Digital disruption diversified—FinTechs and the emergence of a coopetitive market ecosystem

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This article analyses the development of FinTech companies in relation to traditional banks in four countries: Denmark, Estonia, the Netherlands and Sweden. Based on approaches drawn from the sociology of markets and field theory, we analyse and theorize about empirical data from secondary sources, official documents and 38 interviews with key actors. Whereas digital technologies have been commonly depicted as a source of disruption for established business models, suggesting that the rise of FinTech leads to competitive upheaval in the financial sector, more recent studies argue that such interpretations are exaggerated. Here, we propose the emergence of a ‘coopetitive’ market ecosystem that combines co-operative and competitive connections between incumbents and challengers who often share the same infrastructure. FinTech firms are shown to function as catalysts in the transformation towards this ecosystem shaped by coopetitive interdependence between the actors.

**Key words:** financial services markets, FinTech, economic sociology, coopetition, market ecosystem

**JEL classification:** Z13 Economic Sociology, O33 Technological Change: Choices and Consequences, Diffusion Processes, N20 Financial Markets and Institutions: General, International or Comparative
1. Introduction

Digital technologies are often said to disrupt markets as innovative challenger firms introduce new business models, forcing incumbents to adjust or be outcompeted (Calvano and Polo, 2021; Garzella et al., 2021). Through digital infrastructure, firms gain access to plentiful data and may participate in networked activities (Esposito, 2017; Ciriello et al., 2018). Combined with automation, this gives challenger firms opportunities to compete with incumbents by offering easily accessed and easily up-scalable services at low prices.

Although this depiction of technologically driven disruption is common in analyses of the financial services markets, more recent studies indicate that such expectations are exaggerated as new forms of co-operation and interdependence emerge (Arner et al., 2016; Chiu, 2016; Cai, 2018; Hendrikse et al., 2018; Vives, 2019; cf. Lomachynska, 2020; Hodson, 2021; Aysan and Nanaeva, 2022). Even though the digitalization of financial services was initiated by incumbent banks, today, the development of FinTech—‘the use of innovative information and automation technology in financial services’ (Vives, 2019, p. 245)—is to a high degree driven by entrepreneurial start-ups and scaled-up ‘unicorns’ (CFTE, 2021). These FinTech companies (FinTechs) provide innovative app and AI-based services utilizing the emerging open-banking infrastructure in niches such as payments, deposits and lending, investment, advice, pensions, crowdfunding, insurance and even cryptocurrencies (Degryse, 2016; Breidbach et al., 2019; Vives, 2019; Lomachynska, 2020).

The number of FinTechs has increased rapidly during the last two decades, and investment is increasing as many FinTechs are scaling up (Chiu, 2016; CFTE, 2021). This development has raised concerns about the survival of conventional business models in financial services; that is, banks supplying a wide range of bundled products in one-stop comprehensive services under one ‘roof’ (Lee and Shin, 2018). This article aims to explore change and continuity in financial services markets in four small, open and highly digitized European economies: Estonia, Denmark, the Netherlands and Sweden. By analysing and theorizing about the competitive and co-operative strategies that market incumbents and challengers develop, this study contributes knowledge on the relations between banks and FinTechs, and thereby to the wider discussion on the disruptive transformation of markets through digitalization (Esposito, 2017; Ciriello et al., 2018; Garzella et al., 2021).

Theoretically, the analysis is based on the sociology of markets, which we find helpful in exploring the ways in which actors position themselves in markets, and how business models and markets are ordered and stabilized, or challenged and disrupted (Fligstein, 2001, 2021; Bourdieu, 2005; Fligstein and McAdam, 2012; cf., Aspers, 2011; Ahrne et al., 2015; Balsinger, 2021). In relation to how such theories represent markets as ‘strategic action fields’, we elaborate on the concept of emergent ‘market ecosystems’ characterized by ‘coopetition’, that is, new combinations of competition and co-operation emerging from a joint digital infrastructure (Adner, 2017; Musselin, 2018; Anand and Mantrala, 2019; Fonseca and Meneses, 2020; Vohra, 2020; Boyer, 2022).

Empirically, this article is a comparative case study, drawing on qualitative analyses of documents and interviews. The selection of countries was made on the basis that all four are European Union (EU) Member States covered by a joint regulatory framework, while also being small and open economies with high levels of digitalization (European Commission, 2021a,b). We collected public and organizational reports, policy documents and statements, as
well as web pages providing information on national-level FinTech development in four countries: Denmark, Estonia, the Netherlands and Sweden. Furthermore, we conducted and transcribed interviews with a total of 39 respondents from different organizations in the four countries, representing banks, FinTech companies, associations and hubs, as well as employer organizations and trade unions in the sector (see Appendix Table A1). For confidentiality reasons, we only state the category and country of the interviewees when quoting. The quotations are translated by the authors and have been slightly edited to increase readability.

The analysis was performed in two steps. The first cycle of coding was carried out separately for each country and produced thematically descriptive codes relating to: trends and challenges within the FinTech sector; the relation between FinTechs and banks; the development of the FinTech community; and employment relations in the FinTech sector. The second cycle of coding was cross-country comparative and identified theoretically informed themes focusing on the situations, strategies and challenges relating to competition, co-operation and co-optation.

