Fintech, Comfort zoning typology, Inductive research*

Paper type *Research paper*

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1. Introduction

As a prominent phenomenon, Financial Technology (Fintech) emerged in the past decade, playing a pivotal role – whether as a stick or a carrot – in innovating and transforming financial ecosystems worldwide. Despite its applied and pragmatic aims, "Fintech is still an untilled field," in which, "one of the most pressing [strands of research] is the relationship between Fintech firms and incumbent players" (Schueffel, 2016, p. 49). Recent reviews of the field support this assertion (Skinner, 2015; Dareolles, 2016; Arner *et al.*, 2017; Boot, 2017; Gai *et al.*, 2018; Goldstein *et al.*, 2019; Kowalewski and Pisany, 2020; Lu *et al.*, 2020; Thakor, 2020). This paper is a response to this call (Schueffel, 2016; Bömer and Maxin, 2018), with the aim to explore and construct a framework of the relation between Fintechs and incumbents.

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To "till" such "uncultivated" phenomenon, a number of review studies have been undertaken in recent years, taking stock of Fintech, for example, by Skinner (2015), Dareolles (2016); Arner *et al.* (2017), Boot (2017); Gai *et al.* (2018), Goldstein *et al.* (2019); Kowalewski and Pisany (2020), Lu *et al.* (2020); and Thakor (2020), to name a few. Another review study to get further clarity on Fintech phenomenon would most likely add another overview of the field, but not necessarily an insight into the phenomenon. An alternative approach is to synthesize the phenomenon, its emergence, building on the above review studies. In this paper, we took the latter route.

Given the scarcity of empirical evidence and theoretical understanding of the *relationship between Fintechs and incumbents*, we adopted a multiple-case study strategy for the purpose of theory building (Dyer and Wilkins, 1991). The relationship between Fintechs and incumbents as a *social process* is present in various Fintech ecosystems, regardless of whether it is studied or not by the researchers. Therefore, the main factor in deciding the context for this study was access to data. For this reason, data collection took place in the Fintech ecosystem in Quebec (Canada). Following an intensive sampling strategy, we purposefully selected seven players from the Fintech ecosystem in Quebec (Canada), representing financial institutions, Fintech start-ups and Quebec's financial cluster. We collected primary data, mainly via in-depth interviews with ten respondents at the level of vice presidents, managers, directors, chief executive officers (CEOs) and founders, and unobtrusive data (Webb *et al.*, 2000) in the form of running records, mass-media news reports, presentations and proceedings from Fintech events. Data collection process yielded approximately 425 pages of primary and secondary data.

Data analysis was informed by grounded theory methods and techniques (Glaser, 1978; Glaser and Strauss, 2000). Initially, primary and secondary data were coded openly, with open codes emerging from the data spontaneously in the form of temporal and contextual aspects, activities and actors. These open codes stimulated theoretical coding and sampling (Glaser, 1978) and further data collection. Constant iteration between open and theoretical coding led to the discovery of a core variable, *comfort zoning*.

This paper makes multiple contributions. The comfort zoning typology would aid practitioners and researchers in their efforts to define and refine the domain of Fintech, problematize it and eventually enhance the relationship between Fintechs. This paper also contributes to the examination of Fintech issues from a qualitative, theory-building perspective, as research to date predominantly adopts quantitative, testing perspectives, and it advocates for more qualitative, theory building future Fintech research. It further contributes toward Fintech paradigm and research domain emergence, that both to date remains yet elusive.

We proceed by exploring the extant understanding of the Fintech phenomenon, followed by the research method of data collection and analysis. Thereafter, we present and discuss the findings and conclude the paper by providing venues for future research.

2. Understanding the Fintech phenomenon

The evolution of Fintech could be viewed through the development of Fintech-based innovations in a worldwide perspective from the past centuries (Nicoletti, 2017; Arner *et al.*, 2016). The changing nature of banking from brick-and-mortar system toward the world of digital banking system is highlighted through the development of cheques, electronic cards and fund transfer systems all the way to the neo-banks. "Bank branches will disappear" looks like a hyperbole, as a signal emanating from competitive or remote environments about exaggerated future prospects of a technology or innovation (Dholakia and Turcan, 2013, 2014), such as Fintech, has been around since the advent of dot.com bubble. Today, whether it is a hyperbole (Turcan, 2011) is no longer a question. Moreover, it is not even about the "disappearance of bank branches," but an eventual "disappearance of banks" as

we know them today. This is already a reality in making, for example, in UK and other European countries, where neo-banks are mushrooming in national financial ecosystems.

