

Marketplace and FinTech lending for SMEs in the COVID-19 crisis

Please cite as: OECD (2022), *Marketplace and FinTech lending for SMEs in the COVID-19 crisis*, OECD Business and Finance Policy Papers, OECD Publishing, Paris, <https://doi.org/10.1787/ff11697f-en>.

This report analyses the potential of the marketplace lending (MPL) model of online credit intermediation to finance small and medium-sized enterprises (SMEs) on a large scale, including the evolution of this model, its comparative advantage to banks and its benefits to borrowers, investors/funders and the market for SME financing. It also covers the risks this model presents, and limitations to its growth. Given the use of FinTechs to facilitate government support to SMEs throughout the COVID-19 crisis, the report analyses the involvement of MPL and FinTech lenders in the roll-out of government guaranteed loans in certain jurisdictions and the learnings from this experience. It then examines the benefits and limitations to their participation and derives lessons for future crisis support programmes.

© OECD 2022

This document, as well as any data and map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Photo credit: © Quardia/Getty Images

Foreword

Marketplace lending (MPL) involves online lending intermediated by platforms that match borrowers and lenders, collaborate with deposit-based financial institutions or employ their own balance for the extension of credit, depending on the model. The rapid evolution of FinTech-assisted intermediation in recent years has led to a recognition that policy makers and regulators need to fully understand the potential challenges and opportunities presented by these developments

This report analyses the potential of the MPL of online credit intermediation to finance small and medium-sized enterprises (SMEs) on a large scale, including the evolution of this model, its comparative advantage to banks and its benefits to borrowers, investors/funders and the market for SME financing. It also covers the risks this model presents, and limitations to its growth. Given the use of MPL to facilitate government support to SMEs throughout the COVID-19 crisis, the report analyses the involvement of MPL and FinTech lenders in the roll-out of government guaranteed loans in certain jurisdictions and the learnings from this experience. It then examines the benefits and limitations to their participation and derives lessons for future crisis support programmes.

The report has been prepared by *Iota Kaousar Nassr* and *Ana Sasi Brodesky* under the supervision of *Robert Patalano* from the Division of Financial Markets of the OECD Directorate for Financial and Enterprise Affairs. Pamela Duffin and Liv Gudmundson provided editorial and communication support.

The report supports the work of the OECD Committee on Financial Markets and is a product of its Expert Group on Finance and Digitalisation, both chaired by Aerd Houben. It was first discussed by the Expert Group in October 2020 and then approved by the Committee in May 2022.

The author gratefully acknowledges valuable input and constructive feedback provided by the following individuals and organisations: *Zaynah Asad*, HM Treasury; *Adam Głogowski*, National Bank of Poland; *Peter Grills*, US Treasury; *Alex Ivančo* and *Lenka Franče Rejzková*, Ministry of Finance, Czech Republic; *Eleftheria Kostika*, Bank of Greece; *Irina Mnohohitnei* and *Teresa Cascino*, Bank of England; *Benjamin Müller*, Swiss National Bank; *Borut Poljšak*, Bank of Slovenia; *Mai Santamaria*, Department of Finance, Ireland; *Akiko Shintani*, Permanent Delegation of Japan to the OECD and *Ryosuke Ushida*, Financial Services Agency, Japan; *Giuseppe Grande*, *Ilaria Supino*, *Giuseppe Ferrero*, Banca d'Italia. The report has also benefited from views and input provided by academia and the industry.

Table of contents

Foreword	3
Executive summary	6
1 Evolution of marketplace lending and latest trends	10
A changing business model: from P2P to marketplace lending	11
Comparative advantages of MPL compared to traditional SME lending and potential benefits to borrowers and the markets	16
Alternative credit scoring and the importance of data	18
Risks involved in MPL/FinTech lending activity and limitations to the growth of the MPL lending model	20
Limitations to the growth of MPL for SME financing	23
2 Marketplace/FinTech lender participation in COVID-19 government support programmes	29
Performance of MPL and other FinTech lenders during the pandemic	30
Participation of FinTech platforms in the deployment of COVID-19 relief loans: the case of the United States, the United Kingdom and the European Union	31
A missed opportunity for MPL and FinTech lenders? Examining limitations to FinTech lender participation in COVID19 relief loan disbursement	32
Potential merits of fostering further FinTech lender participation in government support schemes	39
3 Policy considerations	41
References	44
Notes	51

FIGURES

Figure 1.1. Example of the evolution of loan origination volume breakdown for top tier MPL players in the United States	12
Figure 1.2. Yearly FinTech lending flows by regions (2013-20)	13
Figure 1.3. Yearly FinTech lending flows in the three largest markets (2013-2020)	13
Figure 1.4. Year-on-year change in FinTech credit financing volume by sub regions, 2019-2020	14
Figure 1.5. Aggregate P2P platforms and problematic P2P platforms in China (H1 2015-16)	15
Figure 1.6. Credit sources broken down by credit risk of firm, US market	22
Figure 1.7. MPL regulation status globally	25
Figure 2.1. YoY Change in Financing Volume and Regulatory Authorisation	35

Figure 2.2. FinTech share of suspicious loans outperformed its market share

36

TABLES

Table 2.1. Summary of FinTechs (and other State Regulated entities) participation in PPP

31

Table 2.2. Estimated level of fraud and error in the UK COVID-19 support schemes

36

Table 2.3. US Paycheck Protection Programme, Lenders with <USD1bn assets and Non-Banks

38

Executive summary

Marketplace lending (MPL) can be described as online lending intermediated by FinTech platforms that match borrowers and lenders with the use of technology. Initially developed as peer-to-peer lending involving retail investors, the model has evolved into MPL with the wholesale debt funding base now including institutional investors and banks, as well as platforms deploying their own balance sheet. FinTech credit has been discussed at different fora in recent years, particularly looking at the financial stability implications that a potential growth of such activity would have, if it were to account for significant share of overall credit (FSB, 2017^[1]; FSB, 2017^[2]).

Similar to other forms of FinTech lending, MPL has the potential to improve efficiency and increase competition and diversification in lending, by providing an alternative to conventional bank lending for small and medium-sized companies (SMEs). This is particularly in times of stress when the bank lending channel becomes impaired with regards to quantity, price and distribution of credit, as was the case in the aftermath of the 2008 financial crisis (Nassr and Wehinger, 2015^[3]).

MPL could constitute a useful channel for credit allocation to SMEs because it reduces informational asymmetries prevailing in SME financing through the use of automation, big data and innovative techniques for the assessment of creditworthiness. Financial innovation in lending, whether through MPL or other FinTech models, has the potential to expand access to credit for underserved SMEs and promote financial inclusion, while it can also potentially foster productivity gains for the economy. End customers could benefit from cheaper access (provided that cost efficiencies are passed on to consumers), improved quality of offering or new channels for the distribution of financial services.

One of the major enablers of productivity enhancements in FinTech-based credit intermediation is the use of big data and artificial intelligence (AI)/ machine learning (ML) models for credit scoring. Such techniques, when properly geared, trained and programmed, could reduce the cost of credit underwriting as automation allows for cost efficiencies in data processing and enhance the underwriting decision-making process, improving the accuracy of creditworthiness assessment compared to traditional methods. This in turn can reduce credit losses while also improving the overall management of the lending portfolio (e.g. better fraud detection, more accurate analysis of the degree of interconnectedness between borrowers, etc.). These techniques can also facilitate the extension of credit to unscored clients (known as ‘thin file’ borrowers) with limited credit history or lack of collateral, supporting the financing of the real economy.

MPL and other FinTech lending models involve risks related to regulatory arbitrage, weaknesses associated with loan performance and asset quality, as well as risks to financial consumers including potential manipulation, absence of appropriate disclosure and risk of discriminatory or unfair lending. When it comes to asset quality, a potential easing of underwriting standards by MPL/FinTech lenders in an effort to compete for new business may deteriorate the asset quality of their lending portfolio, which is already skewed towards high-risk borrowers. Platforms that grow their loan originations too aggressively in order to gain market share are likely to simultaneously lower the credit quality of their portfolio with future repercussions when the growth or credit outlook turns. Lack of trust towards smaller platforms exacerbates perception of risk and further increases the cost of funding, which in turn gives rise to the risk of abrupt pull out of funding by investors in times of stress, with such platforms risking pro-cyclical behaviour. What is

more, such lending models and credit assessment methodologies have not been tested through a full credit cycle. In addition, many of these platforms are exposed to wholesale funding instability and related solvency risks, are vulnerable to funding freezes and expose participants to subsequent risk of loss of capital. There is a risk of misaligned interests and moral hazard depending on the funding model of the platform (e.g. originate-to-distribute model) and the risk retention requirements (and subsequent financial buffers) that may apply and which vary depending on the jurisdiction. Weak or inadequate level of disclosure creates risks for prospective borrowers, coupled with concerns about data privacy and confidentiality. Concerns also exist around disclosure practices to prospective borrowers, data privacy and confidentiality, both in terms of performance of loans extended, but also the absence of appropriate disclosure (or information provided in inadequate form) and the level of understanding of prospective borrowers around costs and detailed product features. Concerning the use of AI techniques and alternative big data, despite its vast potential, such innovation can raise risks of disparate impact in credit outcomes and the potential for biased, discriminatory or unfair lending. In addition to the risk of inadvertently generating or perpetuating biases, AI-driven rating models make discrimination in credit allocation even harder to find given the lack of explainability and the difficulty in interpreting their dynamic, non-linear evolution over time, and outputs of the model difficult to interpret and communicate to declined applicants for lending.

Despite its potential to address SME financing gaps, MPLs have only become a serious alternative to bank lending in very few markets, primarily due to lack of stable and affordable funding sources. The capacity of MPLs to provide financing at meaningful levels is dependent on their ability to secure wholesale funding at affordable cost. When it comes to the cost of funding, the economics of platform lending largely depend on such costs: platforms deploying their own balance sheet fund themselves at higher interest rates and less favourable repayment terms than banks, as they first have to obtain the liquidity they can lend in debt markets given that they cannot create it in the form of deposits as banks do, and they do so at higher interest rates as they are [perceived as] riskier than banks. The economics of FinTech lending model is a priori in disadvantage compared to bank lenders, while they are also exposed to the risk of downturns, when wholesale funding liquidity tends to disappear. The difficulty of MPLs to secure cheap wholesale funding could be linked to the limited trust the small MPL players enjoy in the market or their lack of track record. This highlights the importance of stronger involvement of long-term institutional investors (pension funds, insurance companies) in MPL wholesale funding, as this is critical to the scalability of such model. At the same time, non-bank institutional funders could also ensure additionality in the credit provision instead of just channelling credit through different routes.

Undeveloped secondary markets for such illiquid loan portfolios (e.g. securitisation) undermine non-bank institutional investor involvement and the scale-up of this market. Lack of transparency and limited repeat issuances, underdeveloped trading and portfolio management infrastructure for loans of small size, potential lack of transparency and the subsequent lack of visibility into underlying collateral are some of the reasons impeding the development of such secondary markets. In particular, due diligence requirements and loan-by-loan disclosure requirements associated with securitisation issuance can be difficult to fulfil for SME loan portfolios, which may involve thousands of heterogeneous small-sized loans, and translate into significant upfront costs and complexity for issuers of such structured products and their investors.

During the pandemic, several jurisdictions allowed MPLs and other FinTech lenders to participate in the roll-out of COVID19 SME support lending and the growth in global business lending during 2020 could be partly attributed to this participation in some major MPL markets (e.g. US, UK). In 2020, global FinTech lending levels surpassed that of 2019 reaching a volume of USD100bn, mainly driven by corporate lending. FinTech lender participation in the distribution of COVID-19 support programmes by governments was limited but gave such online platforms an excellent opportunity to showcase their technological edge and comparative advantages vis-à-vis bank lending. Fast on-boarding and full production process automation (from creditworthiness assessment to funds processing) offered the rapid delivery of emergency funding,

while the agility of FinTech lenders allowed them to reach micro SMEs and entrepreneurs that did not have formal bank relationships or that are based in remote parts of the world. A number of eligible banks partnered with FinTechs for the processing of relief loan applications, leveraging their technological edge of speed, efficiency, and reach.

The United States and the United Kingdom are two of the most prominent examples of jurisdictions having allowed for the participation of FinTech lenders in the roll-out of their support schemes. Although FinTech lenders disbursed only a small share of total COVID-19 support lending in the jurisdictions where they participated in absolute terms, there is evidence that they provided important support to underserved SMEs. Indicatively, in the US, FinTech lender participation in the US PPP scheme allowed minority business owners who have in the past been underserved by the traditional banking industry, to borrow, while the role of FinTechs in PPP provision was greater in counties where the economic effects of the COVID-19 pandemic were more severe. Empirical evidence of US market behaviour suggests that FinTechs mostly expanded the overall supply of financial services during the pandemic, rather than redistributing it.

The limited participation of FinTechs in COVID-19 schemes was the result of the inherent weaknesses of their business models, such as the availability and cost of funding sources. In support schemes involving government guarantees, intermediaries had to source the wholesale funding required to extend loans benefitting from government guarantees. The lack of credibility and trust by authorities when it came to accessing central bank liquidity facilities or enjoying governmental guarantees was another limitation. The higher cost of funding relative to banks and the restricted access to central bank funding facilities made available during the crisis in some jurisdictions limited the ability of FinTechs to participate, particularly in guarantee schemes for loans with a capped interest rate. Importantly, FinTechs operating in jurisdictions that have lagged behind in setting in place a supervisory framework for their operations have experienced lower increase/or deeper decrease in funding volume during the crisis perhaps due to lower credibility and assurance for authorities to on board such players into their programmes, and the speed at which they could interact with them.

FinTechs were responsible for a disproportionately high share of suspicious or fraudulent loans in some of the COVID-19 programmes they participated. Fraud related to such schemes involved individuals giving false information or misrepresenting their identity and other relevant information to access relief loans. There may be trade-offs between speed of disbursement of funds in emergency situations and exposure to potential fraud, as there is limited room for extensive due diligence when support needs to be distributed in an expedited manner, particularly for small SMEs without prior bank relationships (primarily serviced by FinTechs). In order to avoid high levels of fraud in future schemes involving FinTech intermediaries and established banks, it may be important to further promote investment in data sharing infrastructure and systems that will allow for the speedy and efficient due diligence of small businesses. This may include cooperation between the different authorities (e.g. tax authorities, company registration authorities) for the exchange of information in case of emergency and the use of FinTech applications. Risk management practices of FinTechs and their recovery capabilities need to be further reinforced, necessary for them to build trust with the authorities and the market.