The structure of the article is as follows: We begin by presenting the theoretical approach and previous research, including a brief context of the four countries. Thereafter, we present the empirical analysis based on the analytical themes emerging in the second cycle of coding. The first theme concerns how actors experience market competition from FinTechs in relation to incumbent banks. The second theme focuses on strategies and difficulties for incumbent banks attempting to retain market dominance. The third analyses a rather recent turn towards strategies of co-operation between incumbents and challengers. The fourth theme discusses co-operation difficulties and alternative incumbent strategies to co-opt challenger firms. The thematic analysis is followed by a discussion in which the themes are synthesized and interpreted in light of the theoretical discussion and modelling. The article ends with some general conclusions.

2. FinTech seen through the lens of field theory

In the sociology of markets, field theory is a central approach (Fligstein, 2001, 2021; Bourdieu, 2005; Fligstein and McAdam, 2012; cf. Balsinger, 2021). Field theory is not a theory in the predictive sense, that is, ‘logically interconnected sets of propositions from which empirical uniformities can be derived’ (Merton, 1968, p. 39); rather, it is an analytical tool that includes a set of conceptualizations that guide the questions and focus of exploratory research (cf. Blumer, 1954). Field theory conceptualizes how order and change in markets are based on the interaction between dominant incumbent and innovative challenger firms. These actors position themselves strategically in relation to the market by niching or bundling, branding and pricing (cf. Podolny, 2005; Aspers, 2011). Other important actors constitute ‘governance units’ that control and regulate entry and activities on the field. The state is the most important one but also private organizations may affect entry and activities, and co-ordinate interests and information (cf. Ahrne et al., 2015).

In field theory, actor strategies are related to the distribution of power and resources. This entails not only firms’ financial and human resources, but also status aspects such as branding, and consumer trust. As for the context, besides regulations and established cultural conceptions (cf. Hendrikse et al., 2018), technology is seen as central for the choice of competition, co-operation and co-optation strategies between firms, as well as for the
overall stability and change in the market. In addition, when viewed as a field, the market encompasses not only horizontal relations between firms but also vertical relations between firms (and individual buyers and sellers) upstream and downstream in the production and distribution chains (Aspers, 2008; Fligstein, 2021).

Figure 1 presents a model developed for our analysis of how actors position themselves in the market, and how the interrelation between traditional banks and FinTechs may be understood. It is a simplified model focusing on the vertical and horizontal market relations between producers, consumers and suppliers. The producers, such as banks and other financial service providers, have different resources and statuses. The producers provide bundled or niched products that may be either more or less identical (i.e. forming a ‘standard market’) or rather unique (i.e. forming a ‘status market’) and may thus be subject to the same or different regulatory requirements (Aspers, 2008). Downstream, these producers compete on the consumer market with their products and services, for example, by targeting individuals and companies in need of credit, savings or payment solutions. Upstream, there is a ‘role shift’ in the sense that the producers act as buyers of products and services, such as hardware and software products, consultancy services or insurance, and hire labour from an upstream labour market.

Because this heuristic theoretical model is rather abstract, we need to connect it to previous research on FinTech development to provide greater context. During the 1990s, digitalization and the Internet had already emerged as vehicles for change in banking and financial services. This laid the ground for the expansion of online banking around 2000, leading to the closure of local bank branches in many countries. In the wake of this development, there has been an upsurge of new FinTechs using application programming interfaces (APIs) and data sharing through so-called ‘open banking’ (cf. Westermeier, 2020). This development is co-ordinated across the EU through the EU’s Payment Services Directives (PSD1 and PSD2), the FinTech Action Plan and the Digital Finance Strategy, along with other initiatives that aim at financial and payment market integration and efficiency, and to shape a ‘level playing field’ across countries and market actors, while also securing consumer security and system stability in the EU (Românova et al., 2018; European Commission, 2018a,b; 2021a,b).

A common assumption is that these FinTechs challenge the incumbents in the market, particularly the large traditional banks that have already faced increased competition from niche and retail banks in recent decades. The traditional banks typically produce a wide

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1 Co-optation theory suggests that challengers may be neutralized or dominated by incorporating them in the dominant order of incumbents through for example purchase (Thompson and Coskuner-Balli, 2007).
range of bundled financial products, offering one-stop comprehensive services, targeting broad customer groups, and building long-term trust-based customer relations (Lee and Shin, 2018). However, as financial technology creates new solutions, it is no longer given that the traditional banks provide the best packages of services to their customers.

Generally, FinTechs are relatively new start-ups or small and medium-sized enterprises that provide new core or ancillary financial services demanded by customers, or services at lower cost than existing ones, through technological solutions. While FinTechs are often quite niched, and produce unbundled services, there are various business models involving a range of other actors. They may act as suppliers, competitors or intermediaries for existing financial services providers, and some FinTechs may even create dis-intermediation through platforms that match borrowers and lenders directly (Navaretti et al., 2017; Puschmann, 2017; Vives, 2017, 2019). FinTechs often draw in younger and wealthier customers than do traditional services providers, and they base their customer relations on automatic machine-based trust rather than on trust built through long-term relationships (Navaretti et al., 2017; cf. Lee and Shin, 2018). In addition, FinTechs may team up with ‘BigTechs’ such as technology, e-commerce and telecommunications companies, which have many customers for which financial services such as payment can be provided (Hendrikse et al., 2018; Zetzsche et al., 2018).

Whereas the incumbents may be subject to both European and national regulation, FinTechs often have less strict regulatory requirements, and some regulatory developments have given them new opportunities—the most important being the EU’s PSD1 and PSD2, which intended to establish well-functioning markets for payment services in the European Economic Area (Românova et al., 2018). The PSD2 allows ‘Third-Party Providers’ to deliver financial services to bank customers by accessing their bank accounts. These regulations have strengthened the emergent infrastructure of open banking, giving FinTechs the opportunity to connect app-based services and AI to the banks’ APIs, thereby enabling FinTechs to access banks’ financial infrastructure and customer data, with the customer’s agreement, as regulated by the PSD2 (Breidbach et al., 2019; Lomachynska, 2020; Westermeier, 2020).