Besides the adoption of internet banking services, this evolution reflects upon the appearance of new competitors, Fintechs, whose innovative technology-related financial services change the competitive landscape within the financial industry (Wonglimpiyarat, 2017; Townsend, 2019; Muhovic, 2020; Thakor, 2020). As technological innovations are evolving and globalizing, traditional financial organizations are facing continuously changing patterns, though incentives for Fintech engagement have been rather uncommon in previous decades. This phenomenon conjectures radical transformations within the global financial industry, where Fintech is expected to gain a central position within a decade.

The research to date focuses mainly on Fintech's applied and pragmatic aims. It focuses on innovative, technical and applied *outputs* Fintech brings to financial ecosystems, such as algorithm trading, text analysis, cryptocurrencies, blockchain-assisted smart contracts, crowdfunding, Fintech lenders, peer-to-peer lending, Big Data and artificial intelligence (Wonglimpiyarat, 2017; Gai *et al.*, 2018; Lee and Shin, 2018; Goldstein *et al.*, 2019; Lu *et al.*, 2020; Thakor, 2020). It also focuses on the *outcomes* (or *impact*) Fintech innovative offerings have on financial ecosystems, such as disaggregation of the value chain (Boot, 2017) by introducing in the financial landscape new products, business models, players (Bofondi and Gobbi, 2017; Navaretti *et al.*, 2017) as well as new forms of relations and organizing. All within the scope of five major areas: finance and investment; internal operations and risk management; payments and infrastructure; data security and monetization; and customer interface (Arner *et al.*, 2016).

Furthermore, the extant research studies the impact of Fintech on the regulation of the financial landscape. Accelerated development and adoption of Fintech leads to "a paradigm shift necessitating the reconceptualization of financial regulation" (Arner *et al.*, 2017, p. 371). It demands from all stakeholders, including regulators and supervisors, to invest resources to build capacity to understand Fintech and its impact on financial regulation (Dareolles, 2016; Bofondi and Gobbi, 2017; Kowalewski and Pisany, 2020). One of the main challenges is to create an environment for Fintechs and incumbents under an adequate regulation and supervision (Arner *et al.*, 2016; Mansilla-Fernandez, 2017). To a certain extent, this challenge boils down to a trade-off between competition and financial stability: fostering competition leads to a lighter regulatory regime, yet rapid development of Fintech threatens financial stability (FSB, 2017, 2019; Navaretti *et al.*, 2017; Vives, 2017).

Despite the fast growing research into its applied and pragmatic aims, "from an academic point of view, Fintech is still an untilled field" (Schueffel, 2016, p. 49). Fintech is yet to become a fully fledged research program. To get to this stage, its research domain has to be clearly defined. Not only the attempts to define and advance the research domain of Fintech are scarce (Schueffel, 2016), the researchers refuse to speak to one another; they rather prefer to speak after one another (Thakor, 2020). In search for a definition of Fintech, Schueffel (2016) reviewed over 200 scholarly articles covering a period of more than 40 years to conclude that "no one single definition of Fintech exists" (p. 47). Based on his review, Schueffel (2016, p. 47) proposed to define Fintech as "a new financial industry" (see also Skinner, 2015) that "applies technology to improve financial activities." In his review paper of the Fintech literature and the interaction of Fintech with banking, Thakor (2020, p. 1) explicitly stated: "I do not rely on [Schueffel's] paper for the definition of fintech." Instead, Thakor adopted a definition of Fintech by Financial Stability Board (FSB, 2017, p. 7), who defines Fintech as "technology-enabled innovation" that "could result in new business models, applications, processes or products with an associated material effect on the provision of financial services."

It is expected in the early days of a paradigm formation and its research domain emergence that the researchers will keep their mind open and explore diverse, oftentimes, divergent research avenues, as these two examples illustrate. At the same time, it is also expected they will listen and talk to each other, aiming to contribute inter alia via theorizing and theory building to the accumulation of knowledge that in turn will eventually play a crucial role in the definition of a research domain; in this case of Fintech's. Without such interrelationship, the risk is for "Fintech-as-new-financial-industry" research to run in parallel with "Fintech-as-technology-enabled-innovation" research, with no or limited cross-fertilization.

One of the key findings that Schueffel (2016, p. 49) identified in his review of the Fintech literature was the "pressing" need to research "the relationship between Fintech firms and incumbent players." He put forward a number of questions for this new research strand, such as how Fintechs differentiate from incumbents, what sets them apart: is it vision and strategy, organizational structure, processes, culture; do they see each other as complements or competitors; what makes more sense, acquisitions or alliances?