Policy makers could benefit from an assessment of FinTech participation in the roll-out of COVID-19 relief loan programmes so as to better utilise them in possible future large-scale emergency economic situations. Given efficiencies in terms of speed and scale of application processing, as well as evidence of beneficial outcomes for micro-SMEs and minority business-owners, further inclusion in other SME government-sponsored schemes could be considered as a first step. Participation or cooperation in regular SME support schemes by development banks could be one avenue for such collaboration.

There is a need to encourage greater transparency of SME loan portfolios in order to address information asymmetries in SME credit markets, e.g. through the creation of enhanced data sharing solutions. Given SME inherent heterogeneity, which is at the same time an important source of attractiveness to private

investors, there is a need to consider data sharing solutions, whether based on APIs, data portability policies or other Open Finance schemes. These can improve transparency for lenders; provide SMEs with more choice and better access to financing; while having a positive effect in competitive dynamics with greater participation by new lenders and FinTechs. At the same time, the build-up of loan-level data, performance track records and the encouragement of ongoing reporting would support secondary markets for SMEs-based instruments (e.g. securitisation), stimulate institutional investor participation, and allow for informed decision-making by capital holders.

Policy makers could consider ways to encourage the safe development of these markets as a way to improve access to SME financing – especially where sources of finance for this sector are not diversified – , while addressing risks emerging from such models, through the provision of a clear regulatory perimeter for such players. Regulatory clarity could address the risk of regulatory arbitrage and fill in any potential regulatory gaps when it comes to unregulated online platforms. Ensuring the same level of rules between regulated banks and FinTechs performing the same activity is commensurate with the ‘same risks, same rules’ principle of technology-neutral policymaking. Regulatory clarity could also promote more collaboration and partnerships between banks and FinTechs for the provision of safe and affordable credit to the underbanked parts of the population (e.g. the US ‘True Lender’ proposals). Effective oversight and robust small business owner protections can promote a sound borrower experience, a more transparent marketplace for borrowers and investors and a safer online lending environment for all. Enhanced oversight and consumer protections will mitigate risks and instil more confidence and trust in MPL/FinTech lenders. From the lender perspective, addressing regulatory gaps and bringing such players into the regulatory perimeter could reduce their cost of funding, addressing one of the most pressing obstacles in the expansion of this market. Closer collaboration with supervisors can also improve the levels of understanding and trust that authorities have in these players.

The role of coordination between authorities is crucial at both the national and the international levels. Facilitating coordination between different authorities and agencies responsible for such activities is a pre-requisite for the development of a sound framework at the national level, covering aspects from prudential regulation to consumer protection and competition conditions. The latter is particularly important given the potential benefits of FinTech lending activity in the competitive landscape of SME lending and in light of BigTech growing footprint in financial services. For example, coordination at the international level will support the safe expansion of credit at the cross-border level, while cooperation with authorities responsible for data protection could allow for the safe access of online lenders to government- or industry-held data through open banking initiatives for the ultimate benefit of consumers.

Policy makers may have a role in supporting diversity of financing models and risk appetites in the market for SME financing, in order to reduce the likelihood of shocks obstructing the flow of financing to SMEs and the real economy, particularly in a counter-cyclical manner. The market for SME financing is heterogeneous in nature, with a wide range of risk profiles, needs and channels of financing, reflecting the inherent nature of heterogeneous SMEs. Diverse sources and providers of SME financing with different business models and risk appetite can better serve the whole spectrum of SMEs and their needs, particularly in times of stress. A level playing field for traditional and alternative online lenders, such as MPLs and other FinTechs can help ensure a healthy competitive environment for SME credit, higher quality products and services to customers and better access to such products for the smaller/underserved small businesses.

1 Evolution of marketplace lending and latest trends

MPL could constitute a useful channel for credit allocation to SMEs because it reduces informational asymmetries prevailing in SME financing through the use of automation, big data and innovative techniques for the assessment of creditworthiness. Despite its potential to address SME financing gaps, MPLs have only become a serious alternative to bank lending in very few markets, primarily due to lack of stable and affordable funding sources. This Chapter analyses benefits and risks related to such activity and the limitations to its growth, touching in particular upon undeveloped secondary markets for illiquid loan portfolios (e.g. securitisation) that undermine non-bank institutional investor involvement and the scale-up of this market.

MPL can be described as online lending intermediated by FinTech platforms that match borrowers and lenders with the use of technology. While MPL activity still accounts for a small part of credit activity and does not pose systemic risk to financial stability (FSB, 2017^[2]), it has been growing fast in scope in the recent decade, and could potentially constitute a useful channel for the allocation of credit to small and medium-sized companies (SMEs) and consumers, both in advanced and developing economies.

The broader FinTech credit market has been given consideration by the OECD and international bodies (FSB, BIS) and national authorities (US Treasury), with a focus on financial stability implications. This section delves into the MPL part of the FinTech lending market and analyses the conditions required for this model to address financing needs of SMEs.

This section examines how MPL compares to lending by traditional deposit-taking institutions¹, whether and how it has a competitive advantage vis-à-vis conventional corporate lending and small business

lending in particular, with a focus on non-conventional credit scoring. It then discusses the different risks arising from such model of online credit intermediation, focusing on regulatory-related risks, weaknesses linked to asset quality and loan portfolio performance of such lenders, and risks to borrowers such as limited or inexistent disclosure obligations and standards. The section ends by examining the limitations to the growth of the MPL model for SME financing, such as the availability and cost of funding, the economics of this model and the absence of secondary markets for MPL-originated loans.

A changing business model: from P2P to marketplace lending

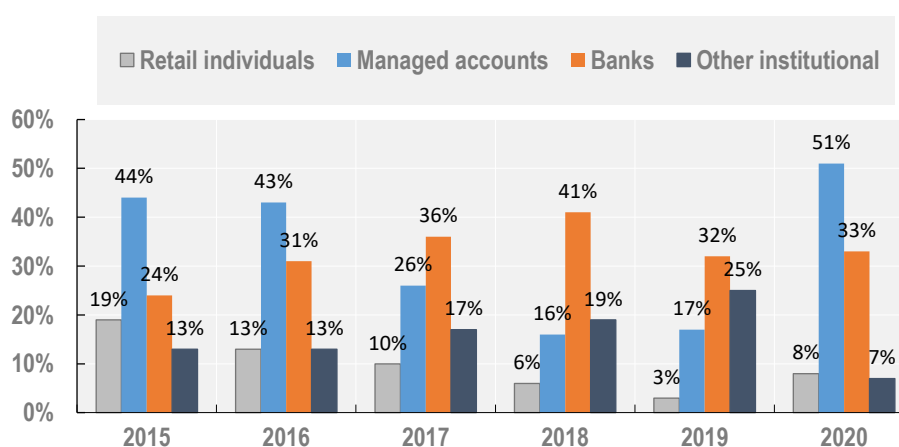
The concept of online lending has existed for more than a decade, and was first developed in the 'traditional' P2P lending model where electronic platforms facilitate the provision of credit to individual borrowers, funded by retail investors. This P2P model has evolved with the funding base now including both institutional investors and deposit-taking financial institutions, as well as platforms deploying their own balance sheet², and is now generally described as marketplace lending (MPL). More recently, BigTech companies have engaged in MPL by providing credit intermediation through their own platforms to their customer base, leveraging on the wealth of proprietary data on their customer base.

Incumbent banks participate in the MPL sector in a number of ways, by acquiring equity stakes in MPL platforms, providing wholesale funding to online lenders or partnering with them and making use of the platform's technological advantage for the provision of small business lending. Banks can thereby deploy their funding pools to underserved customers such as micro SMEs, by leveraging on the FinTech capabilities of MPL for fast on boarding and alternative methods of credit assessment (e.g. OnDeck collaboration with JPMorgan, Kabbage past partnerships with ING in Spain and Santander in the UK). From a supervisory perspective, such partnerships can, to some extent, address some of the risks associated with MPL while offering the experience and trust of a regulated entity to the online lending process. At the same time, they offer speed of execution and agility to banks for the acquisition of new small clients at a lower cost.

Though many online alternative finance ventures began their operation relying mostly on retail investors with a pure P2P funding model, a growing share of funding for FinTech financing has been provided by institutional investment (in 2019, approximately 16% of FinTech finance volumes was provided by institutional investors, and that share has presumably increased to 42% in 2020, (Cambridge Centre for Alternative Finance, 2021^[4])).³ As an example, retail lenders have provided less than 10% of the capital of Prosper Marketplace in recent years (Balyuk and Davydenko, 2019^[5]) whereas LendingClub has recently retired the retail investment option completely (Prosper and LendingClub are the two largest platforms in the United States) (LendingClub, 2021^[6]).

In parallel to decreasing the reliance on retail funding, the business model of MPLs has moved away from pure intermediation to leveraging of own equity; the share of balance sheet lending models among FinTech lending increased from 14% in 2018 to 38% in 2020 (Cambridge Centre for Alternative Finance, 2021^[4]) and (CCAF, 2020^[7]).⁴

Figure 1.1. Example of the evolution of loan origination volume breakdown for top tier MPL players in the United States



Note: (1) Managed accounts and Other institutional investors primarily include other non-bank investors, dedicated third-party funds, and public and private funds managed by third-party asset managers, (2) Banks, which are deposit taking institutions or their affiliates, (3) Retail individuals are self-directed retail investors. The remaining % consists of LendingClub inventory, which includes loan originations purchased by the Company during the period and not yet sold as of the period end.

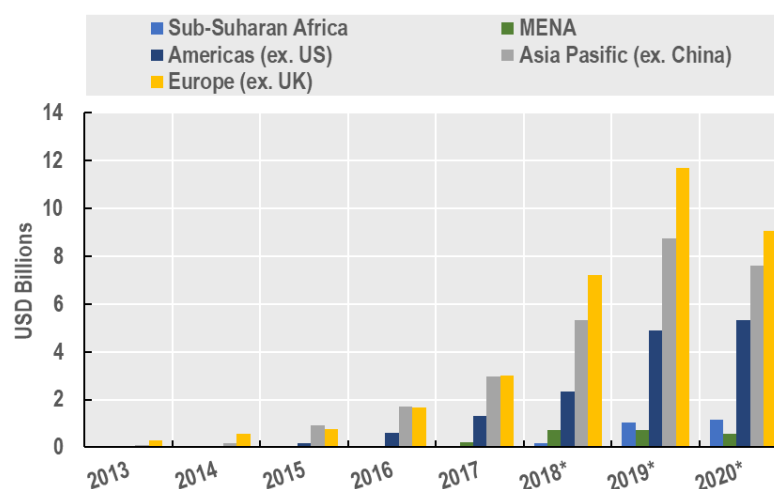
Source: (LendingClub, 2020^[8]), (LendingClub, 2018^[9]).

For the purposes of this discussion, MPL will focus on online platform lending to small and medium-sized companies (SMEs) that is funded by institutional investors; cooperating with traditional deposit-taking financial institutions; or using their own balance sheet. As such, ‘traditional’ P2P lending or debt crowdfunding, where retail non-accredited investors pool small amounts of capital for various purposes through online platforms, is not the main focus of this report.⁵

Excluding China, the global FinTech activity has been growing between 2019 and 2020, despite the COVID-19 crisis. FinTech funding volume in 2020 to businesses and consumers (including equity) has reached almost USD 114bn (Cambridge Centre for Alternative Finance, 2021^[4]). US became the largest market for all types of FinTech financing, accounting for more than two thirds of activity in 2020 (Cambridge Centre for Alternative Finance, 2021^[4]). In 2020, the largest online alternative finance model by market segmentation was P2P/ Marketplace Consumer Lending, accounting for USD35bn globally (or 31% of total global volume of alternative financing) followed by Balance Sheet Business Lending (USD 14bn, or 25% of total global volume) and P2P/ Marketplace Business Lending (USD 15bn, 14% of total global volume).

New FinTech credit reached a global volume of USD 100 billion in 2020 (including P2P/MPL and balance-sheet lending to consumers, businesses or for property; invoice trading, debt-based securities (debentures and bonds) and mini-bonds) (Cambridge Centre for Alternative Finance, 2021^[4]) (Figure 1.2). A cross-country examination performed by Cornelli et al. empirically confirmed what can be seen in Figure 1.2, and that is that between 2013 and 2018 FinTech credit enjoyed faster growth rates in countries with higher economic and institutional development. Cornelli et al. also found that FinTech credit expansion was faster in jurisdictions with a less competitive banking sector.

Figure 1.2. Yearly FinTech lending flows by regions (2013-20)

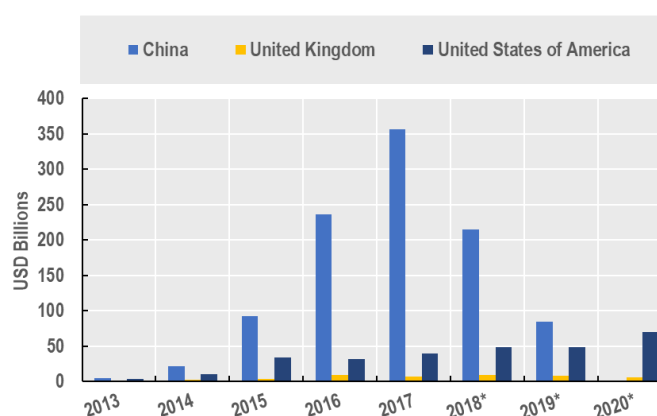


Note: Data for the yearly flow volumes for 2013-2017 are based on the Big Tech and FinTech Credit Database made available for the public by the BIS; Date for the yearly volumes for 2018-2020 are taken directly from The 2nd Global Alternative Finance Market Benchmarking Report published by the CCAF. Accordingly, some discrepancies might be present going from 2017 to 2018, mainly due to inconsistency in countries included in each region.

Source: OECD calculations based on (Cornelli et al., 2020_[10]) (Cambridge Centre for Alternative Finance, 2021_[4])

China has been home to the largest FinTech credit market until 2020, followed by the US and UK. However, regulatory changes in China have led to a considerable decline in volumes and its global market share in recent years, while FinTech credit elsewhere continued to grow. Prior to the COVID-19 breakout, FinTech credit in the US was made up primarily of P2P/marketplace consumer lending, offered by several large lending platform, and with investment coming predominantly from institutional investors rather than individual lenders (Cornelli et al., 2020_[10]). Growth of FinTech credit in the UK has, among other things, enjoyed a welcoming regulatory attitude (CCAF, 2020_[7]).

