

Exploring the role of digital finance in small business lending: the case of FX12

Arturo Capasso

Università degli Studi del Sannio
WSB Merito University in Wroclaw
capasso@unisannio.it

Matteo Rossi

Università degli Studi del Sannio
WSB Merito University in Poznan
mrossi@unisannio.it

Abstract

Digital innovation technologies are part of the so-called Digital Transformation (DT). Also in the financial sector, DT has become an imperative for companies. A branch of Digital Transformation is the Digital Finance (DF). In the last decade, DF (also known as FinTech), has become more and more popular. In a nutshell, digital finance is the internet-based generation of traditional finance. It is a revolution currently taking place in the financial system. In the same time, Fintech had an impact on incumbents – with a re-evolution of business models – and on new competitors: the Digital Finance Start-ups.

In this paper we present a longitudinal case study: the unit of analysis was a firm not a single project. In fact, we contacted the top management of FX12 and we realised several interviews over three months.

FX12 is a start-up founded in Naples in 2019 specialized in assisting Small and Medium Enterprises. FX12 is the clear demonstration that fintech companies could help Small Business Lending, and that fintech firms can play a fundamental role in funding local economic growth.

Keywords: SMEs, Small Business Lending, Fintech, Digital Transformation, Digital Finance

1. Introduction

Digital innovation technologies (as cloud computing, social media and big data) are part of the so-called Digital Transformation (DT). Also in the financial sector, DT has become an imperative for companies in a world of emergent and continuous changes. In the last few years, DT is driving Financial Services Providers (FSP) to re-examine their business model and their strategies. Moreover, new business model and technological concepts provides a basis for innovative solutions in finance (Gomber et al., 2017).

In this new context Digital Finance impact in different ways:

- it challenges existing FSP, such as established banks or insurance providers, due to new competition by FinTech companies (FinTechs),
- in the same time, it offers new opportunities for the incumbents to reach their younger and more technology-savvy clientele, and
- it helps Small and Medium Enterprises (SMEs) in getting credit financing from non-bank lenders.

As a matter of fact, one of the most important changes of Digital Finance concerned the Small Business Lending (SBL) that plays a central role in funding local economic growth (Beck and Demirgüç-Kunt, 2006). Not only in the emerging countries, but also in the most developed economies, Small and Medium Enterprises (SMEs) represent more than 90 per cent of all businesses and more than 50 per cent of employment.

During Nineties', community banks had personal relations with small business owner in their own area of interest. Actually small banks, due to their lean organization, are more capable to collect and use soft information than large banks. "In particular, large banks are less willing to lend to *informationally difficult* credits, such as firms with no financial records" (Berger et al., 2005: 237).

In the last 20 years some important supply-side barriers had a huge impact in the financial process of SMEs. The most important barriers are (World Bank Group, 2022):

- high cost to acquire and serve clients, in relation to revenue;
- information asymmetry;
- lack of collateral.

All these frictions constrain the supply of capital to small and medium firms. Consequently, the financial scenario for SBL has changed significantly: fintech lenders and fintech companies have shaken up the traditional ways of doing business. Small Business Lending by fintech and big tech corporations has become increasingly important as a source of finance both for consumers and small firms around the world (Financial Stability Board, 2019; Cornelli et al., 2020; Ziegler et al., 2020).

Based on these statements the paper aims to analyse the impact of DTs on working capital financing. Following this introduction, a literature review on Digital Technologies, Information Asymmetry and SMES finance. The third section presents method and data used for the investigation. Finally, the main results have been discussed with consequent considerations presenting implications, limitations, and future directions of investigation.

2. Literature review

Digital Transformation has gained great research interest in both academia and practice. A branch of DT is the Digital Finance (DF). In the last decade, DF generally known as FinTech, has become more and more popular and it expanded in delivering innovative financial products and services through the internet, PCs, mobiles and contactless cards linking to digital payment systems (Manyika et al., 2016).