One of the recent attempts to study and conceptualize the *cooperation* between Fintechs and banks was undertaken by Bömer and Maxin (2018). Bömer and Maxin (2018) put forward a conceptual framework to explain Fintech-bank collaboration. Their framework explains how *banks* enable:

- Fintech products;
- Fintech's market entry; and
- increase of Fintech's profits.

While being an important step toward understanding the relationship between Fintechs and incumbents, Bömer and Maxin's (2018) framework offers only a narrow explanation because of its *unidirectional conceptualization* of the relationship between Fintechs and incumbents. With this paper, we aim to shed further light on the relationship between Fintechs and incumbents and advance our theoretical understanding of this relationship.

3. Research design

Our aim in this paper was to explore the relationship between Fintechs and incumbents and advance a theoretical understanding of this relationship. Given the scarcity of empirical evidence and theoretical understanding of this relationship, we adopted a multiple-case study strategy for the purpose of theory building (Dyer and Wilkins, 1991). We used an intensive sampling strategy to purposefully select information-rich, but not extreme cases (Miles and Huberman, 1994). Three criteria guided this process as follows:

1. To minimize attribution errors, that is, when people tend to misattribute cause of events (Lovallo and Kahneman, 2003) and thus being able to distil the ensuing relationship, one criteria was to control for the effect of external environment such as economy, legislation, social, market size and structure on selected cases.
2. The other criterion was to ensure diverse representation of a Fintech ecosystem, such as traditional financial institutions, start-ups, facilitators and enablers.
3. Finally, the third criteria aimed at identifying key decision-makers of the selected cases who were responsible for developing and/or carrying out business relationships within the respective Fintech ecosystem.

Table 1 Case company descriptions

Cases	*Organization*	*Main activity area*	*Fintech activity*
Case A	Cooperative Financial Group	Offering a mix of financial and insurance products and services (personal, business and institutional)	Fintech start-up ecosystem connector Fintech start-up support Innovation lab founder
Case B	Québec's Financial Cluster	Promoting and developing Québec's financial sector	Bring capital to financial sector and Fintech start-ups Opportunity creation through Fintech events Creation of physical Fintech space Creation of University Fintech chair
Case C	Fintech start-up	Financial aggregation application programming interface	Software platform to retrieve tailored information about financial users, incl., full name, address, e-mail and account usage information
Cased D	Fintech start-up	Education and training platform (investors-to-be)	Support investment account synchronicity Investment portfolio analysis Advise on how to select robo-advisors and brokerages
Case E	Fintech start-up	Education and training platform	Improve financial literacy among kids between the age of 5 and 12 Via the financial literacy application kids are able to learn about saving, investing as well as bargaining
Case F	Fintech start-up	Blockchain data analytics	Crime detection Proof of ownership Transaction verification
Case G	Fintech start-up	Personal finance management	Turning debt into wealth Customized loan packages for clients with debts Consolidate clients' debts and accumulate savings

Following this approach, we confined the empirical context to the financial ecosystem in Quebec (Canada), purposefully selected seven players from the Quebec Fintech ecosystem, representing financial institutions, Fintech start-ups and Quebec's financial cluster (Table 1) and identified ten respondents at the level of vice presidents, managers, directors, CEOs and founders (Table 2). For confidentiality reasons, cases' and respondents' names are disguised throughout the paper.

These respondents were the sources of primary data we collected via in-depth interviews (Table 2) that lasted between 30 and 60 min. The interviews were semi-structured in the form of guided conversations, including open questions allowing the respondents to do most of the talking. The interviews were recorded with interviewee's permission and transcribed verbatim within 3–4 days (Brinkmann and Kvale, 2015). In