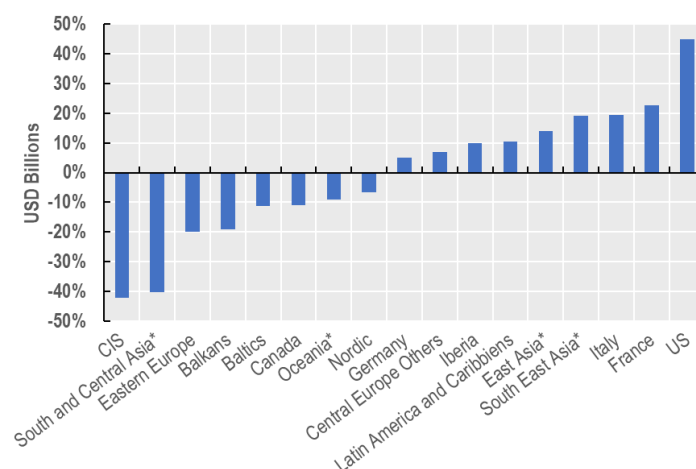
Figure 1.3. Yearly FinTech lending flows in the three largest markets (2013-20)



Note: Data for the yearly flow volumes for 2013-2017 are based on the Big Tech and FinTech Credit Database made available for the public by the BIS; Date for the yearly volumes for 2018-2020 are taken directly from The 2nd Global Alternative Finance Market Benchmarking Report published by the CCAF

Source: OECD calculations based on (Cornelli et al., 2020_[10]) and (Cambridge Centre for Alternative Finance, 2021_[4]).

Figure 1.4. Year-on-year change in FinTech credit financing volume by sub regions, 2019-20



Note: Figures represent the percentage change in funding volume between 2020 and 2019 of debt-based alternative finance market volume by sub-regions. For sub-regions marked with (*), change in volume relates to all alternative finance models, in the absence of more granular data. UK and the Benelux regions were excluded due to inconsistency among survey participants in 2019 and 2020 which affected greatly the reported volume.

Source: OECD calculations and (Cambridge Centre for Alternative Finance, 2021^[4])

Debt- and equity-based MPL financing to *businesses* experienced significant growth from 2019 to 2020, with transaction volumes increasing substantially from USD 35bn to USD 53bn (excl. China). The vast majority of activity is debt-based (93% of business funding) (Cambridge Centre for Alternative Finance, 2021^[4]). This expansion was in contrast to MPL *consumer* financing that declined during the COVID-19 pandemic period.

Box 1.1. The rise and fall of MPL in China and the importance of FinTech regulation

China has been the largest marketplace lending industry globally. Unlike the US and UK where MPLs aimed at disintermediating banks, in China the MPL market developed as a market aiming to serve a vastly underserved space of underbanked consumers or SMEs, estimated at 500m customers.

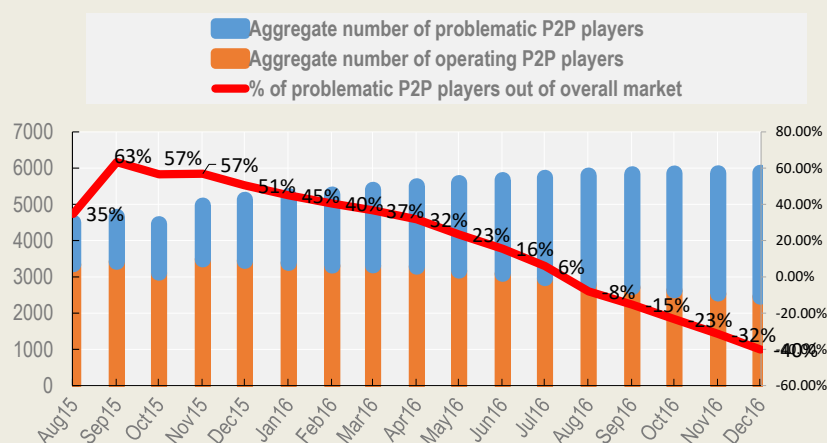
Lower credit penetration in China's banking system and a low risk appetite of large Chinese banks serving primarily prime customers, coupled with geographical limitations to servicing remote parts of the country, left a gap for online lenders to fill. Growing household wealth on the investor side and increased appetite for alternative investments with high returns created abundant funding pools for such MPLs. The large proportion of tech-savvy millennials in the general population provided fertile ground for such FinTech innovation: prior to COVID-19, China accounted for 45% of global e-commerce transactions while mobile payments penetration was three times higher than that of the US (Zipser et al., 2020^[11]).

Online lenders have also managed to make use of alternative metrics for credit scoring very early on, before the proliferation of BigTechs. The lack of centralised credit bureau for credit scoring at the time of MPL proliferation in China in the early 2000s increased the cost of servicing small-sized borrowers for banks, making space for such innovative players.

After a multi-year period of extremely high growth and strong profits for the Chinese MPL market (three new platforms being set up every day during 2014-15), the entry of the internet BigTechs into online finance created a serious threat for standalone MPLs around 2015. BigTechs (e.g. AliPay, Tencent,

Wechat, Bytedance, JD) used their substantial financial resources and networks, including personal and transactional data and information about their customers, to provide financial services. This led to a series of consolidations in what was a highly fragmented industry of around 5,900 operating MPL platforms as of early 2016.

Figure 1.5. Aggregate P2P platforms and problematic P2P platforms in China (H1 2015-16)



Source: (CeicData, 2020^[12]), Wangdaizhijia, Statista.

The most important enabler of this spectacular growth was the absence of appropriate regulation for this space (e.g. Wechat and Alipay started offering financial services when there were virtually no KYC/AML requirements). MPLs were subject to very light regulation for many years, until the rapid growth of the sector attracted the attention of the regulator.

Given the absence of regulatory safeguards, the MPL market in China faced numerous scandals and turmoil with fraud discoveries at large MPL players in 2015. Ezubao, one of the largest MPLs, defaulted on its investors amounting USD 7.6 billion. Allegations over a 'Ponzi' scheme involved the use of the platform to create fictitious borrowers and the sale of such fictitious loans to investors, mainly retail individuals. Other cases of fraud have occurred in this space, with reportedly over 500 problematic platforms identified where there has been fraud, the owner has ran away, lost contact, closed down, or had experienced problems with withdrawal of funds. At the end of 2016, the China Banking Regulatory Commission issued draft rules, followed by new regulation in 2016, that imposed restrictions on the role of MPL and promoted enhanced borrower and investor protection, eliminating weaker players and allowing for those with sustainable models to survive.

Overall, more than half of platforms failed at a spectacular rate (c. 100 platform failures per month in 2016) reflecting the weaknesses of an – until then - unregulated market. Industry consolidation, a police crackdown on fraudulent and illicit activity and the aggressive expansion of BigTechs in financial services overtook the growth of the Chinese MPL market. The large captive user base of BigTechs, coupled with their vast customer data allows them to offer lending products and several of these BigTechs have been licenced to set up online banking operations, too.

Source: (McKinsey, 2018^[13]), (Atkinson, 2017^[14]), (Reuters, 2019^[15]).

Comparative advantages of MPL compared to traditional SME lending and potential benefits to borrowers and the markets

On the supply side, FinTech-enabled credit provision to SMEs has the potential to improve the efficiency of financial intermediation. FinTech-driven loan activity offers efficiency, simplicity, transparency and lower transaction costs stemming mainly from a lower operating cost base and operational efficiencies, as automation replaces physical infrastructure, legacy IT systems and associated staff costs, such as the ones borne by traditional bank lenders. Importantly, platforms in many markets benefit from a lack of regulatory capital and liquidity requirements similar to the ones imposed on banks, avoiding the distortions created by risk-weighted capital requirements. In accordance, evidence from the US mortgage lending market indicates shadow-bank lenders, with growing share of this activity attributed to FinTech lenders after the Great Financial Crisis, compensated for contracted banking mortgage lending in places where banks became subject to more regulatory constraints (Buchak et al., 2018^[16]). More generally, empirical evidence suggests that FinTech lenders adjust supply more elastically than other lenders in response to exogenous demand shocks, thereby alleviating capacity constraints associated with traditional lending (Federal Reserve Bank of New York, 2018^[17])⁶.

The advantage of FinTechs over banks in terms of lower operational costs might have been particularly important to the growth of FinTech lending taking off during a decade of low interest rates environment (Deloitte, 2016^[18]). Low interest rates have a negative effect on banks' net interest margin and banks have responded with a shift to fee-based activities and the non-retail segment (Brei, Borio and Gambacorta, 2019^[19]).

Benefits of MPL to the demand side include speed, competitive pricing compared to specific credit products (such as unsecured lending to SMEs), convenient, user-friendly and seamless customer experience, personalised products, and reach of remote clients by being purely digital. SMEs can apply for funding during non-banking hours and flexible funding distribution options with 24/7 online access caters for time-strapped small business owners. MPL competes with traditional lending in terms of speed, as loans are processed faster through online platforms given the use of advanced technology at all stages of the credit allocation process (including AML/KYC checks and fraud prevention; client on-boarding; automated application processing; data sharing between lenders and borrowers through APIs; automated loan disbursement and post-lending monitoring of performance). By way of an example, the average "time to decision" for SME lending is 3-five weeks for a traditional deposit-based institution, compared to five minutes for a digitalised equivalent process (McKinsey, 2018^[20]). In terms of cost, when compared to short-term lending through credit cards, some research has suggested that borrowers may receive potentially significant interest rate reductions as a result of obtaining loans from online P2P platforms (Adams, 2018^[21]), although literature is not conclusive on that issue. Berg et al. 2021 conclude that an increase in convenience and speed appears to have been more central to FinTech lending growth than improved screening or monitoring (Berg, Fuster and Puri, 2021^[22]).

Nevertheless, faster processing times by FinTech lenders may come at a cost of higher default rates. Operational efficiency, the key driver of competitive advantage of such platforms, provides speed, efficiency and greater access but is also associated with higher interest rates required to compensate for higher default rates. Empirical evidence from the mortgage sector shows that although FinTech lenders process loan applications 20% faster than other lenders, even when controlling for loan, borrower, and geographic observables, they also encounter higher default rates than bank lenders (Federal Reserve Bank of New York, 2018^[17]) (see also sections 3.4.2 and 4.1).

Some of the competitive advantages of MPLs are related to their business model and whether they are simply intermediating suppliers and seekers of funding or participating themselves in the funding of the credit extended. In particular, MPLs that do not employ their own balance sheet (pure platform model) have an additional cost advantage when compared to banks, stemming from the absence of capital and

liquidity requirements applicable to banks (FSB, 2017^[21]). Platforms solely engaged in matching supply of funds with demand do not bear credit or liquidity risk, and as such, they are not subject to banking prudential regulation in most jurisdictions. MPL platforms are not regulated in a uniform way and some jurisdictions, and indicatively, Spain and the United Kingdom, impose capital requirements to MPLs which increase with a platform's lending volumes, although no liquidity requirements apply (FSB, 2017^[21]).

MPL and other FinTech-based lending has the potential to promote financial inclusion by allowing for the extension of credit to underserved or underbanked parts of the population. It has long been argued that FinTech lenders have the nimbleness and agility required to serve SME customers who do not meet the conventional lending criteria, reducing potential financing gaps that cannot be fulfilled by banks (US Treasury, 2016^[23]). In particular, it allows the granting of credit to SMEs with limited credit history and thin credit files or no credit rating at all; those with limited collateral to post against a bank loan, or with intangible assets that cannot easily back traditional bank loans. This is achieved by overcoming the asymmetric information problem that SME lending involves⁷ through the use of innovative approaches of FinTech lenders to risk evaluation and assessment of creditworthiness (see Section 3.3). FinTech platforms also have global reach without the need for any physical brick and mortar presence of proximity to the customer, allowing them to reach remote or rural areas. The potential of FinTech lenders to promote financial inclusion is particularly pertinent in developing economies, and the proliferation of this activity in the Asian region and the South-East Asian market in particular is a pertinent example of such potential (Nikkei Asia, 2021^[24]).

Equally, FinTech lenders in advanced economies allowed SMEs in communities of ethnic or other minorities to gain faster access to support schemes. Indicatively, the absence of pre-existing relationships with large banks by ethnic minorities prior to the pandemic systematically delayed access to Paycheck Protection Program (PPP) loans in majority-minority neighbourhoods in the US, particularly in the case of non-employer companies (JPMorgan Chase Institute, 2019^[25]) (Federal Reserve Banks, 2021^[26]). Online lenders were the main source of government guaranteed credit for such minority-run businesses, with evidence that FinTechs helped close a gap in loan size between minority and non-minority-owned businesses (Atkins, Cook and Seamans, 2021^[27]). This performance may not be easy to replicate outside the PPP framework, not just because of the guarantee but also given the relatively light eligibility requirements for prospective borrowers who only had to document their payroll and other expenses.

MPL platforms offer the possibility to institutional or other investors of capital to hold SME risk without investing resources in allocating capital directly to SMEs. Long-term institutional investors wishing to diversify their portfolios may not have the know-how or resources required for the assessment of hundreds of heterogeneous and idiosyncratic risk profiles of small businesses and start-ups or for their monitoring during the lifetime of the loan. Instead, funding of such platforms allows for a bundled approach to investing in SMEs. Similarly, traditional credit institutions can benefit from fast origination of loans to SMEs who are not part of the bank's client base, and at potentially lower cost than the bank itself given the technological innovation deployed by FinTechs. Such practice, however, involves risks of regulatory arbitrage (FSB, 2017^[21]).

Lastly, a possible effect of FinTech-enabled credit provision in the market lies in its potential to increase competition and diversification of lending, by providing an alternative to conventional bank lending. This is particularly critical in times of stress when the credit channel is impaired, and could, in turn, increase the resilience of the financial system and promote financial stability. Research suggests that most of the increase in FinTech lending to small businesses after the 2008 financial crisis substituted for a reduction in lending by banks (Gopal and Schnabl, 2021^[28]). At the same time, the growth of MPL activity can induce pro-cyclical behaviour and a possible deterioration of lending standards as a consequence of an 'originate-to-distribute' model of lending (depending on the model and the regulatory requirements applied, and with the exception of MPL employing their own balance sheet) (see Section 5).

Alternative credit scoring and the importance of data

The use of artificial intelligence (AI)-based mechanisms, machine learning (ML) models and big data for creditworthiness assessment give MPL/FinTech lenders a competitive edge vis-à-vis traditional financial institutions who may be slower in adopting such innovative mechanisms (OECD, 2021^[29]). In the context of credit scoring, ML models are used to predict borrowers' default with superior forecasting accuracy compared to standard statistical models (e.g. logic regressions) especially when limited information is available (Bank of Italy, 2019^[30]). Such innovative technologies reduce the cost of underwriting, and reduce the time necessary for credit decision making.

The use of such alternative scoring methods allows for the analysis of creditworthiness of clients with limited credit history ('thin files'), such as young or micro SMEs (OECD, 2021^[29]). Credit scoring models powered by AI and big data have the potential to reduce information asymmetries in SME financing through the use of data not intuitively related to creditworthiness (e.g. social media data, 'digital footprints', and transactional data accessible through Open Banking initiatives). As such, they can enable the extension of credit to viable companies that cannot prove their viability through historical performance data or tangible collateral assets, potentially enhancing access to credit and supporting the growth of the real economy. Empirical evidence suggests that they could even reduce the need for collateral (BIS, 2020^[31]). Near-prime clients or underbanked parts of the population could therefore be better served through alternative scoring methods employed by MPL/FinTech lenders, potentially promoting financial inclusion.