Despite the regulatory variation in the four countries studied, as well as within the EU overall, there is thus a joint regulatory framework and an emerging convergence within the EU (cf. Kulms, 2022). Given that our approach focuses on similarities rather than on differences, we leave the potential effects of regulatory differences between countries for future research.

The above development is the reason that we wish to add the concepts of ‘ecosystem’ and ‘coopetition’ to field theory. These indicate that firms may combine competition with co-operation in complex arrangements, as new digital solutions and regulations make it possible to share the same digital infrastructure and data (Adner, 2017; Musselin, 2018; Anand and Mantrala, 2019; Fonseca and Meneses, 2020; Vohra, 2020; Boyer, 2022). The emergence of such ‘coopetitive interdependence’ relates to the emergence of a market ecosystem in which various competitive actors are mutually dependent—as elaborated in various ways in recent research on FinTech and the transformation of the financial services market (Bogers et al., 2019; Hendrikse et al., 2020; Lomachynska, 2020; Langley and Leyshon, 2021; Turcan and Deák, 2022). The concepts of ‘ecosystem’ and ‘coopetition’ are still being developed in this field, and there is some contestation regarding the usefulness and implications of the terms (cf. Gancarczyk and Rodil-Marzábal, 2022). As our theoretical approach uses concepts as sensitizing analytical tools, we do not specify previous definitions of
‘ecosystem’ operationally. We retain the main sense in which the concept has been used, that is, as indicating the existence of both competition and co-operation involving actors, artefacts and (cultural, technological and regulatory) institutions that interconnect and create codependencies on a market (cf. Granstrand and Holgersson, 2020, p. 2). For this reason, we combine ‘ecosystem’ with both field theory and the concept of coopetition.

We find these theoretical concepts and tools useful in analysing empirical material where not everything necessarily points to a strong disruption on the market. Banks may still play a crucial role in providing the basis of and stability in the system by performing most of the maturity transformation, that is, converting short-term funding into long-term loans. Their banking licences also give them an advantage through the rules on fractional reserve requirements, allowing them to ‘create’ money and liquidity for the economic system, and thereby profit from both fees and the interest margin (Navaretti et al., 2017).

We have selected the four case countries of Denmark, Estonia, the Netherlands and Sweden because they are small and open economies with high levels of digitalization (European Commission, 2021a,b). They all have rather innovation-friendly environments for FinTechs and have prepared for the uptake of FinTech products and services among consumers through the early adoption of new technologies by traditional banks and high usage levels of online and mobile banking among consumers. Consequently, all four countries have seen the rapid development of FinTech by banks and a growing number of FinTech companies. Statistics on all such segments show that in 2020–2021, there were approximately 450 FinTech companies in Sweden, 400 in the Netherlands, 280 in Denmark and 200 in Estonia. In all countries, a large proportion of these are small and micro companies in the start-up phase. However, a few FinTechs that have succeeded in scaling up and becoming established also exist, particularly in the niches of payment services, deposits and lending—for example Klarna and Wise (Holland Fintech, 2018; Tirmaste et al., 2019; Fintech Aera, 2020; Ingram-Bogusz and Andersen, 2020; Kulager, 2020; Copenhagen Fintech Policy, 2021; Laidroo et al., 2021).

3. Competition, co-operation and co-optation in the financial services markets

This section presents the empirical analysis based on the four analytical themes that emerged from the second cycle of coding, using quotations to provide details and nuance to the actors’ perspectives and strategies. The first theme concerns how the actors experience market competition from FinTechs in relation to incumbent banks. The second theme focuses on the strategies that incumbent banks develop to remain competitive, as well as the difficulties they encounter. The third theme centres around the recent turn towards more co-operative strategies by both incumbents and challengers. The fourth theme analyses co-operation difficulties and the possibilities for incumbents to co-opt challengers as a complementary strategy.

3.1 The competitive threat from FinTech challengers

Given the rapid development of FinTechs in Estonia, Denmark, the Netherlands and Sweden, one might expect the entrepreneurial challenge from FinTechs against the market incumbents to be fierce. The national contexts are beneficial to FinTechs, and the following
statement from a representative of a FinTech company in the Netherlands appears to apply to all four countries:

We have a very different e-commerce landscape from the rest of Europe. We are used to paying online, etc. We have good infrastructure […] and smaller businesses can really make a difference here. […] FinTechs can thrive more easily; it’s easier to gain consumer confidence, and that makes developments faster and more flexible. […] Traditional banks don’t have the perks that they would have in Germany, [where] banks may be more inclined to develop FinTech services themselves and more easily dominate the market. (NL #7)

The fact that FinTechs thrive reflects the threat they pose to traditional banks, as digital technology opens the value chain to flexible solutions giving customers the possibility of combining services from various providers. Even if this theme is not emphasized that much in most interviews, a representative of an Estonian Bank noted that ‘Some FinTechs are really affecting the market. They are attractive to customers and are taking on the market very aggressively’ (EE #3). However, that does not mean that banks are being outcompeted. As another Estonian bank representative explained: ‘banking services will not disappear from the market, but rather they will be complemented by certain niches or service segments’ (EE #4).