Table 2 Respondents and timeline of encounters

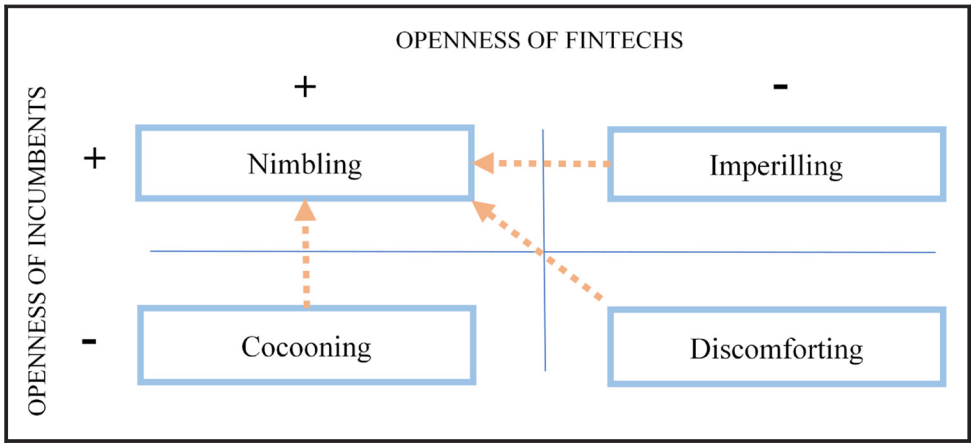
Respondent	*Job position*	*Organization*	*Date*
A1	Strategic Advisor and Fintech Lead	Cooperative Financial Group	April 2018
A2	Open Innovation Catalyst	Cooperative Financial Group	April 2018
C	Growth Manager	Fintech start-up	April 2018
B1	Senior Advisor Fintech Development & Digital Marketing	Québec's Financial Cluster	April 2018
B2	Vice President, Fintech Development and Corporate Affairs	Québec's Financial Cluster	April 2018
F	CEO and Co-founder	Fintech start-up	April 2018
E	Co-Founder	Fintech start-up	April 2018
G	Co-Founder	Fintech start-up	May 2018
A2	Open Innovation Catalyst	Cooperative Financial Group	May 2018
A3	Open Innovation & Start-up Ecosystem Connector	Cooperative Financial Group	June 2018
D	CEO and Co-Founder	Fintech start-up	June 2018

addition, we collected unobtrusive data (Webb *et al.*, 2000) in the form of running records, mass-media news reports, presentations and proceedings from Fintech events. Data collection process yielded approximately 425 pages of primary and secondary data. The data was stored and handled in NVivo.

Data analysis was informed by grounded theory methods and techniques (Glaser, 1978, 2005; Glaser and Strauss, 2000). Initially, primary and secondary data were coded openly, with open codes emerging from the data spontaneously in the form of temporal and contextual aspects, activities and actors. These open codes stimulated theoretical coding and sampling (Glaser, 1978) and further data collection. Constant iteration between open and theoretical coding and further theoretical sampling led to the discovery of a core variable, *comfort zoning*.

As a theoretical code, *comfort zoning* is a member of the consensus family of codes (Glaser, 1978, 2005). "Comfort" emerged as an In-Vivo theoretical code early in the data collection process. Further data collection and analysis was theoretically sampled around it. Grounded in data, *openness* of Fintechs and incumbents emerged as differentiating *external* criteria to the comfort zoning concept; openness toward – or fear of – radical or incremental innovation, expectations, needs, promises, value co-creation, exploitation and exploration. Glaser's (1978) method of constructing typologies by reduction was used to conceptualize the relationship between Fintechs and incumbents. We cross tabulated the openness criteria of these players. The positive attitude of incumbents and Fintechs toward each other was marked with "+" sign, while their negative receptiveness toward collaboration was indicated by "–" sign. Further encounters and conversations with respondents from the Quebec financial ecosystem were guided by Fintechs' and incumbents' openness toward each other. Constantly iterating between this theoretical sampling and theorizing, four types of comfort zoning emerged: nimbling, imperiling, cocooning and discomforting (Figure 1).

Figure 1 Typology of comfort zoning



Although the typology of comfort zoning (and its types) was grounded in data that emerged from a substantive empirical context – incumbent financial institutions and Fintechs from the Quebec Fintech ecosystem – it allows us to make further conjectures about possible relationships and behaviors of other key stakeholders with a Fintech ecosystem; these are captured in Figure 2. Section 4 will present and discuss the core variable and its types.

Figure 2 Interconnecting the comfort zoning types and key Fintech ecosystem players