Risks related to alternative credit scoring

Notwithstanding the above, a number of risks and challenges are associated with the use of AI and big data for credit scoring. First, such models remain untested over longer credit cycles or in case of a market downturn, and there is limited conclusive empirical support as to the benefits of ML-driven techniques for financial inclusion (OECD, 2021^[29]). Despite their vast potential for speed, efficiency and risk scoring of the 'unscored', alternative credit scoring models using big data raise risks of disparate impact in credit outcomes and the potential for fair lending violations (US Treasury, 2016^[23]) (OECD, 2021^[29]). In particular, the use of poor quality or inadequate/unsuitable data may result in wrong or biased decision-making.

Inadequately designed and controlled AI/ML models carry a risk of exacerbating or reinforcing existing biases while making discrimination in credit allocation even harder to find (Brookings, 2020^[32]). Furthermore, ML models may unintentionally and inadvertently generate biased conclusions, discriminated against certain classes of people (e.g. based on race, gender, ethnicity, religion) (White & Case, 2017^[33]). Algorithms may combine facially neutral data points and treat them as proxies for immutable characteristics such as race or gender, thereby circumventing existing non-discrimination laws. For example, even when not including gender-based variants as input to an AI-based model, the model can infer the gender based on transaction activity, and use such knowledge in the assessment of creditworthiness, circumventing the law. Biases may also be inherent in the data used as variables and, given that the model trains itself on data from external sources that may have already incorporated certain biases, perpetuates historical biases.

The volume, ubiquity and continuous flowing nature of big data used for credit scoring can raise various data protection and privacy concerns (OECD, 2021^[29]). Consumers' financial and non-financial data are increasingly being shared and used, sometimes without their understanding and informed consent (US Treasury, 2018^[34]). In addition to standard concerns around the collection and use of personal data, potential incompatibilities may arise when it comes to the power of models to make inferences in big datasets; questionable feasibility of applying practices of 'notification and consent' that allow for privacy protection in ML models; as well as questions around data connectivity and the cross-border flow of data.

Finally, ML-based credit scoring models leveraging big data raise also important challenges related to the lack of transparency and explainability around the model (OECD, 2021^[29]). The difficulty in decomposing

the output of a ML model into the underlying drivers of its decision, in other words, understanding why and how the model generates results, is described by the term ‘explainability’. This difficulty in justifying or rationalising model decisions and outputs can be incompatible with existing regulation where this requires the interpretation of the underlying logic and/or the reporting of such logic when it comes to lending. For example, in the EU, the GDPR introduced a ‘right to explanation’ for credit decisions made by algorithms and information on the logic involved. This means that lenders may not be able to explain the basis for denials of credit extension, or that consumers have limited ability to identify and contest unfair credit decisions, and little chance to understand what steps they should take to improve their credit rating (OECD, 2021^[29]).

Data ownership and the use of Open Banking for credit scoring

The use of Open Banking-type of initiatives to access prospective borrower’s transaction data through APIs in a secure way of allowing lenders to use these borrowers’ transaction data in order to improve their risk assessment. Empirical analysis suggests that underwriting decisions based on cash-flow data relying on the applicant’s bank balance over a certain timeframe, combined with FICO scoring, is more predictive than the use of FICO scores alone (FinReg Lab, 2019^[35]).

Prior to the implementation of Open Banking/PSD2 type of initiatives, such analysis was performed by FinTechs by using ‘screen scraping’ to retrieve customer data. This created security concerns, as it involved the storage of customers’ banking credentials. Conversely, the use of APIs allows for customers to have ownership of their data and share it with lenders who can feed it into their credit risk models alongside other parameters (e.g. existing loan performance data or big data).

In addition to the opportunity to expand credit and to serve underserved clients, Open Banking initiatives promote competition by depriving conventional banks from having an advantage over other potential lenders in offering loans to their customer base by using their exclusive access to the financial history and transaction data of these clients. They also raise consumer awareness around ownership of their data and the possibility to share their data with third parties.

It should be noted, however, that the handling of private data by FinTechs can be subject to cyber security threats, and risks include data loss, data breaches, malware injection, hacking of accounts and abuse of cloud services. For instance, in 2017, hackers breached a major FinTech credit scoring operator, Equifax, and accessed sensitive personal information of more than 140m customers (Equifax, 2017^[36]).

Alternative credit scoring in the COVID-19 era

The COVID-19 crisis presents a unique case study of the vulnerabilities of credit scoring models, used by both traditional lenders and FinTechs. Lenders typically rely on 6-12m old data and historical financial statements. These were no longer useful in evaluating the creditworthiness of borrowers and predicting their ability to repay given the effect of pandemic containment measures on economic activity. At the same time, traditional credit bureaus suffered, at least at the beginning of the pandemic, from a reduced use of credit tools by customers, as credit demand was subdued and most SME lending was extended via government support programmes. This deprived credit bureaus from valuable insights on recent customer behaviour and increased the difficulty in understanding and predicting repayment ability and default.

Traditional lenders adjusted to the new environment in a number of ways. Some developed COVID-19 ‘vulnerability ratings’ incorporating the realised or expected impact of the pandemic on the borrower. Others opted for scenario analysis based on epidemiological data, macroeconomic forecasts and borrower-specific scenarios (PWC, 2020^[37]). Sector and subsector analysis became key, given the diversity of impact between sectors, and so did geography.⁸ However, even the analysis at subsector level is not sufficient to predict credit loss or default, given the different impact of COVID-19 on businesses within the same subsector, stemming, for example, from different levels of online presence (what could be

described as operational flexibility) (McKinsey, 2020^[38]). Banks accelerated the incorporation and development of analysis capabilities of real-time data such as current-account inflows, credit-line utilization, the evolution of point-of-sale transactions, to evaluate the borrower's ability to overcome the crisis, and turned to alternative data sources for augmented information (McKinsey, 2020^[38]).

Credit risk models that have been trained on data from previous crises (e.g. natural catastrophes) can shed light on the relationship between variables in periods of stress and can better predict losses and defaults compared to linear manual credit models. Still, glitches are still present, and for instance, forbearance from the side of the bank on the collection of receivables may negatively affect the score of a borrower, affecting the integrity of the data and the analysis (World Bank, 2020^[39]).

Although alternative credit scoring models using AI are adaptive in nature, as they evolve over time by learning from new data, they may not be able to perform as good during idiosyncratic events that have not been experienced before, such as the COVID-19 crisis, and which are therefore not reflected in the data used to train the model (OECD, 2021^[29]). Such models are expected to be effective as long as the market environment has some consistency with the past. Tail and unforeseen events, such as the recent pandemic, give rise to discontinuity in the datasets, which in turn creates model drifts that undermine the models' predictive capacity. Tail events cause unexpected changes in the behaviour of the target variable that the model is looking to predict, and previously undocumented changes to the data structure and underlying patterns of the dataset used by the model, both caused by a shift in market dynamics during such events. These are naturally not captured by the initial dataset on which the model was trained and are likely to result in performance degradation. Evidence based on a survey conducted in UK banks suggest that around 35% of banks experienced a negative impact on ML model performance during the pandemic (Bholat, Gharbawi and Thew, 2020^[40]). This is likely because the pandemic has created major movements in macroeconomic variables, such as rising unemployment and mortgage forbearance, which required ML (as well as traditional) models to be recalibrated.

Risks involved in MPL/FinTech lending activity and limitations to the growth of the MPL lending model

Risks related to MPLs and FinTech lenders have been discussed in previous analyses by policy makers and academia, both at the onset of these new business models for lending (OECD, 2018^[41]), (FSB, 2017^[2]), (US Treasury, 2016^[23]) as well as more recently in the context of the wider discussion about BigTech lending and other platforms offering financial services (EBA, 2021^[42]) (BIS, 2020^[43]) (BIS, 2022^[44]). This section briefly outlines key risks involved in MPL and FinTech lending, and discusses limitations to the growth of the MPL model for business lending.

Differences in the regulatory and supervisory frameworks applicable to MPL/FinTech lending activity may give rise to risks of regulatory arbitrage, depending on the business model employed by the online lender. Other risks relate to asset quality considerations and loan performance, as well as absence of disclosure exposing consumers to potential losses.

Risks stemming from insufficient regulation

The regulatory framework applying to MPLs and FinTech lenders varies widely between countries, giving room to potential risks of regulatory arbitrage. This is particularly the case for MPL/FinTech lenders deploying their own balance sheet, where, depending on the jurisdiction, there may be opportunity for them to structure their operations similar to banks, while avoiding the imposition of prudential requirements on them.⁹ Based on a 2019 survey by the BIS, in most surveyed jurisdictions, there is no dedicated regulatory framework for FinTechs employing balance-sheet lending, and such lenders are subject to regulation applying to non-bank lenders (BIS, 2020^[43]). Based on the same survey, most jurisdictions have

implemented dedicated regulatory frameworks for MPL while there is wide variation in the rules around risk retention or capital requirements applicable to such firms. This, in turn, translates into differences in the financial buffers of such platforms in different markets (BIS, 2020^[43]).

The absence of any regulatory capital or liquidity requirements in the pure MPL platforms¹⁰ is an important cost advantage when compared to regulated banks subject to prudential requirements. Some of these platforms do not perform maturity transformation and simply match lenders of funds with borrowers and, by consequence, do not bear liquidity risk¹¹ or credit risk since they only act as agents between lenders and borrowers. Such absence of liquidity or credit risk does not hold in other MPL models where platforms employ their own balance sheet and/or use leverage to fund loans and are exposed to credit risk. Naturally, these platforms are not covered by the financial safety net that applies to banks, and MPL players do not necessarily have other provisioning or reserve funds.

Additionally, some of these lenders are exposed to funding instability and related solvency risks. Funding by investors and loans extended are typically duration-matched and therefore MPLs do not carry liquidity risk of transforming on-demand deposits to longer maturity lending (FSB, 2017^[2]). Some MPL platforms, however, offer the possibility of withdrawal of funds to investors at any point in time, sometimes by offering an option to resell the loan. Such platforms expose investors to important risk of loss and the platform itself to solvency risks, which stems from funding instability, particularly for MPLs using leverage. MPLs are more vulnerable to funding freezes given their relative small investor base and swings in credit risk appetite (Moody's, 2019^[45]). This exposes their end borrowers to risk of not being able to refinance, a function that many bank-borrowers take as granted.

The risk of misaligned interests and moral hazard is one of the most significant risks related to MPL although it mostly applies to originate-to-distribute model of lending. The rise and fall of P2P platforms in China underlines the importance of regulation for this industry (see Box 1.1). In the absence of risk retention requirements, such lending platform does not bear any credit risk, giving rise to potential conflicts of interest between the platform and the funders that can result in poor underwriting process and lack of incentive to the platform to recover defaulted loans. Risk retention requirements, investment of the platform in the loans originated or the use of balance sheet by the platform are all ways to minimise such conflict of interest. In the absence of such safeguards, the providers of wholesale funding to the platform (banks or institutional investors) are required to monitor both the borrower and the platform and participate or audit the due diligence conducted by the platforms. The risk of misalignment of interests is also present when the fee structure of the platforms is skewed towards origination fees. In such cases, and in the absence of skin-in-the-game, platforms have a short-run incentive to maximise loan volume with a risk of loosening their credit standards (Davis, 2016^[46]). Reputational risks borne by the platform may only partially counterbalance such risks.

Asset quality and loan performance

FinTech lenders tend to service higher-risk borrowers and may further ease underwriting standards in order to compete with banks for new business. This may result in further deterioration of the asset quality of their lending portfolio. Platforms that grow their loan originations too aggressively in order to gain market share are likely to simultaneously lower the credit quality of their portfolio with future repercussions when the growth or credit outlook turns. High approval rates by such platforms could be explained by such search for customer acquisition and a more aggressive competition strategy by platforms.

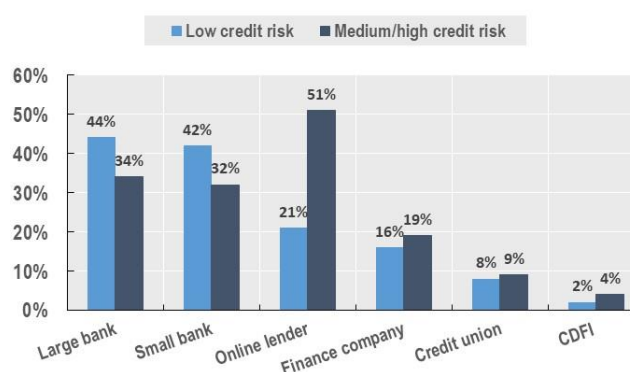
MPL models and credit assessment methodologies used have not been tested throughout a full credit cycle. Such lenders could therefore be threatened by changing economic conditions and increase a pro-cyclical impact on the credit market during a downturn. What is more, platform-intermediated credit is generally cheaper but sometime riskier than bank credit, suggesting that MPL/FinTech lenders may under price borrowers risks (Branzoli and Supino, 2020^[47]).

FinTech borrowers generally tend to be riskier than traditional bank borrowers, as such platforms target more financially vulnerable individuals and firms (Tang, 2019^[48]), (Di Maggio and Yao, 2021^[49]) (Branzoli and Supino, 2020^[47]). According to a 2019 survey in the US, 89% of medium/high-risk firms that applied for an online loan were approved for at least some of the funds requested - a rate nearly as high as the 94 percent approval rate for their low-risk counterparts (Lieberman, York and Lipman, 2019^[50]). By way of an example, 15 day delinquency rates for MPL OnDeck stood at 8.5% in Q3 2019, while commercial banks reported a commercial and industrial (C&I) loan delinquency rate of just more than 1%, and C&I delinquency rates at SME-lending-intensive banks reported somewhat higher, but below 3% (Lieberman, York and Lipman, 2019^[50]).

As such, the average FinTech-originated lending portfolio may have lower asset quality and higher levels of non-performing loans compared to the average bank-originated loan portfolio. In the US, medium/high credit risk SMEs claim to have sought online lending during COVID-19 more often than bank loans; during 2020, firms with lower credit scores turned to online lenders (35%) and nonbank finance companies (23%) much frequently than their counterparts with higher credit scores (11% and 11%, respectively) (Figure 1.6, (Federal Reserve Banks, 2021^[26])).