As sustained by Ozili (2018) DF refers to “all products, services, technology and/or infrastructure that enable individuals and companies to have access to payments, savings, and credit facilities via the internet (online) without the need to visit a bank branch or to deal directly with the financial service provider” (330). In few words, digital finance is the internet-based generation of traditional finance (Xie and Liu, 2022). This is an ongoing process: digital finance is a revolution currently taking place in the financial system.

In fact, at the same time, Fintech had an impact on incumbents – with a re-evolution of business models – and on new competitors: the Digital Finance Start-ups.

From a side, digital finance enables banks and other financial institutions to enlarge their client numbers and diversify/increase their financial services without the need of investing proportionately in branches and staff. From the other side, DF supports new firms that creating innovation for integrating distributed digital banking, payment solutions, micro-finance, peer-to-peer lending (Gomber et al., 2017; Cornelli et al., 2022).

Digital finance realises multiple functions in an economic context:

- it can exchange value across time and space;
- it can optimize resource allocation (Kapoor, 2014); and
- it can use technologies to reduce credit risk at an early stage (Zhang et al., 2022).

Various report from World Bank and Bank for International Settlements analyses the connection between fintech and Small and Medium Enterprises financing. Concerning the scientific research, the research on digital finance and SMEs could be divided in three branches:

- a. the impact of DF in the evaluation process for new project;
- b. the impact of DF to improve the firms' productivity; and
- c. the impact of Fintech to access to new funds.

In general, the scientific literature on the relationship between digital finance and the quality development of SMEs is almost poor. Therefore, this paper – in line with the third branch of studies – wants to analyse in depth the impact of digital finance on SMEs finance, and in particular on working capital financing.

2.1 DT, Information Asymmetry and SMEs finance: a literature review

Several studies (Stiglitz and Weiss, 1981; Myers and Majluf, 1984; Nier and Baumann, 2003; Gan and Riddiough, 2008) underlined that Information Asymmetry (IA) is a major concern for Financial Service Providers. The IA could concern two different types of information: soft and hard.

Soft information asymmetry can be reduced through personal interactions between banks and the entrepreneurs/managers (Greenbaum et al., 2016). This is particularly true for SMEs that are more subject to IA. As demonstrated from Beck et al. (2005), financial, legal, and corruption problems constrain particularly smallest firms. In opposition, hard information asymmetry can be reduced with the collection, processing and communication of standardized information.

In the European context recent regulatory changes (in particular Basel III) had an impact on hard information asymmetry, but banks and other traditional financial institutions are less skilled at processing and transmitting soft information through their hierarchical structures (Stein, 2002). In this scenario, Digital Transformation plays a crucial rule. Today, Fintech offers both benefits and costs relating to the information collection process and the cooperation between FSP and fintech is inevitable. But there are also

several risks for bank system. In fact, “Although banks have realized that cooperation with fintechs is a key approach to foster innovation, they struggle to address the associated challenges” Drasch et al. (2018: 26).

Moreover, numerous studies (De Young et al., 2007; Agarwal and Hauswald, 2010; Marinč, 2013; Ferri and Murro, 2015) demonstrate as digital transformation could have a negative impact on Small Business Loans.

As sustained by different scholars (Boot and Thakor, 2000; Goetz, 2011; Marinč, 2013) Large Banks (LBs) expand by relying on hard information but monitor less, which makes them less safe and sound. In particular, Marinč, (2013) sustain that LBs increase by relying on hard information. In this way, Information Technologies (ITs) better allows LBs to exploit economies of scale and scope. In the same time, the growing availability of hard information may mean that loan decisions will be based on coded data and less on personal contacts, in contrast with Small Businesses’ necessity.

The main difference between hard and soft information are: the first one can be easily acquired thanks to ITs, the second one can mainly be collected via non-digital contacts. Soft information can be difficult to standardize using online platforms: “we show that borrower proximity facilitates the collection of soft information, leading to a trade-off in the availability and pricing of credit, which is more readily accessible to nearby firms” (Agarwal and Hauswald, 2010: 2757).

Information Technologies reduce the interactions between banks and firms, and they decrease the amount of soft information available for bankers, increasing financial constraints and the amount of bank debt for SMEs. Some “bankers believe that their Internet web site increases profitability by reducing production costs, because a routine web-based transaction costs just pennies compared to more than a dollar at a teller window” (De Young et al., 2007: 1034).