	Nimbling(++)	Imperilling (-+)	Cocooning(+-)	Discomforting (–)
Fintech start-ups	willingness towards collaboration with FIs; innovation through mutual supportive forces with FIs → accelerated Fintech diffusion	no willingness towards Fintech innovation integration into current financial industry; innovation through individual sources, lack of interest in interaction with FIs → reduced speed and security aspects of Fintech diffusion	willingness towards Fintech innovation integration into current financial industry, participation in accelerator programs of gov. org. but no chance of gaining attention or/ and support from FIs → reduced speed and security aspects of Fintech diffusion	no willingness towards Fintech innovation integration into current financial industry; innovation through individual sources, lack of interest as well as lack of opportunities to collaborate with FIs → uncomfortable stage of Fintech diffusion
Financial Institutions (FIs)	willingness towards collaborating with Fintechs innovation through mutual supportive forces with Fintechs → accelerated Fintech diffusion	willingness towards Fintech innovation integration into current financial industry, creation of Fintech related arrangements, events, but lack of Fintech participants → reduced speed of Fintech diffusion	no willingness towards Fintech innovation integration into current financial industry; process of innovation is aimed internally → reduced speed of Fintech diffusion	no willingness towards Fintech innovation integration into current financial industry; innovation through internal sources, lack of interest and opportunities to collaborate with Fintechs → uncomfortable stage of Fintech diffusion
Regulatory Institutions	barriers from its complexity & decelerated nature can be tackled easier → incentivized towards flexibility	high significance of complexity barriers for Fintechs; high significance of decelerated barriers for FIs; → enhanced difficulties to monitor influential Fintech innovations	high significance of complexity barriers for Fintechs; high significance of decelerated barriers for FIs; → enhanced difficulties to monitor influential Fintech innovations	Tech Giants entry and diversification into Fintech market → decreased level of financial market protective nature
Financial Customers	high quality innovation and positive image of key players, incl., FIs and Fintechs → increased customer satisfaction and loyalty	decreased customer satisfaction from FIs due to slow process of innovation meeting with their evolving needs are less likely to achieve → decreased level of trust in Fintechs due to security aspects and weak brand image	decreased customer satisfaction from FIs due to slow process of innovation meeting with their evolving needs are less likely to achieve → decreased level of trust in Fintechs due to security aspects and weak brand image	Tech Giants entry and diversification into Fintech market → decreased switching costs
Tech Giants	a bulletproof Fintech ecosystem → low chance to disrupt the ecosystem	opportunity to embrace Fintechs and expand into financial market by providing financial support, image and significant base of customer data for further developments → enhanced competition in the Fintech ecosystem	opportunity to embrace Fintechs and expand into financial market by merger and acquisitions → decreased competition and market consolidation	opportunity to embrace Fintechs and expand into financial market, bringing strong brand image, significant base of customer fata, and growing demand for their products and services → high chance to disrupt the ecosystem

Notes: Shaded sections under each category illustrate Fintech diffusion alternatives for the future. While sections with the darkest shade refer to the relatively best possible outcome for given player, sections with the lightest shade emphasizes a potential disadvantage of players under the comfort zoning typology. Arrows underline key propositions that emerge from respective interactions. White font is used to make printing more "user friendly"

4. Findings and discussion

4.1 Nimbling

Nimbling is a win-win situation when openness from Fintechs and financial institutions and other key stakeholders lead inter alia to acceleration of Fintech diffusion and adoption, a

removal of legislative and regulative barriers, improving financial services and products and enhancing customer satisfaction and loyalty (see also Arner *et al.*, 2016; Navaretti *et al.*, 2017; Bomer and Maxim, 2018; FSB, 2019; Kowalewski and Pisany, 2020). Under the scenario of nimbling, openness from both sides of Fintechs and incumbent financial institutions leads to an expected acceleration of Fintech diffusion because the nimble nature of Fintechs together with the professional mentorship of financial institutions can improve the financial sector as a whole and result in win-win situations (see also Bomer and Maxim, 2018, on win-win conceptualization of the cooperation between Fintechs and banks, and Wonglimpiyarat, 2017, on collaborative Fintech innovation and its diffusion). One of the reasons why Fintechs are able to innovate quickly is their online-based technology system and therefore, solutions for financial obstacles can be generated directly without tremendous monetary contribution, as one of the interviewee (D1) highlighted: "[. . .] today with technology it becomes less and less expensive to innovate, less expensive to change things, and because all of our data are online, we can move very fast."

The ability to address financial concerns in a rapid, agile manner (Turcan, 2008), allows Fintech companies deal effectively with current and future challenges from financial institutions, as explained by a Fintech Start-up Growth Manager (C1): "there are gaps within financial institutions' services and they have not had to innovate as quickly as other industries, so these Fintechs are solving major gaps that the banks want to address." Such prosperous collaboration can yield mutual benefits, including attracting new financial users as per Financial Advisor (A1) of a financial institution: "[. . .] we have the customer, they innovate faster, as soon as we can collaborate together there will be a real benefit for the members and the clients."

Because the main purpose of Fintech innovations is to improve current financial services and products, financial customer satisfaction is expected to increase because of emerging variety of innovative financial offers (services and products), as suggested by the CEO of Company D1:"We have this lucrative partnership where they provide their tools to their users and we provide them with new customers. It is a win-win and it is great." Furthermore, Nimbling can not only enhance the level of customer loyalty toward financial institutions but also attract new customers such as millennials (Sachdev, 2019; Lulic, 2020) as their willingness toward Fintech innovation is paired with their already existing positive image of Fintech, as experienced by Interviewee A1:"[Millennials] are the consumer of tomorrow. [They] always want fast, convenient and do not want to deal with the legacy system."