Figure 1.6. Credit sources broken down by credit risk of firm, US market

% of loan/line of credit and cash advance applicants, 2020



Note: Large banks: Respondents were provided with a list of large banks (those with at least USD 10B in total deposits) operating in their state. "Online lenders" are defined as nonbank alternative and marketplace lenders, including Lending Club, OnDeck, CAN Capital, Kabbage, and PayPal Working Capital. "Finance company" includes nonbank lenders such as mortgage companies, equipment dealers, insurance companies, auto finance companies, etc. Community development financial institutions (CDFIs) are financial institutions that provide credit and financial services to underserved markets and populations. CDFIs are certified by the CDFI Fund at the U.S. Department of the Treasury.

Source: Small business credit service (Federal Reserve Banks, 2021^[26])

Lack of disclosures and risks to borrowers

The FinTech industry's growing reach heightens concerns about disclosure practices to prospective borrowers, data privacy and confidentiality and calls for greater scrutiny. Based on qualitative surveys, prospective and actual borrowers report challenges faced in their experience with online lenders, citing high interest rates and unfavourable repayment terms as the most pressing issues (Lipman and Wiersch, 2015^[51]). Given that this involves both applicants and successful borrowers, it raises the concern that some borrowers may not fully understand the cost of credit products they are considering, as underscored by qualitative research conducted by the Federal Reserve. Comparison of MPL/FinTech products was also reported as cumbersome for prospective borrowers.

This raises a two-fold challenge: the absence of appropriate disclosure (or information provided in inadequate form) and the level of understanding of prospective borrowers around costs and detailed

product features. Hidden fees, other product costs and terms and conditions may be difficult to find, and in some cases to understand, depending on the level of financial literacy of the prospective borrowers. Importantly, some FinTechs disclose such information only once they have provided their businesses' financial data and information, raising concerns over data privacy and confidentiality. To that end, it remains an important policy consideration whether and how prospective borrowers should be best informed to make educated decisions about the credit products most suitable for their businesses (Barbara J. Lipman and Ann Marie Wiersch, 2018^[52]).

In response to these challenges, some policy makers are proposing the reinforcement of existing disclosure regimes for MPL activity. A recent consultation by the UK Financial Conduct Authority (FCA) is proposing enhanced disclosures and marketing restrictions for high-risk investment activity, including P2P platforms and investment-based crowdfunding among others. The underlying rationale for such proposal lies in the changes of the investment environment, with promotions distributed to a mass audience at increasing speed via online platforms and through social media and with consumers often unable to fully understand the risks involved, making them particularly vulnerable to unexpected losses.

Limitations to the growth of MPL for SME financing

MPL has been around for more than a decade, but has grown to become a serious alternative to SME bank lending in less than a handful of markets (e.g. China, US, UK). Despite its growth, the market for platform-based lending is still small compared to other corporate lending (FSB, 2017^[2]), (Moody's, 2019^[45]) and has still to reach a meaningful size in most markets. In the US mortgage market, where FinTech lending has gained a significant presence, the annual FinTech lending volume amounted to only approximately 3.5% of the outstanding stock of mortgages in 2020; in all other sectors, the importance of FinTech lending is presumably significantly lower (Berg, Fuster and Puri, 2021^[22]).

Given the benefits of MPL for specialised SME lending and the opportunity to fill in part of the SME financing gap that may exist in some markets, it may be worthwhile for policy makers to examine the impediments to the growth of this activity. This section discusses such limitations, focusing on the lack of stable funding sources and the absence of secondary markets for MPL/FinTech loans.

Lack of stable funding sources and the role of institutional investors

At the early stages of the P2P lending industry, most of the funding that backed extended credit came from retail investors. Lender sophistication is lower in unsophisticated (unaccredited) retail lenders and the corresponding risks for these investors are likely to be higher, as they base their decision on the ratings assigned by the platform without performing their own due diligence for most part.

Since its inception, however, the industry has grown to include substantial involvement of institutional investors as a funding source. Such involvement is critical for the scale-up of the industry at a level that will become material for the SME funding space. Unlike banks, where capacity to finance is restricted by the amount of capital held, MPLs are in many cases not subject to capital or other reserve requirements (see Section 3.2). As such, their capacity to provide financing at meaningful levels is rather dependent on their funding model. What is more, the ability of MPLs to provide financing to SMEs and other borrowers on a sustainable basis depends on the availability of funding provided by lenders throughout the stages of the economic or credit cycle. If investors doubt the capabilities of MPL platforms and pull out their funding in times of stress, the platforms face solvency risks.

Further involvement of long-term institutional investors in MPL is critical for the industry to mature and reach a meaningful size. The involvement of non-bank institutional investors is even more crucial given that they ensure additionality in the credit provision: instead of banks originating loans through a different intermediation channel, other institutional investors (pension funds, insurance companies) can provide

additional credit to the real economy and increase the size of the pie instead of just channelling the credit through different routes. That said, the potential benefits of bank cooperation with FinTech lenders should not be underestimated (see Section 3.1), including the benefit of enjoying more favourable interest rate and repayment terms for wholesale funding compared to standalone MPL operations.

Institutional investors participating in MPL markets could also play a safeguarding role, as they have the capability to perform their own independent analysis of the quality of the platform and sound-check the risk analysis performed by the platform, including around expected returns and defaults, but also in terms of credit risk assessment. Long-term investors also tend to participate only in investments that fulfil a set of minimum quality requirements, incentivising platforms to raise their own standards.

The downside of such institutional investor involvement is that MPL/FinTech continuity of funding (and therefore business continuity) is very much linked to loan performance. As such, in case of a market downturn or poor loan portfolio performance, investors may very easily deprive such lenders of the funding necessary to continue to extend new loans.

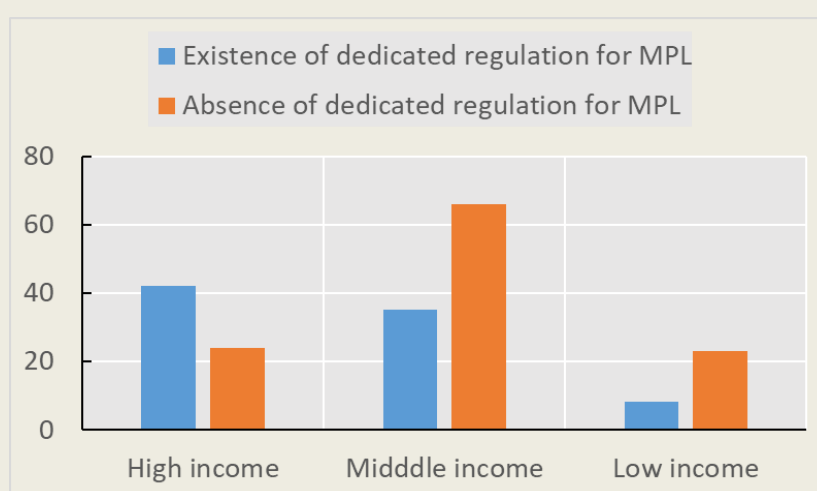
During the pandemic, institutional investor funding of alternative lenders more than doubled. While in 2019 16% of the alternative finance volumes was provided by institutional investors, in 2020, this share rose to 42% (CCAF, 2021), indicating perhaps that lenders that relied exclusively on retail inflow had a harder time to operate in the uncertainty brought about by COVID-19.

Box 1.2. Introduction of dedicated MPL regulation and MPL market growth

In many jurisdictions around the world, P2P online platforms and marketplace lending more broadly are not regulated through a dedicated regulation for these platform models. Instead, MPL activity falls under existing regulation, and in some cases existing frameworks are being adjusted for this kind of activity. According to surveillance by the World Bank, 85 countries have introduced MPL-specific regulation compared with 113 that did not, with a clear bias for such introduction by high-level income countries (Figure 1.7 (World Bank, 2022^[53])).

Figure 1.7. MPL regulation status globally

Countries with identified MPL-specific regulation, by income level



Source: (World Bank, 2022^[53]).

Empirical evidence suggest that that the introduction of explicit regulation appears to significantly increase retail crowdfunding volume (debt or equity funding available to retail investors through online platforms; the effect appears to be at least partly causal) (Rau, 2020^[54]). On average, bespoke regulatory frameworks for alternative finance provide for a wider range of permitted activities than pre-existing frameworks, while they also create more explicit obligations. Out of a maximum of 20 types of requirements that respondents were prompted with, the average bespoke framework for P2P lending featured nine, against five for pre-existing ones that had not been adjusted in some way (World Bank and CCAF, 2019^[55]).

To date, most legislative actions have focused on P2P platforms rather than balance sheet lending - based on a survey of 31 developed and emerging economies, only 3% of jurisdictions have introduced balance sheet lending specific licensing regime compared with 42% of jurisdictions that have introduced loan-crowdfunding specific licensing regime/specific requirements and additional 16% having work in progress (Johannes Ehrentraud et al., 2020^[56]). Balance sheet lending shares more similarities with traditional lending intermediation and as a consequence might often fall within the existing regulatory perimeter.

Source: (OECD, 2018^[41]) and (Johannes Ehrentraud et al., 2020^[56])

Insufficient economic viability of MPL platforms during COVID-19 and beyond

In addition to the availability of wholesale funding, the cost at which this is secured is an important parameter for the sustainability of the online lending platforms. The economics of a MPL platform's activity will depend on its operating costs and its cost of funding, with the latter being directly impacted by the model employed: for platforms that match borrowers and lenders without using their own balance sheet, their costs will largely depend on their cost of funding. For those funding their loans with their own balance sheet, they can continue to extend credit so long as the platform can borrow money inexpensively, exposing themselves to the risk of downturns, when liquidity tends to disappear. As such lenders fund themselves at higher interest rates and less favourable repayment terms than banks, the economics of their model are a priori in disadvantage compared to bank lenders.

The experience of the COVID-19 crisis has exposed some weakness in the ability of MPLs to secure cheap wholesale funding on the one hand, which may be linked to the limited trust the small MPL players enjoy or their lack of track record. This was witnessed by industry participants in some markets, such as the UK, despite the general improvement in funding conditions in the market given massive policy support flowing through markets (see Section 4.1).

By way of an example, industry participants in the UK have raised concerns to the Bank of England over the Bounce Back support scheme and the cost of capital required for them to participate (FT, 2020^[57]). Anecdotal evidence by market participants indicates that the funding cost of small UK FinTech lenders largely exceeded the 2.5% fixed interest rate that Bounce Back loans could charge borrowers. As such, it became difficult for many of them to participate in the roll-out of the scheme. Conversely, traditional funds had access to the central bank's term funding facilities and benefited from the lower funding costs prevailing in the market for large, well-established players. In the US, small lenders qualified for Fed's lending facility where they could borrow the money to lend, allowing for greater participation by smaller players (see Table 3.1).

The recent experience has also casted some doubt over the cost advantages secured through the use of innovative technologies for automation. The absence of scale (and consequent economies of scale) may also inhibit the economic viability of FinTech platforms, and could be the reason why the cost efficiencies provided by the application of innovative technologies may not materialise at this stage. This risk exacerbates in times of stress, as in the example of the COVID-19 crisis.

A more extensive analysis of the economics underlying MPL platforms may be warranted, with a view to confirm the hypothesis suggesting that scale is the key to economic viability of the MPL model and to the further expansion of the market.

Absence of secondary markets for MPL-originated SME loans

Marketplace loans are generally illiquid and secondary markets for such loans are undeveloped (US Treasury, 2016^[23]), with the exception of a couple of markets for large MPL players. For example, in the US there have been a number of securitisation issuances of MPL-originated loans by the largest players of the market, while some listed investment funds backed by MPL loans of the most well-established players also exist (e.g. Funding Circle, Kabbage). In other markets, investors wishing to acquiring marketplace loans so as to hold some SME risk are investing directly through the MPL platforms and generally hold their loans through to maturity and are tied up for the long term. It may be worthwhile to examine and analyse any additional challenges to SME MPL securitisation, with a view to unlock an important impediment to the growth of the MPL market.

As with other alternative SME financing instruments, the absence of secondary markets where loans originated by MPLs can be traded is one of the major impediments for the scale-up of this market. Platforms do not have the capacity to lure in investors who do not want their investment tied up for the long-term. The creation of liquidity for such instruments is therefore essential for investor exits, and good exit

prospects are recognised in many alternative financing mechanisms as a pre-condition for investment (see, for example, the chapter on Private Equity/ Venture Capital investment).

The existence of securitisation opportunities for MPL loan portfolios can be an important funding source for MPLs, lowering the funding costs for online lenders, thereby lowering borrowing costs for borrowers (US Treasury, 2016^[23]). At the same time, they can make SME lending an investable asset class for institutional investors who do not want or cannot get involved in this market directly, as a complement to SME bank loan securitisation. It offers liquidity to the MPL market and reduces the funding risk of MPLs as funding conditions change (US Treasury, 2016^[23]).

Potential reasons for the lack of secondary markets for MPL loans include the lack of transparency and the lack of significant repeat issuances, underdeveloped trade and portfolio management infrastructure for loans of small size, potential lack of transparency and the subsequent lack of visibility into underlying collateral. All these impediments are also evidenced in the development of the securitisation market for SME bank loans (Nassr and Wehinger, 2015^[3]). In Europe, the SME securitisation market was spearheaded by post-crisis public intervention, with the eligibility of SME ABS as collateral for monetary operations driving a large part of the market. Such public intervention, however, has not led to a revival of private market-based SME securitisation.

Well-structured and robust securitisation markets in particular can support economic recovery, and makes it a potential useful tool to mitigate any effects of the recent pandemic and provide support to the real economy, particularly through securitisation backed by SME risk. In June 2021, the UK HM Treasury launched a call for evidence in the context of its review of securitisation regulation (HM Treasury, 2021^[58]). The subsequent report discussing the findings of this consultation includes areas of securitisation regulation that may benefit from targeted and appropriate refinement, including due diligence and disclosure requirements, especially when it comes to different types of securitisations (i.e. public or private) (HM Treasury, 2021^[59]) (see Box 1.3).

Box 1.3. HM Treasury review of the securitisation regulation and SMEs

Respondents to the UK HM Treasury's public consultation on securitisation regulation noted that significant upfront costs and relative complexity involved both in the securitisation process of SME loans and for SMEs involved in issuing securitisations impedes the development of this market (HM Treasury, 2021^[59]), (Nassr and Wehinger, 2015^[3]).

Respondents commented on potential impediments to the wider development of the SME securitisation part of the wider market for this instrument.

In particular, due diligence requirements and loan-by-loan disclosure requirements, which can be difficult to fulfil for SME loans, were cited as obstacles to the wider use of securitisation backed by small business loans.

In addition, other funding mechanisms, such as covered bonds, were noted as more economical than SME securitisation, with the overall costs of SME securitisations deemed high. Such costs stem from structuring, arrangement and legal work, plus the appointment of third parties.

At the same time, respondents noted that traditional securitisations where the underlying exposures consist of SME loans are only a small proportion of the overall UK securitisation market because SME loans are riskier than other types of loans. This affects their liquidity, creates a need for higher credit enhancement and higher credit spread compared to other underlying exposures.