Ferri and Murro (2015) formulated similar considerations. They analyse a large sample of Italian manufacturing firms and the relationship with their main bank. Authors start to consider an optimal matching of opaque (transparent) borrowing firms with relational (transactional) lending main banks. One important result is that more than 25% of the firms falls into an “odd couple”: “We find that the probability of rationing is larger when firms and banks match in “odd couples”. We conjecture the “odd couples” emerge either since the bank’s lending technology is not perfectly observable to the firm or because

riskier firms - even though opaque - strategically select transactional banks in the hope of being classified as lower risks” (Ferri and Murro, 2015: 231).

Traditionally, banks are the suppliers of financial resources for companies. From two decades, other sources of capital for start-ups and small businesses are venture capital, angel finance, and government financing programs (Klohn and Hornuf 2012).

With Digital Transformation firms became independent from these traditional ways by using the Internet to acquire the necessary money. Today Digital Financing embraces all digital types of making available financial capital: different platforms offer digitalized services in the area of factoring, invoicing, leasing, and crowdfunding.

In few years, Digital Financial Services (DFS) have been a key driver of financial inclusion. In fact, several researches (Jack and Suri, 2011, 2014; Lukonga, 2018; Berkmen et. al., 2019; Loukoianova et al, 2019, and Blancher et al., 2019) demonstrate there are important evidence on how fintech is increasing access to financial services.

For traditional banking sector fintech is in the same time a risk and an opportunity. From one side, DTs allow banks to acquire a huge amount of hard information about firms more efficiently and quickly. However, from another side, fintech presents some limitations: the use of internet and mobile banking platforms does not provide soft information that is essential in the lending relationship.

In the same time Digital Finance This can be explained with a different approach of Digital Finance in comparison with traditional bank loans: it hasn’t collateral and the time required is relatively fast (Figure 1).

	Bank Loan	Digital Finance
Collateral	Essential	Not required
Time required	Long	Fast
Relationship	Previous bank relationship is supportive	Not necessary. It can obtain public support
Management control	None	None

Figure 1. Bank loan and Digital Finance: a comparison

Source: authors’ calculations

Starting from these considerations the paper wants to answer to an important question: could DF help SMEs in working capital financing?

3. Research Method

In this paper we present a longitudinal case study (LCS). A longitudinal study is a kind of correlational research study that involves looking at variables over an extended period of time.

The opposite of a longitudinal study is a cross-sectional study. While LCS repeatedly observe the same participants over a period of time, cross-sectional studies examine different samples of the population at one point in time (Figure 2). They can be used to provide a snapshot of a group or society at a specific moment.