To the above, we further conjecture (Figure 2) that nimbling would create a "bulletproof" Fintech ecosystem that can incentivize innovation in a safe and secure way, withstand a disruptive nature of Tech giants on the financial market and diminish barriers of the complex and decelerated nature of regulations.

4.2 Imperiling

Imperiling refers to the unwillingness of Fintechs to integrate Fintech innovation into current financial ecosystem. For example, it is a state when Fintechs are unwilling and/or refuse the offer from financial institutions to integrate and implement their innovations into the current ecosystem (Arner *et al.*, 2017; Boot, 2017; Bömer and Maxin, 2018). Dealing with and handling data of millions of end-users, without a mentorship from experienced finance experts, can imperil the security of the whole ecosystem. Perceiving financial institutions as competitors and vice versa can result in lack of interest toward cooperation and non-attendance of Fintech-related venues by Fintech intermediators, as maintained by Interviewee A3: "There are very few people from banks and other financial institutions that go and see start-ups [. . .], and there are very few start-ups that will go to such events."

If collaboration and support from financial institutions is being refused, the speed of Fintech diffusion is expected to reduce as well. For example, in case Fintechs defy co-existing with

financial institutions, unawareness of data security issues is likely to increase because of the lack of implementation of Fintech objectives. Because the maintenance of a healthy financial ecosystem is needed for financial institutions, they take initiatives to provide potentially imperiling start-ups with alternatives on how to scale up the quality of their financial products and/or services as experienced by Interviewee A3: "When we see start-ups that are not at the level that we would like, we can also advice to whom they can go and get to know an expert advice and they can improve their solution."

While working with data of millions and millions of end-users, a lack of mentorship from experienced finance experts can imperil the security of the Fintech ecosystem. According to Interviewee C1, even in some of these cases, the complexity of regulatory environment prevents Fintechs to get involved into external mentorships and it is preferred to address security concerns within the organization: "[. . .] within our security we have to do all the R&D work internally, [. . .] we don't want to add other people, it just makes it a lot more complicated [. . .]."

Imperiling affects regulatory bodies who adapt to emerging financial innovations, although their ability to monitor innovations that can have significant impact on the financial industry is hindered by the complexity of Fintech solutions. As far as financial customers are concerned, from one hand, imperiling can lead to a decreased customer satisfaction from the side of financial institutions because of slow processes of innovation. Fintech diffusion leads to evolving needs of financial users that financial institutions cannot satisfy in parallel with Fintechs. On the other hand, through imperiling, Fintechs are likely to experience a decreased level of customer trust because of security aspects and weak brand image. Concerning Tech Giants, in case of their willingness to penetrate financial markets, opportunity is created for them to embrace Fintechs and expand into a financial sector by providing financial support, image and significant base of customer data to Fintechs, supporting their growth (Figure 2).

4.3 Cocooning

When incumbent financial institutions are afraid of disruptive effects of Fintech innovations on the ecosystem, and as a result resist an open cooperation with Fintechs while recognizing the inevitable, they are *cocooning* by internalizing Fintech innovations (FSB, 2017; Navaretti *et al.*, 2017; Bömer and Maxin, 2018; Goldstein *et al.*, 2019). As in imperiling, in cocooning inter alia Fintech diffusion is stifled, customer satisfaction and loyalty shrink, and legislative and regulatory barriers persist. Under cocooning (Turcan, 2008), those processes take place when financial institutions refuse to cooperate with external Fintechs, but are still aware of the importance of Fintech innovations and therefore create ideal circumstances for developing technology within their organization – actions pursued by Interviewee A1: "[. . .] we have our R&D team, we can innovate internally, we did it in the past and we will continue in the future."

The fear of potential imperiling nature of Fintechs on financial ecosystem can lead to diminished willingness toward cooperation from the side of financial institutions. For example, as Fintechs are likely to lack experience with big data, financial institutions distrust their ability to properly deal with their enormous financial customer base, as Interviewee A2 explains:

> [. . .] you can show success with hundred thousand even with ten thousand or more people but when it gets to deploying to millions of people, there are way more complexities that start-ups or lot of projects don't have the capacity to deal with".

and engage in technological innovation building upon their existing resources, according to Interviewee B1:

> [. . .] the most pressing issue right now is related to data, how to bring out more value out of the data that we have [. . .] at the same time protecting the privacy of our customers.