As part of the responses to this call, it was noted that non-bank financial institutions (NBFIs) use securitisations to raise funding, pointing to the potential of securitisation to support the real economy, as many NBFIs provide finance for SMEs.

In terms of potential mitigants to the above obstacles, respondents to the HM Treasury's call noted the following actions:

- Simplification of disclosures for SME loans;
- Change of requirements around the quality and consistency of historical performance data for SME loans;
- Make certain synthetic securitisations STS-eligible where a regulated credit insurer provides protection to SME loans;
- Encourage originators to direct securitisation proceeds towards more SME funding;
- Introduce a government-supported entity into the UK securitisation market, similar to other jurisdictions, like the US and EU.

Source: (HM Treasury, 2021^[59]).

2 Marketplace/FinTech lender participation in COVID-19 government support programmes

During the pandemic, several jurisdictions allowed MPLs and other FinTech lenders to participate in the roll-out of COVID19 SME support lending and the growth in global business lending during 2020 could be partly attributed to this participation in some major MPL markets (e.g. US, UK). The limited participation of FinTechs in COVID-19 schemes in other parts of the world was the result of the inherent weaknesses of their business models, such as the availability and cost of funding sources. Importantly, FinTechs were responsible for a disproportionately high share of suspicious or fraudulent loans in some of the COVID-19 programmes they participated. There may be trade-offs between speed of disbursement of funds in emergency situations and exposure to potential fraud, as there is limited room for extensive due diligence when support needs to be distributed in an expedited manner, particularly for small SMEs without prior bank relationships (primarily serviced by FinTechs).

The COVID-19 crisis has acted as a powerful accelerator for the adoption of digitalisation in financial services, speeding up a trend that had already appeared in many industries (Swiss Bankers Association, 2020^[60]), (KPMG, 2020^[61]). Bank branches, face-to-face interactions and paper documentation have all moved to a digital form amid the pandemic, and consumers switched to FinTech replacing traditional

products for contactless and digital payments, online banking and other forms of digitally-enabled financial services.

This section examines the performance of MPL and other FinTech¹² lenders during the pandemic, and looks into case studies of markets where MPLs were allowed to participate in government support schemes. The section also discusses the benefits and limitations to the participation of such lenders in COVID19 relief loans in these countries and the potential opportunities and challenges for policy makers of other jurisdictions to make use of this intermediation channel in future crises.

Performance of MPL and other FinTech lenders during the pandemic

As FinTech lenders often require much less in-person interaction with borrowers, let alone investors, their operations would be expected to be less impacted by restrictions on travelling and lockdowns in comparison with traditional lenders. Automation of different parts of the origination process allows for fast and remote on boarding, KYC checking, decision-making, and loan portfolio management. The use of AI/ML-based models for underwriting and unconventional data for credit scoring has the potential for swifter loan underwriting and deployment of funds when compared to manual underwriting and traditional loan disbursement, addressing urgent borrower needs surfacing during crises.

Despite these perceived advantages of FinTech lenders, at the early stage of the COVID-19 crisis (first half of 2020) FinTech lending firms globally reported an 8% year-on-year contraction in transaction volume. This situation was compounded by a 9% rise in defaults on outstanding loans (CCAF, 2020^[62]). Firms mostly cited shortage in liquidity as their most urgent difficulty, arising from the widening of credit spreads in financial markets, and risk aversion of their retail investors due to uncertainty. In parallel, the decline in MPL/FinTech lending might have had a permanent effect on some of these lenders, causing them to exit the market.

Globally, MPL volumes recuperated in the second half of 2020 resulting in total volume of Fin Tech Lending in 2020 surpassing that of 2019. Business funding in particular grew significantly in 2020 - Balance Sheet Business Lending increased by 46% to USD 28 bn while P2P/Marketplace Business Lending increased twofold to USD 15 bn (excluding China). In contrast, consumer lending volumes remained similar to previous year (Cambridge Centre for Alternative Finance, 2021^[4]). The growth in business lending could be partly attributed to the participation of some MPLs in the roll-out of COVID19 SME support lending in some major MPL markets (e.g. US, UK). There is no publicly available breakdown of new lending extended outside any government support scheme in these markets at this stage.

FinTech lenders expressed their desire to be included in the delivery of COVID-19 related governmental relief programs in many countries (CCAF, 2020^[62]) (see Section 4.2). At the early stage of such programmes, only traditional financial intermediaries were allowed to participate in most jurisdictions. However, policy makers in certain economies allowed MPLs and other FinTech lenders to participate in the roll-out of COVID-19 relief loans and loan guarantees schemes at later stages in the course of their programmes' implementation, offering MPLs and other online lenders an opportunity to leverage their core competences and test their business models at a larger scale. In the US, for example, all federally insured depository institutions and federally insured credit unions were eligible to participate in the Paycheck Protection Program (PPP) while non-bank lenders needed to be pre-approved for participation and only began lending in the second round of the programme.

Participation of FinTech platforms in the deployment of COVID-19 relief loans: the case of the United States, the United Kingdom and the European Union

The US, the UK and the European Union are three of the most prominent examples of jurisdictions having allowed for the participation of FinTech lenders in the roll-out of their government support schemes. MPL/FinTech participation mostly involved government guaranteed loans schemes and grants. This section looks at some of these case studies and examines the beneficial impact of such participation to the delivery of the programmes, analyses potential reasons for the lack of wider participation by FinTech lenders in these efforts and considers potential policy-related considerations.

The US Paycheck Protection Program

In the US, the Small Business Administration's (SBA) Paycheck Protection Program (PPP), launched under the CARES Act¹³, allowed eligible non-bank FinTech lenders to disburse SBA guaranteed loans to small businesses once they were approved and enrolled in the programme (SBA, 2020^[63]). Such inclusion aimed at enlarging the scope of PPP lending options and the speed with which PPP loans could be disbursed to help small businesses across the country, recognising that FinTech solutions can promote efficiency and financial inclusion in implementing the PPP (US Treasury, 2020^[64]).

Applicant lenders were evaluated to determine whether they have the necessary qualifications to process, close, disburse, and service PPP loans made with SBA's guarantee. Among other criteria, SBA and Treasury gave strong consideration to the types of financial services provided by the lender; the lender's compliance programs, including related to Bank Secrecy Act; and the number and dollar amount of small business loans originated and serviced by (SBA, 2020^[65]) the lender in a 12-month period over the past 36 months. The SBA authorised FinTech lenders, i.e. non-bank lenders operating online, to accept applications towards the end of the first wave.

PPP loans have an interest rate of 1% and did not require collateral or personal guarantees. Neither the government nor lenders charged small businesses any fees. In addition, PPP loans may be sold into the secondary market at any time after the loan is fully disbursed (at a premium or discount to par value), without an SBA approval. Importantly, PPP loans sold into the secondary market continue being 100% SBA-guaranteed (US Treasury, 2020^[64]).

The first two rounds of the PPP expired in August 2020 distributing a total of USD 525 bn in lending. During the third round of PPP, initiated in December 2020 and lasting until May 2021, an additional USD 278 bn of lending was approved. FinTechs were allowed to participate as of the second round which began in mid-April 2020 and their relative participation increased in the third round. Nineteen FinTech lenders participated in PPP as of May 8, 2020, including a number of MPLs approved as lenders of guaranteed loans (e.g. Kabbage, Funding Circle, Lending Club, OnDeck) (SBA, 2020^[65]) (SBA, 2020^[66]).

Table 2.1. Summary of FinTechs (and other State Regulated entities) participation in PPP

As of 31 May 2021

Year	Lender count	Loan count	Net US Dollars	% of loans distributed	% of amount distributed
2020 (round 1 and 2)	19	250,720	6,050,562,792	4.8%	1.2%
2021	41	1,210,098	21,918,632,833	18.1%	7.9%

Source: OECD calculations based on data available from (SBA, 2020^[67]) and (SBA, 2021^[68]).

During the three rounds of the PPP program in 2020 and 2021, lending extended by FinTech contributed 3.5% of the total lent amount and 12.3% of individual loans, attesting to these lenders specialisation in

small and micro loans - during 2020 (2021) average loan size extended by FinTechs was about USD 23 k (USD 18 k) compared with average loan size of 100 k (USD 42 k) across the entire program (SBA, 2020^[67]) and (SBA, 2021^[68]) (Table 2.1).

The UK experience

In the UK, FinTech lenders had the opportunity to participate in the roll out of both the Coronavirus Business Interruption Loan Scheme (CBILS) (British Business Bank, 2020^[69]) and the Bounce Back Loan Scheme (BBLs) (British Business Bank, 2020^[70]) as accredited lenders. CBILS provided lenders with a partial government guarantee of up to 80%, while the Bounce Back scheme was 100% guaranteed but at a fixed interest rate for the facility set at 2.5% per annum. Both schemes closed for new applications on 31 March 2021. The largest MPL platform of the country, Funding Circle, was accredited for both programmes, while Tide and ThinCats participated in the Bounce Back scheme.

The BBLs scheme distributed the largest amount of lending, approving GBP 47.36 bn in loans, followed by CBILS that approved GBP 26.39 bn, as of 25 October 2021 (House of Commons Library, 2021^[71]). Around one quarter of all UK businesses received a Bounce Back Loan. The vast majority of the loans (more than 90%, or GBP 39.7 bn) went to micro-businesses with annual turnover below GBP 632,000. Despite UK having one of the world's largest and established alternative lending markets, only 0.3% of the value of distributed loans through BBLs was made available through non-banks, including FinTech lenders (e.g. Funding Circle, New Wave Capital, Tide Capital, Conister Finance & Leasing, Skipton Business Finance and GC Business Finance) (National Audit Office, 2021^[72]).

The European Union and its Pan-European Guarantee Fund

The Pan-European Guarantee Fund (EGF), operative since December 2020, is part of the EU responses to the impact caused by COVID-19. The fund size is set up to EUR 25 bn and at least 65% of the financing is targeted to SMEs. The fund provides guarantees to operations by the European Investment Bank (EIB) and the European Investment Fund (EIF) on a project-by-project basis, signed between the EIB/EIF and EU-based financial intermediaries.

True to November 2021, approved (not yet deployed) financing guaranteed by the EGF amounts to EUR 20.5 billion. In terms of scope, most of the project signed thus far have been with banks; however, several cases of cooperation with FinTech lenders have also been established. Examples include guarantees to DKK 425 mn in new lending by Flex Funding, a Danish marketplace lender, EUR 30 mn in new lending by October, another marketplace lender, SEK 575 million in new lending by Ark Kapital, a Swedish technology driven lending firm (EIB, 2022^[73]).

A missed opportunity for MPL and FinTech lenders? Examining limitations to FinTech lender participation in COVID19 relief loan disbursement

An opportunity for platforms to make use of their strengths and prove their model

Participation in the roll-out of COVID19 support programmes by governments across the world gave FinTech platforms an excellent opportunity to showcase their technological edge and comparative advantages of speed, efficiency, and reach when it comes to on-boarding of new clients, application process, assessment of creditworthiness, credit underwriting decision-making and funds transfer. At the same time, FinTech participation in the roll out of COVID-19 relief loans also encouraged them to boost their compliance capabilities; reinforce their risk management; and enhance their internal processes and controls so as to effectively address any risks associated with their participation. Such risks related to cyber-security, operational, AML/CFT, risk of fraud, but also included important compliance and

reputational risks (American Banker, 2020^[74]). This was even more crucial given the high level of fraud related to COVID support funding applicants and ensuing risks observed in many economies during the pandemic (see Section 3.3.4).

Quality controls imposed on FinTech lender participation in government support programmes in certain countries encouraged improvements in compliance and quality assurance. For example, as part of the US PPP programme, quality reviews on loans, described as readiness assessments, became mandatory. Guidelines around risk management practices when banks partner with FinTechs for the roll-out of emergency funding also helped quality assurance around credit extended where FinTech acted as agent or processing partner to the eligible financial institution. One such example is the proposed interagency guidance by the Board of Governors of the Federal Reserve System (Board), the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) on managing risks of third-party relationships. It provided a framework based on sound risk management principles for banks to consider in developing risk management practices for all stages in the life cycle of third-party relationships that takes into account the level of risk, complexity, and size of the banking organisation and the nature of the third-party relationship (FED, FDIC and OCC, 2021^[75]).

Wholesale funding and its cost: the largest impediment to FinTechs' participation

One of the largest challenges for the participation of MPL/FinTech lenders in government guaranteed loans disbursement has been their costly access to wholesale funding. While regulated banks enjoyed a surge in deposits during COVID-19 (St. Louis Fed, 2021^[76]) as depositors are safeguarded by deposit insurance in most developed countries, and can more easily tap debt markets during economic uncertainty thanks to being regulated, the largest ones even enjoying a too-big-to-fail subsidy (Santos, 2014^[77]), non-banking MPL/FinTech lenders struggled to secure additional liquidity in order to expand their lending portfolio. In the case of the pandemic support programmes, regulated financial institutions with access to special central bank funding facilities had the ability to fund such lending to SMEs (and at very low cost), while alternative lenders had to seek wholesale financing in the markets, under difficult market conditions. This issue was less of an obstacle in cases where government loans were provided as a subsidy for lenders' funds, as was the case in the US, allowing FinTechs to qualify for the Fed's lending facility where they could borrow the money to on-lend to SMEs.

In most jurisdictions, measures extended by monetary authorities used banks as conduits or as beneficiaries and excluded non-bank financial institutions; according to the COVID-19 Financial Response Tracker (Yale, 2022^[78]), 465 relief tools were offered by monetary authorities where "ultimate beneficiaries" were banks, compared with 113 tools offered to non-bank financial institutions (lending being the most prominent of these tools). Importantly, measures enacted by fiscal authority or regulatory authority were much more evenly offered to banks and non-banks. This only shows the large advantage of banks in having established relationship with the monetary authority, including placing reserves in central banks and having direct access to the payment system infrastructure.

In addition to the lack of availability, non-bank lenders in some markets struggled to secure wholesale funding at a cost that would make the economics of lending viable for them. Programmes with predefined caps on the interest rate charged meant that participating lenders had to ensure that total costs incurred were low enough to allow for a marginal gain for the lender, when in reality the cost of wholesale funding in many of the cases was already higher than the interest rate cap charged on borrower SMEs. For example, the UK BBLS scheme had a 2.5% interest rate; unlike regulated banks who had access to their own emergency funding scheme from the Bank of England (TFSME), allowing them to fund themselves at almost zero cost, MPL/FinTechs struggled to get wholesale funding. According to the industry, the cost of such wholesale funding for FinTechs was anyway much higher than the mandatory interest rate applied to guaranteed loans, effectively crowding them out. Views also differ over whether the operational cost of

such FinTechs is low enough to allow for a profitable participation in relief loan disbursement, even in the absence of the funding cost challenge, as many of these companies have yet to become profitable.