The main competitors for traditional banks among the FinTechs in all four countries are those that develop into neobanks, supplying payment solutions, credits and savings services directly to customers without any physical branches (cf. Hodson, 2021). Among such neobanks are the Swedish FinTech Klarna, established in 2005 as a payment solution for e-commerce businesses, which received its own banking licence in 2017. Another example is the Danish Lunar Bank, initiated as an app-based and mobile bank solution launched in 2015 by partnering with the existing Nykredit Bank to gain access to infrastructure based on a banking licence. However, Lunar Bank subsequently opted for a bank licence of its own in 2019, for reasons explained by a representative:

Although it was a really good collaboration, we also experienced limitations because we were bound by their infrastructure. Our technology is 100 per cent cloud-based, and it does not fit so well with the digital infrastructure at Nykredit Bank. Therefore, the idea came to get our own banking licence. No one has done that for the past 10 years in Denmark. But then we got control over the choice of other partners and our products. So, our business model pivots in the process from being an infrastructure/service provider model, i.e. a partner bank model, to a technology company with a banking licence. (DK #9)

This illustrates an even broader threat in the payment services niche. In that niche, some believed that: ‘banks have accepted that they have lost this competition […] The banks simply have a different role now’ (NL #7)—as stated by a representative for a Dutch FinTech. In addition, FinTech development increases competition between incumbent actors in the financial services markets. A good example is the open-banking platform provided by the Swedish FinTech Tink, established in 2012, with a product making it possible for customers to access accounts and transactions from different service providers, thereby making it easier for them to shop around and combine providers. This not only opens the market for small and niched challenger firms but also increases competition between incumbents.

However, according to the interviews, the real competition is still between the incumbents in the market, and the serious threat for the future is not from the FinTechs themselves, but rather, that they may team up with BigTechs with a large stock of customers in
areas such as online commerce. As stated by a representative from an Estonian bank:
‘Currently, the main competitors in banking are still other banks. In the future, it may be the BigTechs’ (EE #3). This problem was elaborated by a representative for a Dutch banking interest organization:

[Our member banks] tell me: ‘The biggest threat is BigTech’. [As] their earnings model is outside the domain of financial services, their financial services do not need to make a profit. […] [BigTechs] are also taking steps towards delivering ID services, a role that traditionally seemed to be the prerogative of banks. […] BigTechs can create this type of infrastructure much faster […] Whereas hundreds, even thousands of banks need to agree on certain infrastructure, the Googles and Facebooks of this world can simply enforce a standard and use their vast financial reserves and customer bases. (NL #1)

3.2 Counter-competitive strategies and obstacles for incumbent banks

Traditional banks, and later niche banks, initially pioneered the development towards digitized online banking. Of course, they remain active developers and users of FinTech, in an attempt to stay ahead of the market. As stated by the Swedish Bankers’ Association (2019), banks must be sensitive to their customer’s choice of service provider becoming increasingly specific. The awareness of changed consumer behaviour in relation to new technology is widespread in all four countries, as illustrated by the following description by an Estonian representative of the banking sector:

One big change is the flexibility of banking. [Previously] a client needed to go to a bank for a loan application. Today, banks collaborate with service providers offering services directly to the end user, at the site where the service or products are purchased. Thus, the challenge for the banks is to move their infrastructure […] to the end consumer. (EE #7)

Some examples of strategies for this purpose are banks alone or with a partner creating mobile money transfer apps and online ID solutions, such as BankID in 2003 and Swish in 2012 in Sweden (Riksbanken, 2017; Swedish Bankers’ Association, 2019); Mobile Pay in 2013 in Denmark; and iDEAL in 2018, as well as subsidiary FinTech services such as ABN AMRO’s Tikkie, in the Netherlands (Claessens et al., 2018; Holland FinTech, 2018). A current example of ongoing projects is the P27 Nordic Payments project, in which six Nordic banks are developing a new integrated Nordic payment infrastructure for real-time payments within and between their countries (Swedish Banker’s Association, 2020).

To keep up with FinTech competition, another bank strategy is to provide new kinds of ancillary services, such as proposing cheaper electricity contracts for their customers. In our interviews, banks emphasized that they must adjust to customer demand by combining in-house services with open-banking services based on new technological solutions and digital user interfaces. They must meet their customers ‘where they are’ in ways such as accelerating the process of supplying loan commitments through digitized and automated administrative functions. In staffing and organization, this means that units working with open banking and robotics are expanding in traditional banks.

However, some conditions make it difficult for banks to keep pace with the entrepreneurial technological development in FinTechs. First, there are stricter regulatory requirements for banks than for most niched products provided by FinTechs, which in some cases, may
even be outside financial market regulations if they only provide non-financial ancillary services (EBA, 2019; cf. Navaretti et al., 2017; Vives, 2017). This was emphasized in interviews with bank representatives, who stated that their stricter regulation and tougher supervision give FinTechs a competitive advantage. A Swedish bank representative elaborated on this problem:

We must develop our products so that we still comply with all legislation under the Financial Supervision Authority. And that is why it also takes much longer to develop the products than it does for a FinTech company not subject to the Swedish Financial Supervisory Authority. […] They do not have the same regulations at all regarding anti-money laundering, so they do not have CFT [Combating the Financing of Terrorism] rules either. So, there is a huge difference. We must have much more control over what money goes through our systems than a FinTech does. (SE #4)

Banks are thus obliged to have more control, and the competitive advantage that FinTechs have is not connected only to the products and services they may develop and provide. Costs related to their regulatory requirements are also highlighted, as stated by a representative for a Dutch banking interests organization:

Regulatory pressures […] create massive costs and require massive investments. In addition, some large fines have been handed out [to banks]. […] Only after all these things have been taken care of can the remaining earnings be invested in innovation. This is further complicated by legacy IT systems, which make innovation and digitalization more costly for traditional banks. (NL #1)

In addition to regulatory constraints, the above-mentioned obstacle of legacy IT systems further underscores the point that there are technical as well as cultural traditions in banks that hinder them from keeping up with the technological solutions of FinTechs. Some banks are dependent on older software and cultural ideas about banking, locking them into certain ways of doing things or slowing down the adjustment to new products and services (cf. Brandl and Hornuf, 2020).