Besides the fear of the imperiling nature of Fintechs, the fear of their disruptive nature is another reason why financial institutions potentially refuse cooperation related to certain activities. For instance, despite the collaboration of several banking-related Fintechs, Company A refused collaboration with insurance-specific Fintechs, because of their ability to take over insurance services as argued by Interviewee A3: "They are disrupting in a specific area; [. . .] if we talk about insurance, there are some players that have insurance on demand; [. . .] that we do not offer at the moment."

In case of cocooning – similarly to imperiling – the speed of Fintech diffusion will be diminished as long as barriers of regulatory institutions continue challenging and/or stifling development and growth of financial institutions and Fintechs (FSB, 2017; Frame *et al.*, 2018). The impact of cocooning on financial customers will be similar to the impact of imperiling, meaning that a decreasing level of customer satisfaction as well as customer loyalty toward financial institutions are expected. Tech Giants can face the opportunity of embracing Fintechs through offering support for their needs (finance, image, customer database) and therefore, their appearance on the market is facilitated (Figure 2).

4.4 Discomforting

Unwillingness of key stakeholders to jointly and openly innovate, co-create, explore and exploit Fintech new products and services create a *discomforting* state, which inhibits creation of mutually supportive entrepreneurial ecosystem. Refusing the receptiveness from both sides of financial institutions and Fintechs, the ecosystem can be destabilized, resulting in toxic attitudes, which can negatively affect the Fintech environment and hinder the evolution of technological developments, as explained by Interviewee A3: "[. . .] if we want to diversify the ecosystem, we cannot have just one player that wins all."

An uncomfortable stage of Fintech diffusion is created by the unwillingness of both Fintechs and incumbent financial institutions toward the creation of a mutually supportive innovation system (Kowalewski and Pisany, 2020). The name of "becoming uncomfortable" is a result of the commonly used expression of "comforting" when it comes to innovation, as experienced by Fintechs and financial institutions (Arner *et al.*, 2016; Navaretti *et al.*, 2017; Frame *et al.*, 2018; FSB, 2019; Kowalewski and Pisany, 2020). By having strong brand image, large size of customer database, technological expertise, Tech Giants can have the ability to control the financial services industry and disrupt operations of current financial ecosystem as argued by Interviewee A3: "[Tech Giants] really are in a perfect position to be the leaders of tomorrow even in financial services." Even if financial customers feel comfortable with their current financial institutions nowadays, the appearance of, e.g. Google, Amazon, Facebook and Alibaba, on the financial market can lead to changing patterns of customer needs and satisfaction – concerns raised by Interviewee B1: "We can say that conformity protect us; [. . .] we are protected for now, we are not protected for tomorrow."

Comforting customers and their financial needs is of key importance and is nearly impossible to achieve in an unhealthy Fintech ecosystem. Under this stage, the likelihood that Tech Giants will enter financial markets significantly increases, leading to a decreasing level of regulatory institutions' ability to protect financial customers as well as the overall financial industry (Figure 2).

5. Contribution to theory and practice

This paper is the first attempt to ground empirically and theorize the relationship between Fintechs and incumbents. Grounded in data, we put forward a *typology of comfort zoning* to explain and conjecture about the relationship between Fintechs and incumbents. Having openness as its external differentiating criteria, four types of comfort zoning have emerged: *nimbling*, *imperiling*, *cocooning*, and *discomforting*. *Nimbling* is defined as a win-win situation when openness from Fintechs and incumbents leads inter alia to the acceleration

of Fintech diffusion and adoption, a removal of legislative and regulative barriers, improving financial services and products and enhancing customer satisfaction and loyalty. *Imperiling* is defined as the unwillingness of Fintechs to integrate or refuse the offer from incumbents to integrate and implement their innovations into the existing financial ecosystem. The incumbents *cocoon* or internalize Fintech innovations if, or when, they are afraid of disruptive effects of Fintech innovations on the ecosystem and thus as a result resist an open cooperation with Fintechs. *Discomforting* state emerges when Fintechs and incumbents are unwilling to jointly and openly innovate, co-create, explore and exploit Fintech new products and services, negatively effecting the Fintech environment, eventually hindering the evolution of technological developments as well as inhibiting the creation of a mutually supportive innovative ecosystem.