It could be argued that costlier access to wholesale funding is somehow offset by the absence of capital and liquidity requirements that MPLs enjoy in many markets, which is effectively a regulatory arbitrage for such platforms. During the COVID-19 crisis, it appeared that in some markets, this benefit was not enough to compensate for the high cost of funding and the operational costs of the platforms. There are no studies at the time of writing of this note that examine the economics of the MPL model at the time of the COVID-19 crisis and beyond to explain the lack of economic viability of many of the players who were unable to participate in the rollout of relief lending to SMEs (e.g. UK market, CBILS).

Another challenge facing FinTech participation in government guaranteed lending relates to the exit from such portfolios or the refinancing/further financing on the basis of the relief loans. It has been argued that offloading of loan portfolios to secondary markets has been easier in programmes where guarantees are transferrable. Lack of exits is a general problem that FinTech lenders have been facing before the crisis under normal market conditions (see Section 5). Also, SMEs that established a bank relationship for the first time for the purposes of accessing relief loans are likely to return to the same bank for any future financing, further limiting the market opportunity for alternative lenders. This is further obstructed given the low financial education levels of many small business-owners and the corresponding lack of awareness about the availability of alternative financing channels (Nassr and Wehinger, 2015^[3]).

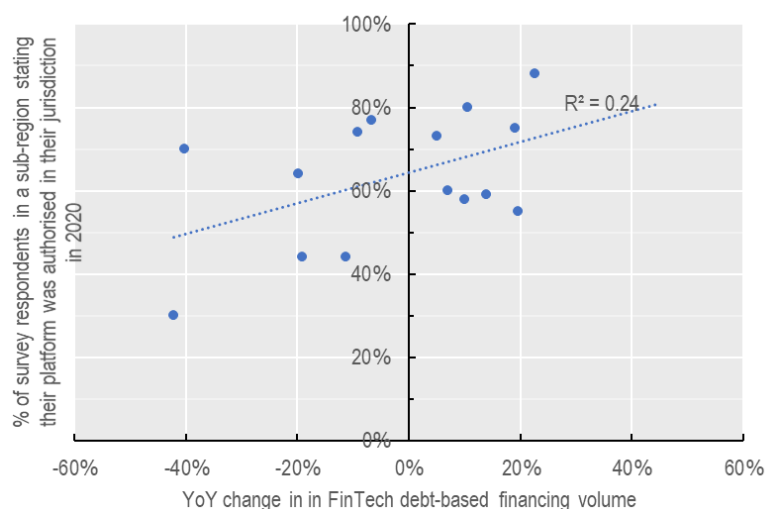
Lack of previous relationship with authorities limits MPL/FinTech lender credibility and impedes their eligibility

As MPL/FinTech lending is a rather novel phenomenon of the recent decade, authorisation, licencing and supervision practices are not fully established and operating in all jurisdictions, and there are differences in the applicable frameworks between different markets. In addition, MPLs and FinTech lenders operating without a banking license are not part of the financial safety net provided by most countries to registered deposit-taking institutions. Governmental authorities might be reluctant to offer guarantees or other fiscal support originated in taxpayers contributions to unregulated and un-licensed lenders.

The general absence of relationships of these FinTech players with the central bank and other financial authorities (e.g. in the context of the licensing or supervisory process) could undermine their credibility and may have impeded their participation in the COVID19 relief loan disbursements. Governments would be exposed to reputational risk and public criticism if they engaged with entities that may be unregulated or that may try to benefit from regulatory arbitrage vis-à-vis banks. The lack of pre-existing official communication channels with these players further impeded their participation at least in the first waves of such programmes, as it was more straightforward for official authorities to negotiate terms with counterparts with which they had prior established relationships, especially given that speed of execution was of the essence for the distribution of support funds to beneficiaries. In addition, lack of familiarity with FinTech lenders' models and practices, lack of supervisory mechanisms to follow through on implementation and deal with consumer complaints, loan recoveries or other processes added to the authorities' challenge of engaging with them.

Empirical research covering the initial impact of the COVID-19 crisis suggests that FinTechs operating in jurisdictions that have lagged behind in setting in place a supervisory framework for their operations have experienced lower increase/or deeper decrease in volume during the crisis (portraying an R^2 of 0.24, Figure 2.1) (Cambridge Centre for Alternative Finance, 2021^[4]). To a weaker extent, the year on year change in debt-based alternative finance market volume also depicts positive correlation with the share of surveyed FinTechs that said that regulation in their jurisdiction was "adequate and appropriate" and with the percentage of overall FinTech funding volume funded by institutional investors in each jurisdiction (Figure 2.1).

Figure 2.1. YoY Change in Financing Volume and Regulatory Authorisation



Note: on the x-axis figures represent the percentage change in funding volume between 2020 and 2019 of debt-based alternative finance market volume for sub-regions. For sub-regions in Asia the change in volume applies to all alternative finance models, in the absence of more granular data. UK and the Benelux regions were excluded due to inconsistency among survey participants in 2019 and 2020 which affected greatly the reported volume.

On the y-axis percent of surveyed platforms stating their platform is authorised in their jurisdiction true in 2020.

Source: OECD calculations based on data by the Cambridge Centre for Alternative Finance (Cambridge Centre for Alternative Finance, 2021^[4])

In recent years, many large MPL and FinTech lenders are acquiring banking licenses (e.g. Zopa, Kabbage). In addition to gaining credibility, having a banking license allows such players access to cheaper funding facilities of the central bank, which has been one of the most challenging obstacles to their participation in COVID-19 support programmes (see Section 4.3.3).

Fraud proliferation in COVID-9 support schemes

Increased risk of fraud (and error) was associated with the COVID-19 business support schemes and was recognised at the outset due to the need to prioritise liquidity provision to businesses impacted by the pandemic in a timely manner. At the same time, government authorities and partnering lenders were aware of the higher risks and implemented fraud prevention measures, often supported by innovative technologies. Indicatively, lenders in the UK reported fraud prevention of over GBP 2 bn as of end of 2021 (BEIS, 2021^[79]). Nevertheless, an important distinction needs to be made between fraud and fraud losses, as fraud refers only to the conduct of those who commit it and need not result in a permanent economic loss to the taxpayer. Action is also being taken for the recovery of fraudulent loans and the enforcement of related consequences to fraudsters.

Fraud related to support schemes involved individuals giving false information or misrepresenting their identity and other relevant information to access relief loans. This includes, for example, non-registered businesses applying for loans, borrowing businesses registered at residential addresses, companies misrepresenting their turnover and other financials, or using faked or stolen records (e.g. on employees or activity). Other examples of fraud related to pandemic support include businesses claiming benefits for furloughed staff when they may have had such staff working, or those recording more sales than in the pre-pandemic period, despite furloughing all their staff. Authorities scrutinise debit and credit card payments received by businesses to identify the scale of trading activity taking place and compare this to furlough claims, while tax authorities also cross-reference claims made to different coronavirus business support schemes to identify fraudsters (FT, 2021^[80]).

Table 2.2. Estimated level of fraud and error in the UK COVID-19 support schemes

As of 31 December 2021

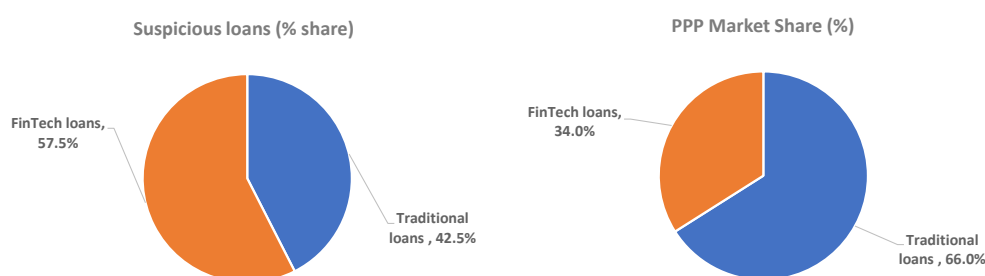
Scheme	Value of schemes	Fraud and error range
Bounce Back Loans	Total value guaranteed of £46bn	GBP 3.6 bn to GBP 6.3 bn
COVID-19 Business Support Grants	Value of grant schemes £19.1bn	GBP 0.5 bn to GBP 1.6 bn

Note: Estimates with 95% confidence level and within the margin of error/confidence range indicated. The table reports estimated levels of financial support obtained either fraudulently or in error, which may be recovered or repaid over time.

Source: (BEIS, 2021^[79]).

According to research estimates, FinTechs were responsible for a disproportionately high share of fraudulent loans in some programmes in which they participated (Figure 2.2). Anecdotal evidence suggests that FinTechs were the ‘lenders of choice’ by scammers during the pandemic (Bloomberg, 2021^[81]). Academic research¹⁴ based on US PPP scheme data found that FinTechs were responsible for a disproportionate share of suspicious loans (Griffin, Kruger and Mahajan, 2021^[82]). Based on such study, FinTech loans were more than 3.5 times as likely to be initiated by someone with a criminal background, and FinTech loans were deemed “highly suspicious” at a rate of almost five times per one loan extended by traditional lenders. In the US, the Select Subcommittee on the Coronavirus Crisis of the Congress launched an investigation into the role of the FinTech industry in PPP Fraud (Select Subcommittee, 2021^[83]).

The fact that MPL/FinTech lenders were the intermediaries extending relief funding to the most difficult to reach SMEs may explain, at least partly, the disproportionately high percentage of fraudulent or suspicious loans in their portfolio. FinTechs succeeded in expanding access to relief loans particularly to smaller firms without pre-existing lending relationships with traditional banks. The absence of prior established relationships means, in turn, lack of prior customer due diligence/KYC checks, which are the first effective line of defence against fraud.

Figure 2.2. FinTech share of suspicious loans outperformed its market share

Source: (Griffin, Kruger and Mahajan, 2021^[82]).

In the UK, loan fraud rates rose 40% in Q2 2021, reaching their highest level in the past three years and up 63% from the same period last year (Experian, 2021^[84]). This was coupled with a threefold increase in fraudulent openings for savings accounts, aiming to facilitate reception and quick distribution of illegally-obtained funds. It should be noted that such increase in fraudulent applicants may also be attributed to the increased capabilities of firms to detect fraud through the use of sophisticated innovative technologies such as Artificial Intelligence and Machine Learning.

According to industry sources, as of August 2021, between 5-10% of businesses that used the Bounce Bank scheme in the UK have missed repayments, representing a total of c. GBP 5bn (Experian, 2021^[84]). The largest part of these missed payments, however, include companies that have defaulted or struggled during the pandemic, rather than fraud.

There may be trade-offs between speed of disbursement of funds and exposure to potential fraud, as there is limited room for extensive due diligence, particularly for small SMEs without prior bank relationships. Participating intermediaries had to change their working practices during the pandemic to allow for the fast roll-out of relief loans, while the requirements for beneficiaries were naturally lighter than under normal conditions. The repercussions of the COVID-19 pandemic called for urgent action, and programmes aimed at reaching as many people as possible in the fastest possible manner. This translated into lighter credit underwriting processes, which gave rise to risks when it came to risk of illegal and fraudulent activity.

In order to avoid high levels of fraud in future schemes involving FinTech intermediaries and established banks, it may be important to further promote investment in data sharing infrastructure and systems that will allow for the speedy and efficient due diligence of small businesses. This may include inter alia cooperation between the different authorities (e.g. tax authorities, company registration authorities) for the exchange of information in case of emergency and the use of FinTech applications.

Cooperation and competition in the post-pandemic era

Banks routinely partner with third-parties and FinTech companies to expand their product offering, and did so also when becoming accredited lenders in COVID-19 support schemes. FinTechs provided innovative and effective methods for the processing of lending applications to COVID-19 relief loans, and the sheer size and time intensity associated with the disbursement of relief loans called for closer collaboration between the two. Indeed, many MPL/FinTech lenders acted as agents to banks (Funding Circle with Starling bank in the US, Kabbage with Cross River Bank and Customer's Bank) before they became allowed to participate on a standalone basis.

Another challenge in the distribution of COVID-19 relief loans affecting FinTechs relates to their lack of pre-existing customer base, contrary to banks. Traditional bank lenders have been reported to show a potential preference to their existing client base, prioritising applications coming from pre-existing customers (The Wall Street Journal, 2020^[85]). These could be processed much faster, given that most of the required information for the screening of the applicant exists already, allowing traditional lenders to save on costs and avoid fraudulent applications, while mitigating their risk and exposure, and even refinance existing client loans with guarantee-based loans. The downside of that is that banks tend to exclude the smallest of companies from the client base as the costs associated with credit underwriting of micro-loans makes it uneconomical for large deposit-taking institutions to serve. The disbursement of relief loans to existing clientele has therefore excluded part of the SME population by default at the very early stages of these programmes.

Partnerships of banks with FinTech companies can also allow banks to meet the needs of underbanked or underserved consumers (e.g. the long tail of the SME population, which is harder and costlier for banks to serve), in normal times and in times of crisis (FED, FDIC and OCC, 2021^[75]). Indeed, FinTech lenders have an edge when it comes to smaller SMEs and smaller loan sizes, as was evidenced by the number of loans disbursed in the US PPP lending scheme (see Table 2.3). Kabbage, a leading marketplace lender in the US, processed almost 300,000 loan applications representing more than USD 7 billion in loans, making the platform the second largest PPP lender based on application volume (Kabbage, 2020^[86]). In Italy, FinTech companies signed partnerships with Italian banks to help ease up and fasten its loan application responses during the pandemic, while in Ireland, FinTechs supported the SBCI with processing debt applications.

Table 2.3. US Paycheck Protection Programme, Lenders with <USD1bn assets and Non-Banks

Approvals through 08/08/2020

Lender Type	Lender Count	Loan Count	Net Dollars
Banks (less than USD 1b)	3,533	1,084,619	USD 84,947,576,047
Small Business Lending Companies	14	61,511	USD 6,429,280,309
FinTechs (and other State Regulated)	19	250,720	USD 6,050,562,792
Credit Unions (less than USD 1b)	719	67,846	USD 3,099,426,436
Farm Credit Lenders	54	15,876	USD 1,386,869,441
Savings & Loans (less than USD 1b)	77	11,769	USD 1,042,472,101
Certified Development Companies	19	8,463	USD 401,533,542
Non Bank CDFI Funds	8	9,598	USD 367,938,078
Microlenders	32	8,774	USD 238,627,841
BIDCOs	1	24	USD 791,088
Total	4,496	1,519,200	USD 103,965,077,675

Source: (SBA, 2020^[65]).