3.3 A turn towards co-operation strategies between incumbents and challengers

However, the interrelations between established banks and FinTechs are described as more complex than simple competition. They also involve co-operation and co-optation. In all countries, the main thread in the description given by representatives for FinTechs and banks is that their interrelations are very much characterized by a (selectively) co-operative approach by both parties. Even if this was not the case initially, openness to co-operation has increased. Such a change is clearly illustrated in the following statement by the representative of a Dutch banking interest organization:

The [FinTech] development was initially viewed as a threat […] I think this hype has passed. […] [Most of the] FinTech businesses are now actually customers, partners, and suppliers of the big banks. Only [a small share] directly compete with the business model of the banks. […] Nowadays, the development of new value chains [in banking] is about mixing and matching with [external] parties that provide the best technological fit. (NL #1)
For banks, the transaction costs of teaming up with FinTechs are often seen as sufficiently low to favour external partnerships over in-house development. This strategy also externalizes the risk of investment, as banks can cherry-pick already developed solutions and products. Such co-operation with FinTechs is particularly beneficial for smaller banks looking to increase their market share despite the limited capacity for in-house tech development—as illustrated by a representative of a small foreign-owned bank on the Dutch market stating that unlike major banks, it does 'not have a large development team', and therefore must outsource some tech development and collaborate with FinTechs ‘instead of trying to invent everything ourselves’ (NL #3).

The emerging interrelations between banks and FinTechs are described in similar terms by both FinTechs and banks—as illustrated by the following reasoning from the representative of a Swedish bank, echoing the above comments about BigTechs being the greater threat:

Twenty years ago, you had banks competing with banks. And then, ten years ago, you had banks that competed against banks, but also [...] with different types of FinTechs that started to arise. But today, it is rather the case that [...] banks co-operate with FinTechs. [...] FinTechs have an agenda that is to a greater extent collaborative rather than directly competitive. [...] It does not have to be collaboration-oriented in the entire value chain; you may collaborate with the bank on infrastructure but are competitive in the distribution chain, for example. [...] The competitors now, for both banks and other smaller FinTechs, are perhaps rather the larger BigTechs. (SE #7)

The increasing co-operation reflects not only the FinTechs’, but also the banks’ interests in making the most of the new digital infrastructure, and the way it affords business opportunities by providing cheap access to data (Ciriello et al., 2018; Garzella et al., 2021). Accordingly, Swedish banks with the Bankers’ Association at the forefront have declared a positive stance concerning the open-banking trend. They appreciate the opening of the value chain in banking, with competition and specialization in the form of platform-based services. This is because it ‘will make sure that the most competitive products are provided to the end customer, in every product category’ (Swedish Bankers’ Association, 2019, p. 46). Such a stance is also expressed in Estonia, where a banking representative saw a ‘win–win situation’ (EE #3), in that FinTechs gain access to large client bases and financial capital, whereas banks may add new technical solutions to existing products and services. This strategy was elaborated further by a representative of an Estonian authority:

FinTechs mostly provide certain niche solutions, pieces that make banking easier. Traditional banking solutions have been large and expensive, but these niche solutions provide somewhat cheaper opportunities to satisfy clients’ needs. Payment services are a good example of niche solutions where additional pieces are integrated between banking and merchants. In this case, there is no competition with traditional banking, but additional value has been created instead. (EE #8)

Strategic co-operation between incumbents and challengers is thus increasingly pursued in the field. According to Copenhagen FinTech Lab, there are more than 100 partnerships between FinTechs and traditional financial services providers in Denmark. A core argument for joining forces seems to be that digital innovation is better developed outside of the bank’s organization and tech infrastructure—in FinTechs or outsourced entities that are more agile. The banks can offer FinTechs infrastructure in the form of not only access to data
companies, regulation expertise, and their banking licences but also finances to speed their growth. An example of such co-operation was given by a Danish FinTech representative:

You meet us, [FinTech company name] in the app, and when you invest, your deposit is safe with [bank name]. We pay [this bank] to use its infrastructure. It does not own any part of us, but we have a close partnership with it. We provide the investment advice and customers’ deposits are with [the bank]. We have a market strategy to expand in the Nordic countries, and here we depend on a partner bank in the new market. (DK #10)

Through co-operation, both banks and FinTechs also increasingly co-ordinate a complex web of connected actors (cf. Garzella et al., 2021). This is seen in a growing number of dialogue arenas between banks, banking associations, authorities and emerging FinTech community organizations. All four countries today have FinTech hubs, which in some cases are initiated through private–public partnerships and/or accelerator programmes to stimulate start-ups. These facilitate knowledge support and contacts with financiers and consultants and distribute information to members, and most arrange events and meetings with the banking industry and relevant authorities. In Denmark, Sweden and the Netherlands, there are also FinTech business organizations aiming to integrate the FinTech community and represent its interests both nationally and abroad. In Denmark, there is even a FinTech employer association that was founded in 2021 by three of the largest FinTechs. This growth of FinTech ‘governance units’, which are increasingly connected to the governance units of established actors, reflects a co-operative integration between FinTechs and banks at the overall field level. The organization of the FinTech businesses, however, not only is a sign of the increased co-operation with incumbents following the opening of a value chain through open banking but also marks a consolidation of FinTech businesses and shows an ambition to be recognized as established and legitimate actors in the field.