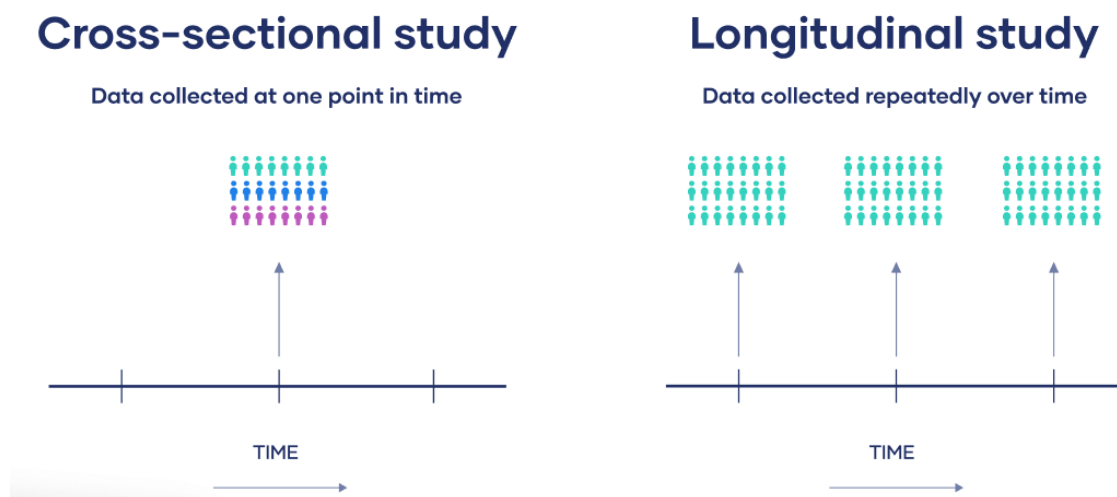


Figure 2. Cross-sectional study and Longitudinal case study: a comparison

Source: Thomas, 2020

For this research we prefer to apply the longitudinal case study. The contracting between the researchers and a host case study firms is particularly important in longitudinal case study research as there is a need for close, trusted contact over an extended period of time (Pettigrew 1997).

In the longitudinal case study described here, the unit of analysis was a companies not a single project. In fact, we contacted the top management of FX12 and we realised several interviews over three months.

4. FX12: a case study

Fx12 is a start-up founded in Naples in 2019, by a group of professionals and practitioners in the financial sector, specialized in assisting small and medium-sized firms.

The idea arose considering the difficulties faced by small farmers, located in the region of Ragusa in Sicily, who were required to pay cash for the supplies of seeds and seedlings, whereas their customers, mainly large retailers, like Carrefour or Auchan, thanks to their overlying bargaining power, impose terms of payments up to 120 days.

Essentially the commercial credits of these small farmers were against high standing debtors, however the characteristics of their businesses, in many cases family farms or individual firms, did not allow them easy access to the banks for discounting these invoices.

The idea of FX12, is based exactly on the intuition of a strong demand for credit by companies with little or no access to ordinary funding; even when their customers are high standing companies and, therefore, also the value of the credits is high.

In order to determine market dynamics, the propensity to discount credits and the size of the “willingness to pay”, FX12 has carried out a first experimental activity, lasting over eight months putting in place several case studies. The results showed that on average the percentage of large company suppliers with low credit ratings, was around 30 to 50%, depending on the industry.

The suppliers who participated in the test, due to the difficult access to the banking system, confirmed their interest in an acceleration of payments, which FX12 manages with a negotiation inspired by the “traditional” discount cash, but carried out in fully dematerialized mode on the “IncassaOra” (cash-Now) covered platform.

Intercepting a first offer of high-quality credits, FX12 has defined a model of capital use which covers three different types of provisions:

- company liquidity (“Yellow Line” dynamic discounting),
- liquidity made available by the owners of the debtor or other debtor-related stakeholders (“Blue Line” crowd investing),
- liquidity in a special purpose vehicle (regulated in Italy by L. 130/99) financed by a local bank (“Azure Line” traditional invoice trading).

From the regulatory point of view, for dynamic discounting, the implemented mechanism is sufficient in our platform, for crowd investing FX12 is enabled as a payment agent of Lemon way and registered with the Bank of France, as regards the FX12 invoice trading

through a special vehicle company established pursuant to L.130/99 by purchasing invoices in a simplified way, in so far as financed without issuing bonds.

Compared to other invoice trading platforms, IncassaOra has the possibility of “switching” any time the stock, always leaving the Leader company, and its owners, the priority for the purchase of the credits owed to themselves.

The core of the strategy is based on the information asymmetry between the demand for working capital of SMEs (in particular in the South Italy), to which the banking system fails to respond, and the ability of high-standing firms to “positively infect” that credit with the simple recognition of debt. Hence the FX12 approach, exclusively focused on specific supply chains available to manage the credit confirmation.

The key to the fast acquisition of credit demand lies in the idea of launching in parallel the three different instruments.

The commitment to always recognize the priority to the Leader and/or property to obtain returns on debt stock, was successful, as the portfolio, highly profitable, is accessible to other investors, only as a second-best option.

IncassaOra can be customized for specific Family Office to which the possibility of spend a small proportion of its liquidity, very short-term and with attractive returns, in the supply chains generated by the portfolio companies.