We expect the interpretation and adoption of comfort zoning typology will be challenged and, hopefully, modified and enhanced by Fintech researchers and practitioners. And, that these will depend on the theoretical lenses the Fintech researchers and practitioners will wear: Fintech-as-new-financial-industry lens or Fintech-as-technology-enabled-innovation lens (overlapping the two lenses to study the Fintech phenomenon would most likely further generate more interesting questions). Through the latter, the researchers might see the comfort zoning typology, hence the relationship between incumbents and Fintechs, as unidirectional, being solely geared toward incumbents' financial/Fintech agenda. One might expect a conservative, slow degree of development and adoption of Fintech innovation, forcing Fintechs to leave and migrate to neighboring ecosystems (IAIS, 2017; Vlaar, 2019). Those remaining could continue to change and affect how financial services are structured, delivered and consumed, but yet would not be able to establish successfully themselves as dominant players (WEF, 2017; WFTR, 2018). One of the major concerns of Fintechs in this relationship would be how to fit in (Turcan, 2018).

Through Fintech-as-new-financial-industry lenses, Fintech researchers and practitioners may see the relationship between Fintechs and incumbents as one between outsiders and insiders (Turcan, 2018). According to Merton (1972, p. 15) "the Outsider has a structurally imposed incapacity to comprehend alien groups, statuses, cultures, and societies. Unlike the Insider, the Outsider has neither been socialized in the group nor has engaged in the run of experience that makes up its life, and therefore cannot have the direct, intuitive sensitivity that alone makes empathic understanding possible" (p. 15). The perception of the core concerns and/or processes of the relationship between Fintechs and incumbents would vary depending how researchers conceptualize Fintechs or incumbents, as outsiders or insiders.

6. Concluding remarks, limitations and few pointers for future research

With this paper, we aimed to shed some light on Fintech phenomenon, responding to a call from Fintech researchers, e.g. Schueffel (2016); Bömer and Maxin (2018), to explore the relationship between Fintech and incumbents and advance a theoretical understanding of this relationship. This paper also contributed to the examination of Fintech issues from a qualitative, theory-building perspective, as research to date predominantly adopts quantitative, testing perspectives, and it advocates for more qualitative, theory building future Fintech research. The paper further contributed toward Fintech paradigm and research domain emergence that both to date remain yet elusive. Without clearly defined research domain, there would be no or limited fertilization within and across various Fintech schools of thought. Whether Fintech is defined as "new financial industry" or "technology enabled innovation" or conceptualized as both, it is critical Fintech researchers speak to each other, rather than speak after one another, thus contributing to theory and data cross-fertilization and eventually the emergence of holistic paradigm and research domain of Fintech.

The limitations of this research are informed by the evaluation criteria used in this study in which the purpose is to build theory to contribute to an understanding of the relationship between Fintechs and incumbents, a relationship that currently is scarcely researched and understood. In this regard, we follow the tenets of the classic grounded theory (Glaser, 1978, 2001) and use four criteria with which an emergent theory grounded in data is evaluated: *fit*, *workability*, *relevance* and *modifiability*. According to Glaser (1978, p. 34), "the credibility of a theory should be won by its integration, relevance and workability not by illustrations as if it were proof."

The *typology of comfort zoning* is a theory about the relationship between Fintechs and incumbent, a theory that emerged from a substantive context, the Quebec Fintech ecosystem. It thus *fits* with the emerged data or reflects the data it purports to express and is expressed as emergent fit. At the same time, the typology of comfort zoning is able to explain and predict Fintechs' and incumbents' relationship within a substantive context, the Quebec Fintech ecosystem. In other words, it *works*. But such relationship between Fintechs and incumbents as a social process is present in various other Fintech ecosystems, and for the typology of comfort zoning to predict behavior in other contexts, it has to be *modifiable* as new data will emerge to produce new categories, properties or dimensions of the theory. Last but not least, the typology of comfort zoning is relevant, as it focuses not only on the core or main concerns of the Fintech and incumbent respondents but also is in response to scarce empirical and theoretical understanding of the relationship between Fintechs and incumbents.

To mitigate the above identified limitations, future research is needed. For the purpose of future research and practice, *fit, relevance, workability and modifiability* qualities of the comfort zoning typology would aid researchers and practitioners in their efforts to define and refine the research domain of Fintech, problematize the intersection, develop guiding propositions and testable hypothesis and eventually explore in depth the relationship between Fintechs and incumbents and advance our understanding of this relationship. For example, imperiling and cocooning could be used to problematize and explore the regulatory trade-off between competition and financial stability. The typology and its types could also assist researchers in investigating the "pressing" questions raised by Fintech researchers (Schueffel, 2016; Lu *et al.*, 2020), such as how Fintechs differentiate from incumbents; what sets them apart; are they competitors or coopetitors; and how Fintechs' value creation differ from that of incumbents, to name a few.

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