3.4 Co-operation difficulties and co-optation strategies
The co-operation between banks and FinTechs outlined above is not without complications. Technological, regulatory and cultural differences make co-operation difficult. Among the technological difficulties, traditional banks may be locked into old and complex software system solutions. FinTechs tend to be technologically swifter on their feet in development processes but lack the financial capacity of banks. As discussed by an Estonian bank representative, there can be a clash of ambitions between FinTech start-ups that need to accelerate and grow by ‘burning money’ fast and banks that have the financial muscle to wait for results in a slower development process. As elaborated by the same respondent, a critical factor in successful collaboration is that a ‘cultural match’ must exist so that teamwork and co-ordination between the partners’ staff members runs smoothly.

Other difficulties relate to regulation. FinTechs often have less stringent regulatory requirements in terms of capital and liquidity governance and risk processes, and are under less supervisory monitoring in regard to compliance with Anti-Money Laundering (AML)/Combating the Financing of Terrorism (CFT) rules. Thus, there may be limits to the banks’ opportunities to form partnerships, and there are risks in becoming back-end distributors of FinTech services that they cannot control. The banks may suffer the blow from irregular operations that harm both consumer security and consumer trust in the banking system (cf. Swedish Bankers’ Association, 2017, 2020). Examples exist in instances when banks were
given substantial fines for violations of AML and trade restriction regulations. This has contributed to banks generally taking a relatively risk-averse stance in forming such partnerships, as illustrated by the representative of a large Dutch FinTech company, who declared that: ‘when you are looking to co-operate with a bank, you are treated as a high risk’ (NL #6). Of course, such attitudes from banks vary depending on what product or services the potential FinTech partner provides. In the Swedish context, cryptocurrency companies had particular difficulties gaining access to banks, as they may not even be accepted as bank customers, or by authorities not accepting digital signatures (Ingram-Bogusz and Andersen, 2020).

FinTechs, in turn, often see themselves as confronted with overly rigid regulatory requirements intended for traditional banking that impede their ability to form partnerships with banks. This leads to substantial administrative and financial burdens associated with licensing fees and supervision (cf. Jongmans, 2020). As an example, an interviewee from the Swedish FinTech niche stated that: ‘Legislation and regulation are built around these big old banks, and it is very difficult as a new type of actor, with a new type of service or product, to come in and compete on the same terms’ (SE #3).

Some FinTechs also encounter difficulties in gaining access to financial infrastructure and API solutions because banks act as gatekeepers. This problem was reported in the Swedish case, even though there is a forum for dialogue between banks and FinTechs concerning API solutions. FinTechs found that development proceeded too slowly, and it was difficult to shape standardized solutions (Ingram-Bogusz and Andersen, 2020; cf. Swedish FinTech Association, 2021). Open-banking functions are allegedly still missing from large insurance and pension businesses. In addition, some FinTechs have encountered difficulties in obtaining insurance. As asset insurance is a requirement for licencing by the supervisory authority, this may be a significant obstacle.

Against this background of co-operation difficulties, a commonly mentioned alternative bank strategy to integrate entrepreneurial FinTech products and services is to co-opt FinTech products by buying the companies or their ideas and adjusting them for integration into the bank’s own product line or customer interfaces. In many cases, because of the complex regulatory structure, this is an easier solution than forming partnerships. A bank representative from Sweden explained it in this way:

When there is a FinTech company that has come up with a good smart solution, they are usually bought. So that you actually buy the product, you buy the idea. Precisely because we have a hard time writing agreements [...] you [would] must write so incredibly many legal agreements, which means that the FinTech company would not be able to deliver what you really need. Then it is easier to buy the idea. And so, one implements according to all the rules in the old systems. (SE #4)

However, finding good ideas is also time consuming. The traditional banks are not only waiting for new FinTech start-ups to come knocking on the door to their services but also undertaking active ‘scouting’ for possible new product or service solutions. To capitalize on such new ideas, products or solutions, some large banks have also developed their own FinTech hubs and invested in certain new start-ups, in a manner similar to that of large card issuers that have their own accelerator programmes.
4. Discussion—towards a coopetitive market ecosystem

The above analysis depicts the situation and strategies for both challenger FinTechs and incumbent banks, as new digital technologies in combination with customer demand and regulatory developments—particularly the EU PSD2—have opened value chains in the financial services market. However, the analysis does not fully support the expectations that established business models and market dominance will be disrupted by fierce FinTech competition. That is, ‘the hype’ around FinTechs outcompeting banks—as reported in a quotation above—has been somewhat overstated, at least in the short run. Our analysis instead indicates that the actors in the market believe the development to be more complex. Incumbent banks try to develop new competitive, co-operative and co-optative strategies, while also attempting to act as gatekeepers for FinTechs in some situations by depriving them of access to data and/or financial muscles. Similarly, FinTechs compete with banks through not only niching and pricing, but also supplementary competitive strategies of cooperation or partnering with both banks and BigTechs.