Another opportunity lies in the spread of the “Azure finance” model, which involves the creation of Special Purpose Vehicle (ex L.130/99) intended for operations promoted exclusively by banks of local interest, which they can secure their stock through a simplified mode, significantly reducing technical/ legal costs of “assembly” of the operation. The contract development allows to operate with plug & play mode, which allows the creation of a dedicated vehicle within six weeks.

Compared to other general platforms dedicated to purchase invoices that have substantially process innovations, competing with the traditional banking system, FX12, has identified its target focusing exclusively on suppliers of high standing and supply chain operations, stimulating the passing of assessments of merit “stand alone” favour a different interpretation of risk formation, analysed in a dimension extended to the system in which individual companies operate.

With the valuable help of the Tigran platform created by Modefinance have been defined more analysis timely, which, while respecting the results of evaluation algorithms, are

integrated by an approach “geometric”. In concrete terms, FX12 focuses its compass on the good southern companies and proposes the acceleration of receipts to the suppliers, in particular to those with not easy access to the ordinary credit.

This approach, adopted in full compliance with Community legislation ECSP thanks to the effective integration with the payment services offered by Lemonway, made it possible to propose transactions of demobilize even to newly established companies that did not yet have a budget deposited, to those who presented a high probability of default, to associations not yet enrolled in the RUNTS.

4.1 Main Results

After few months, FX12 has made purchases for several million euros, delivered on average within 72 hours from closing, anticipating payments of more than 10 years, credit losses 0 (zero), average returns for double-digit investors, finance provided to companies that had no access to credit over 70% of uses.

Another important aspect was that only one refusal for limitations related to the ignition of the account, so no disregarded expectation and injection of confidence in digital finance, understood as a technology capable of accelerate evaluations and create new opportunities through innovative information reading available.

As for loyalty, 90% of firms with poor/no access to credit that have used the services proposed by FX12 renewed the application for membership of the platform. This confirms that the demand for short-term resources satisfied by IncassaOra has a connotation structural and it isn't solvable with other tools.

5. Conclusions and managerial implications

In recent years, Digital Technologies have deeply transformed the banking sector (Drasch et al., 2018; Gai et al., 2018; Gimpel et al., 2018). Different authors (Tornjanski et al., 2015; Dapp, 2015) underlined the multiple changes in financial sector: banks face various internal problems, leading to a lack of innovation capability, and - in the same time - fintechs are picking up technology-enabled opportunities to push into the market.

Digital Finance had a strong impact on the banking services industry: it changed the way interactions with customers occur, what information is gathered and competition itself. In

this way, new fintech firms threatened the role of banks, which had to address this challenge by developing online services.

At the same time, financial technology allowed the entrance of new players into the banking market but also created fresh opportunities for incumbent banks.

Even if today the banking sector is characterised to the disintermediation of financial services and innovative approaches to financing, like factoring, crowdfunding, invoicing (Fasano and Cappa, 2022), these changes do not necessarily mean losses for traditional banks.

To overcome these challenges, cross-organizational cooperation had confirmed its applicability and its positive effects. Banks and fintech not necessary must compete but they can cooperate: thus, cooperation with fintech is becoming an increasingly prominent option for banks, to foster innovation (Economist Intelligence Unit, 2015).

In our opinion, the right way to realize a fintech revolution is the cooptation between fintech firms and traditional bank. In the same time, for traditional banks, FinTech firms represent both a threat and an opportunity. From one hand FinTech companies that make lending easier online, threaten big banks by taking their prospective customers. From another hand, FinTech companies that help banks make smarter decisions, increase efficiency, or serve customers on digital channels, give them an array of opportunities.

In this new competitive context, the experience of FX12 demonstrated that new forms of credit can support SMEs in access to finance. The specific case demonstrate that fintech can operate not in opposition, but in cooperation with the bank system. The invoice financing allows small and medium firms to use invoices as a form of collateral to secure a loan or line of credit, in particular to finance the working capital.

FX12 is the clear demonstration that fintech companies could help SBL, and that fintech play a fundamental role in funding local economic growth. In this way, bank system can benefit from working with FinTech companies – like FX 12 – who offer niche services that improve the customer experience.

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