Returning to the simplified theoretical model presented in Figure 1, we may now illustrate how new entrepreneurial FinTech companies not only compete with banks in certain niches or segments of the market but also take other positions, thereby facilitating and accelerating an ongoing transformation to a market ecosystem. Starting from the producer position in the middle layer of Figure 2, there are certainly FinTechs who are pure competitors of the traditional banks in some of the segments and niches of financial services markets. The most illustrative example is FinTechs with an ambition or success in scaling up into neobanks, supplying payment solutions, credit and savings services directly to customers (cf. Hodson, 2021). Some FinTechs may also team up with BigTechs with large stocks of customers in areas such as online commerce, thereby combining their efforts through cooperation to compete with the traditional payment and credit services of banks. In addition, there are more specialized FinTechs competing in market segments such as payment services, investment management, financial advice and regulatory technology.

Other FinTechs, however, position themselves as partners or sellers upstream from a bank, providing back-office services, technical solutions for consumer services, or even ideas that are bought by banks and thus co-opted or integrated through strategic partnerships (cf. Brandl and Hornuf, 2020; Hornuf et al., 2021). Another form of co-operation for FinTechs is to place themselves downstream, between the bank and the customer. For example, by

![Figure 2](https://academic.oup.com/ser/advance-article/doi/10.1093/ser/mwad046/7227940)
utilizing open-banking solutions based on customer and account information from regular banks, they may then have the opportunity to add new services, while customers may utilize and gain an overview of services provided by different actors in the market. In so doing, they can increase the competition between the traditional actors by introducing apps that simulate a ‘one-stop shop’ solution at the customer end, even though different producers/sellers are used (cf. Lomachynska, 2020).

Of course, such a theoretical model does not detail all processes of diversification and/or mergers of subsectors and actors in the financial services markets. In addition, it downplays the tendencies towards a market ecosystem that already existed before FinTechs entered the market. Despite this, this simple model illustrates that the narrative about FinTechs being mainly challengers disrupting the business models of traditional banks must be nuanced—and that FinTech development spurs this process of transforming the financial services market into a more complex market ecosystem. Moreover, the development of financial technology and joint infrastructure reduces barriers to entry into the market. In short, FinTechs affects ‘the forms of interaction between market participants [...] and] promote the diversity and competitiveness’ (Lomachynska, 2020, p. 376).

Furthermore, this understanding of the situation is explicitly acknowledged by some actors in the field, who are aware of this terminology. One of the most poignant illustrations of this was described by a Dutch representative of a major bank:

The FinTechs have found that even if they have an incredibly good technical platform, without access to the market, things become complicated. […] our perspective is not one of competition, but of finding and shaping win-win situations. […] We are all part of an ecosystem, and it is much more relevant to have a good position within that ecosystem, rather than trying to outcompete everybody because that will not be successful anyway. (NL #5)

The emphasis on finding a good position in the ecosystem in this quotation also indicates how the development of FinTech services is largely shaped by how banks, FinTechs, and the various governance units on the field manage this emerging complexity of connected actors (cf. Esposito, 2017; Garzella et al., 2021). While learning to orient themselves in this arrangement of connected services and positions, they must also work both individually and collectively to organize and co-ordinate this networked complexity in line with existing regulations to reinforce trust and legitimacy.

5. Conclusions

As mentioned in the introduction, research has repeatedly viewed new technology as having disruptive effects on established business models. This type of narrative also applies to some analyses of developments in the financial services markets. FinTech companies are seen as innovative challengers forging new types of financial businesses by providing updated, mobile and innovative digital services. They exploit the possibilities of app-based services and AI in connection with the growth of new open-banking infrastructure, giving them access to the incumbent banks’ APIs (Breidbach et al., 2019; Lomachynska, 2020). Thereby, FinTechs are seen as challenger firms threatening traditional banks and their ‘one-stop shop’ business models. However, more recent studies indicate that new technology reshapes the market into an ecosystem in which incumbents and challenger firms become coexistent and
codependent (Aysan and Nanaeva, 2022; Arner et al., 2016; Chiu, 2016; Vives, 2017; 2019; Cai, 2018; Hendrikse et al., 2018).

By analysing and theorizing the strategies of incumbent banks and challenger FinTechs in Denmark, Estonia, the Netherlands and Sweden, this article contributes to a more nuanced understanding of a complex development that is emerging in recent research. We believe that our findings also contribute to the wider discussion on the potentially disruptive transformation of markets through emergent technologies and digitalization (e.g. Esposito, 2017; Ciriello et al., 2018; Garzella et al., 2021).

In our analyses, we have identified and illustrated various actor strategies, and obstacles to these, demonstrating that the interrelations between incumbent and challenger firms are more complex than simple competition—they indicate the emergence of a market ecosystem. There surely exists competitive pressure from entrepreneurial challenger firms, particularly the unicorns developing and scaling up from start-ups to established neobanks. However, to meet this challenge, and the threat from BigTech companies teaming up with FinTechs to use their customer bases for the provision of financial services, the incumbents in the financial services market in many instances see FinTechs as a necessity, ensuring innovation sufficient to meet customer demand and stay competitive. Across these countries, traditional banks are building alliances or strategic partnerships with FinTechs to identify future services, in the context of opening value chains through technology and the open-banking ambitions of the second EU PSD2. Even if the banks are still key actors in the new market ecosystem, they see a need to co-operate with or co-opt innovative FinTech ideas and develop new services and products to hold off the BigTechs (cf. Brandl and Hornuf, 2020). In shaping such alliances, they may also offer access to their client and customer base, or their financial muscle, to FinTechs.

Though traditional banks may have the financial capacity to develop FinTech services in-house, they often see collaboration with FinTechs as a way to stay competitive in an increasingly digital consumer market. The additional transaction costs are often also seen as sufficiently low to favour external partnerships over in-house development, thereby utilizing the entrepreneurial culture of FinTechs. Collaboration not only enables banks to cherry-pick already developed and proven concepts but also allows them to externalize the risk of development. In addition, banks with more limited capacity for in-house technological development may benefit from collaboration with FinTechs in their attempts to increase their market share. The demand for updated IT systems and the fact that regulatory pressures require substantial investments provide further reasons for banks and FinTechs to collaborate.

Concerning their challenger strategies, FinTechs also find reasons to collaborate. They do not have to be competitors of banks but may position themselves as upstream collaborators, providing technical solutions that either use or support the bank’s product lines and services, or they are bought by the bank. Likewise, they may place themselves downstream between the bank and the customer, for example, by utilizing open-banking solutions based on customer and account information from the regular banks.

As we compare the development across the four national settings, we do not find that FinTechs emerge as a primarily disruptive innovation force—if, by that, we mean that they interrupt existing businesses, market leaders and alliances in a fundamental way, or develop new markets through creative destruction (cf. Chiu, 2016; cf. Schumpeter, 2003, p. 83). There are, of course, FinTechs that act as challengers to the traditional incumbents on the market, such as those aiming to become established as neobanks without any physical
branches, thereby adding actors to the online retail banking market (cf. Hodson, 2021). However, many are deeply involved in collaboration and strategic partnerships with traditional banks and other established actors on the finance market (cf. Brandl and Hornuf, 2020; Hornuf et al., 2021).

Of course, this does not mean that we take a ‘functionalist’ approach, implying that everything sorts itself out on markets, or that the financial services market will transform smoothly into a market ecosystem without tension, conflict or new obstacles emerging. Crucial challenges exist that constrain the co-ordination and integration of the field, the most explicit being regulations restricting co-operation or delaying innovation or development of services and products. Regulation may decelerate FinTech implementation for both established banks and FinTech start-ups. The fact that the former are covered by much stricter regulation and control, whereas the latter often experiment in a regulatory grey zone, may create obstacles for both sides. Therefore, banks may prefer to purchase and co-opt FinTech ideas rather than team up with FinTechs in co-operation, whereas some FinTechs search for partners outside of the national arena. FinTechs point out that increasingly strict regulation has led to high administrative costs and difficulties in identifying the types of innovation in which they should engage. In addition, some technical and cultural issues still hinder co-operation (cf. Brandl and Hornuf, 2020). Some banks are dependent on older software and cultural ideas about banking, locking them into certain ways of doing things or slowing their adjustment to new products and services. The other side of the coin is that this creates difficulties for FinTechs in utilizing bank or customer account data through open APIs to the desired extent or speed.

However, we have also touched upon another way in which actors in the field seek to organize and co-ordinate this networked complexity in-line with existing regulations to reinforce trust and legitimacy. We have seen indications of integration of the field at the level of ‘governance units’—that is, state and private organizations that influence market entry and activities, as well as the co-ordination of interests and information (Fligstein and McAdam, 2012; cf. Ahrne et al., 2015). Even though the level of organization varies between the countries studied, there is a common tendency for FinTech communities to be increasingly organized and involved in dialogue with state authorities and bankers’ interest associations.

To conclude, by applying a field theory of markets and the concept of a market ecosystem, the analysis in this article reveals how new technology (and regulatory change) creates possibilities for innovative FinTech firms to do more than challenge incumbent banks. Rather, they seem to function as catalysts in the transformation towards a more complex financial market ecosystem. Instead of shaping a completely new business domain or threatening to disrupt existing actors and business models fully, FinTechs are becoming integrated into this new market ecosystem by using the joint digital infrastructure to develop a complex set of competitive, co-operative and co-optative relations with established actors—or, in a nutshell, through ‘coopetitive interdependence’ (Bogers et al., 2019).

Thereby, this article indicates a need to move beyond assumptions that assign disruptive potentials to specific technologies and to look more closely at the interplay between digital innovations, institutionalized conditions and regulations, and the strategies of actors arranging and changing the field (Esposito, 2017; Ciriello et al., 2018). We do not claim that these ideas or conclusions are radically new, but rather, that they further support and elaborate the results and approaches that have been put forward in recent research on FinTechs and financial services markets (e.g. Hendrikse et al., 2018, 2020; Bogers et al., 2019;
Lomachynska, 2020; Langley and Leyshon, 2021; Turcan and Deák, 2022). In addition, such developments have been discussed in other tech-penetrated markets, such as pharma and insurance (cf. Christensen and Karlsson, 2019; Volosovych et al., 2021).

As for generalizability, our comparative approach has the strength that we have found very similar patterns in four countries. To some extent this may be attributable to the selection of countries that are similar in terms of being small and open EU member economies with high levels of digitalization. In addition, one might suspect that FinTechs may want to exaggerate existing co-operation and downplay their competitive ambitions and possible long-term disruptive effects on the market. However, as co-operation is also acknowledged by representatives from incumbent banks, it seems reasonable to conclude that it exists. The difficult issue is then what developments we will see in the coming decade in terms of the balance between co-operation and competition. Consequently, our results need to be considered in relation to developments over time and in other countries, given that actor relations and strategies may vary with resources, as well as with regulatory, technological and cultural contexts.

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References


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## Appendix

### Table A1 Interviewees, identification number, country and type of organization

<table>
<thead>
<tr>
<th>Respondent number and country</th>
<th>Representing type of organization</th>
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<td>Trade union</td>
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<td>Trade union</td>
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<td>Employer association</td>
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<td>Employer association</td>
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