Interestingly, there are not a lot of recorded cases of similar cooperation between banks and FinTechs where the banks act as the lender of record and the FinTechs serve as distribution channels (i.e. banks effectively providing wholesale funding to MPL/FinTechs). This could be due to the lack of trust by banks vis-à-vis the underwriting, due diligence and monitoring capabilities of FinTech lenders, or due to potential reputational risks that the banks would face depending on the performance of such loans and/or in case of fraud. In parallel, banks are increasingly investing in in-house technological upgrades, and empirical evidence from the US suggests that community banks that invested more in technology, on average, originated a greater share of PPP loans regardless of the loan size, origination date, or borrower distance from the nearest bank branch (FDIC, 2021^[87]). Advanced technology enabled banks to supply PPP loans outside of their branch market area, though this more geographically dispersed lending did not crowd out in-market lending (Kutzbach and Pogach, 2022^[88]).

At the same time, such programmes presented a customer acquisition opportunity for smaller deposit taking institutions, such as community lenders and local small banks in the US. The latter have been reported to view COVID-19 relief loans as a chance to expand their customer base (Liberty Street Economics, 2020^[89]). Some community banks in the US announced that they were willing to offer PPP loans to eligible businesses that would open an account with them (Barron's, 2020^[90]). Since the PPP loans were guaranteed, small community and local banks were less constraint by their capital for the scaling up of their credit extension and seized the opportunity to expand their lending portfolio and customer base. According to some industry participants, while these lenders are less automated than FinTechs, they can provide more personalized, high touch service that the smallest businesses and the self-employed may be seeking (Forbes, 2020^[91]).

In the post-pandemic era, some markets for specialised SME lending are expected by the industry to face reduced competition post disbursement of COVID-19 relief loans, particularly in markets where large banks dominated in the disbursement of support lending. SMEs in such markets may have shifted their primary bank to the large deposit-taking institutions who were the first to disburse relief loans. At the same time, the extent of the loan programmes was such that may have saturated demand for the short and medium-term, as some of the relief loans have a tenure of more than 5 years. Interestingly, Kabbage, one of the largest US MPLs, stopped making conventional SME loans at the onset of the crisis and focused solely on the disbursement of PPP loans (Kabbage, 2020^[92]). In the near future, MPLs who have participated in the roll-out of relief loans are expected to prevail in the market for SME lending, having built a stronger customer base thanks to their participation in government support programmes.

As mentioned earlier in this section, globally, FinTech debt-based funding volume for business grew from USD 32.8 billion in 2019 to USD 49.6 billion in 2020 (excluding China) (Cambridge Centre for Alternative Finance, 2021^[4]). This was however distributed between large contractions in some markets and increases in others. Some markets, such as the US, benefited from governmental support schemes, for others, further development was halted, while in the rest, this industry suffered considerably from lack of inflow, or reduced demand such as in the Swiss case. While in 2019, 16% of the alternative finance volumes was provided by institutional investors, in 2020, this share rose to 42% (Cambridge Centre for Alternative Finance, 2021^[4]), indicating perhaps that lenders that relied exclusively on retail inflow had a harder time to operate in the uncertainty brought about by COVID-19. In addition, globally, business lending models shifted toward greater market concentration. This is especially evident in the US where despite high growth rate of the FinTech market, nearly 80% of its activity (in terms of volume) was dominated by only eight firms in 2020, while the same volume was captured by ten firms in 2019. These firms operated mainly P2P/Marketplace Consumer Lending, Balance Sheet Business Lending and Balance Sheet Consumer Lending models (Cambridge Centre for Alternative Finance, 2021^[4]).

Potential merits of fostering further FinTech lender participation in government support schemes

The technological innovation used by FinTech lenders (e.g. automation, use of artificial intelligence) can produce cost and time efficiencies that can promote productivity enhancement, while they can also lead to improved product offering and customer service. In the particular case of government support schemes, they can offer the rapid delivery of emergency funding given their capabilities for fast on boarding and full production process automation (from creditworthiness assessment to funds processing).

Additionally, the agility of FinTech lenders allows them to reach remote underserved or unserved parts of the population, promoting financial inclusion which is crucial in times of stress, such as the recent pandemic. Micro SMEs and entrepreneurs that did not have formal bank relationships or that are based in remote parts of the world could still benefit from these support schemes through FinTechs. Indeed, although FinTech lenders disbursed only a small share of total COVID-19 support lending in the jurisdictions where they participated, there is evidence that they provided important support to underserved SMEs: in the US, FinTech lenders participation in PPP allowed access for minority business owners who have in the past been underserved by the traditional banking industry to the program (Federal Reserve Bank of New York, 2021^[93]).

Loans distributed exclusively by banks increase the chance that lending is reaching the existing bank clientele before everyone else. In many cases, SMEs in the greatest need for funds do not have pre-existing bank customer relationships, making the speedy reception of support funding a bit more cumbersome. Empirical findings based on data from the US PPP programme suggest that FinTech lenders were disproportionately used in ZIP codes with fewer bank branches, lower incomes, and a larger minority share of the population, as well as in industries with little ex ante small-business lending, confirming the above (Erel and Liebersohn, 2020^[94]). In addition, based on the same analysis, FinTech participation in the PPP mostly expanded the overall supply of financial services, rather than redistributing and the role of FinTechs in PPP provision was greater in counties where the economic effects of the COVID-19 pandemic were more severe (Erel and Liebersohn, 2020^[94]).¹⁵

When it comes to post-support periods, some of the firms that participated in relief lending programmes will probably need to refinance their loan, and might not be able to do so with a new non-guaranteed bank loan, as the abundance of funding provided by governments in response to the COVID19 pandemic's impact extended via traditional lenders has attracted lenders that would have otherwise not be able to get a bank loan. In contrast, borrowers who took out loans from FinTechs during the pandemic under market terms will probably struggle less to refinance those loans in the post-pandemic period. Government

guaranteed lending offered through traditional lenders might have also redirected demand for loans away from FinTech lenders. If more guaranteed lending was channelled through non-traditional lenders it might have strengthened FinTech lenders, contributing to competition and diversity in lending products, as well as diverted some of the borrowers to such lenders that can serve them continuously, including for refinancing under market terms. Empirical research in specific parts of the lending market suggests that in areas with more FinTech lending, borrowers refinance more, especially when it is in their interest to do so (Federal Reserve Bank of New York, 2018^[17]).

Further opportunity for market share for online lenders may come through additional participation in official sector programmes or through the refinancing needs of beneficiaries of COVID-19 relief loans. The successful participation of MPLs/FinTechs in COVID-19 support programmes either as direct accredited lenders or as agents for banks can be leveraged to advocate for broader participation of lenders in other non-emergency support lending programmes for SMEs in particular (American Banker, 2020^[95]). In addition, the withdrawal of COVID-19 support schemes will require SMEs to restructure or refinance some of the loans received, depending on the terms, and this is expected to give room to such lenders to regain market growth.

Overall, increased MPL/FinTech lending activity could have a positive effect on competitive dynamics in the market for business lending. The use of open banking schemes, for instance, can facilitate the switching of providers by customers while it can also allow for the provision of innovative products and services, reinforcing competition between financial institutions.

3 Policy considerations

Policy makers could benefit from an assessment of FinTech participation in the roll-out of COVID-19 relief loan programmes so as to better utilise them in possible future large-scale emergency economic situations. Policy makers could consider ways to encourage the safe development of these markets as a way to improve access to SME financing – especially where sources of finance for this sector are not diversified - while addressing risks emerging from such models, through the provision of a clear regulatory perimeter for such players. The role of coordination between authorities is crucial at both the national and the international levels. Overall, policy makers may have a role to play in supporting a diversity of financing models and risk appetites in the market for SME financing, thereby reducing the likelihood of shocks obstructing the flow of financing to SMEs and the real economy, particularly in a counter-cyclical manner.

There is a role for policy makers to encourage the safe development of these markets as a way to improve access to financing for SMEs and fill in any financing gaps, where these are material, while addressing risks emerging from such models. Financial innovation in lending, whether through MPL or other FinTech models, can potentially expand access to credit for underserved individuals or SMEs and may contribute to productivity gains for the economy while fostering financial inclusion. At the same time, MPL/FinTech lending raises a number of risks associated with, moral hazard, bias or discrimination in credit outcomes, as well as risks to financial consumers given absence of appropriate disclosure. These risks underscore the importance of ensuring high loan origination standards and appropriate risk management practices within the industry

Despite much potential, MPL/FinTech lending has yet to reach a meaningful size, particularly in the corporate credit segment of the market, while it exposes market participants to a number of risks that call for the attention of policy makers. The provision of a clear regulatory perimeter for such players would be

the first step towards the development of safe lending environments and further growth of the industry. Regulatory clarity could address risks of regulatory arbitrage and fill in any potential regulatory gaps when it comes to unregulated online platforms. The proportionality principle could be considered as a way not to stifle innovation when it comes to smaller-sized and lower-risk platform models. Regulatory clarity could also promote more collaboration and partnerships between banks and institutional investors and increase FinTechs funding opportunities to be used by them for the provision of safe and affordable credit to the underbanked parts of the population.

Further promotion and reinforcement of disclosure regimes for MPL/FinTech online activity can foster transparency and protect prospective borrowers who may be unable to fully understand the risks involved, making them vulnerable to unexpected losses. This will include appropriate disclosure and information provided in adequate form, including around detailed product features and costs, hidden fees, other terms and conditions that may be difficult to find in some of the current online platforms. Data privacy and confidentiality should be protected. As the level of understanding of such terms and of commensurate risks depend to a large extent to the level of financial literacy of prospective borrowers, efforts to promote financial education are of paramount importance. This is increasingly important given the potential promotion of financial products to mass audiences by online platforms through social media.

Regulatory clarity in relation to the partnerships of FinTechs with traditional banks could pave a clearer path for deeper and closer cooperation between the two sides. The US Office of the Comptroller of the Currency (OCC) proposed a sets of terms for determining who the ‘true lender’ is in a loan transaction¹⁶, including in the context of a lending partnership between a federally-chartered bank and a non-bank third party (OCC, 2020^[96]). This is an example of policy action that provides legal certainty to banks engaging or seeking to engage in lending partnerships with MPL/FinTechs, fostering innovation in the lending market. The recent policy discussion around the use of digital platforms by financial services in Europe and elsewhere is highly relevant when it comes to cooperation of banks with unregulated MPL/FinTech lenders. According to the analysis by the European Banking Authority, the reliance of financial institutions on digital platforms for the marketing and distribution of financial services is creating new forms of financial, operational, and reputational interdependencies within the banking and payments sector (EBA, 2021^[42]). Such “platformisation” of financial services is also posing challenges for competent authorities in monitoring market developments and any risks arising from these interdependencies (EBA, 2021^[42]).¹⁷

Policy makers could consider potential action to encourage the safe development of FinTech lenders as a way to support diversity of financing models and risk appetites in the market for SME financing, thereby reducing the likelihood of shocks obstructing the flow of financing to SMEs and the real economy, particularly in a counter-cyclical manner. The demand for SME financing is heterogeneous in nature, with a wide range of risk profiles, needs and channels of financing, reflecting the inherent nature of heterogeneous SMEs. Diverse sources and providers of SME financing with different business models and risk appetite can better serve the whole spectrum of SMEs and their needs, particularly in times of stress. A level playing field for traditional and alternative online lenders, such as MPLs and other FinTechs can help ensure a healthy competitive environment for SME credit, higher quality products and services to customers and better access to such products for the smaller/underserved small businesses.

The fostering of secondary markets for loans originated by MPL/FinTech platforms could be encouraged so as to alleviate impediments to the greater participation of long-term institutional investors as wholesale funding providers of such platforms. The lack of stable and affordable funding sources for wholesale funding, coupled with a lack of secondary markets for MPL-originated loan portfolios, are two of the main obstacles to the scale-up of the MPL model. SME securitisation (and SME MPL securitisation), for example, have stalled in part due to due diligence requirements and loan-by-loan disclosure requirements, which can be difficult to fulfil for SME loans. Additionally, the associated significant upfront costs and relative complexity involved are obstacles to the wider use of securitisation backed by SME loan portfolios that need to be mitigated.

To that end, greater transparency of SME loan portfolios needs to be encouraged in order to address such information asymmetries, inter alia through the creation of enhanced data sharing solutions. The characteristic heterogeneity of SMEs, which is at the same time an important source of attractiveness to private investors, requires a solution to the inherent due diligence predicament that goes beyond the capabilities of small MPL/FinTech lenders alone. Data sharing solutions based on APIs, data warehouses or aggregated forms of pooling of loan information for their analysis can allow for the smoothing out of idiosyncrasies of individual loans and for the easier handling of such investments by institutional investors. At the same time, the build-up of loan-level data, performance track records, the encouragement of ongoing reporting and data sharing could support secondary markets for SMEs-based instruments, stimulating investor participation and allowing for informed decision-making by capital holders.

Policy makers could consider the development of Open data platforms and initiatives involving the sharing and portability of SME data in order to open up the credit market to greater competition from new banks and non-bank lenders. The Bank of England proposal for the development of an open platform for SME finance is an example of an initiative in that direction (Bank of England, 2020^[97]). Under the proposal by the Bank of England, permissioned data sharing standards could deliver an Open Data Platform and a portable credit file that will make it easier for SMEs to apply for credit, while it will also improve transparency for lenders through a safe and secure environment. Such open platform could harness novel data sources and advanced analytics to provide SMEs with more choice and better access to productive finance.

Greater participation of MPL/FinTech lenders could be considered by policy makers in possible future large-scale emergency economic situations, based on the learnings of the COVID-19 pandemic. Given efficiencies in terms of speed and scale of application processing, as well as evidence of beneficial outcomes for micro-SMEs without prior banking relationship and minority business-owners, further collaboration in other SME government sponsored schemes could also be considered (e.g. regular SME support by development banks). In their recent participation in the roll-out of COVID-19 government support schemes, MPL/FinTech lenders helped provide important support to underserved SMEs, particularly those at the smaller end of the size spectrum and those who had in the past been underserved by the traditional banking industry. The ability of MPL/FinTech lenders to service such clients underlines their potential to expand the overall supply of financial services, rather than redistribute it, promoting real economic growth.

At the same time, the disproportionate share of FinTechs in the disbursement of fraudulent loans in some of the programmes they participated calls for consideration of design options in future schemes, and of the potential trade-off between speed/reach and potential for fraud given lower underwriting standards. Given the higher levels of fraudulent loans, risk management practices of MPL/FinTechs and their recovery capabilities need to be further reinforced. It may also be important to further promote investment in data sharing infrastructure and systems that will allow for the speedy and efficient due diligence of small businesses. This may include inter alia cooperation between the different authorities (e.g. tax authorities, company registration authorities) for the exchange of information in case of emergency and the use of FinTech applications.

The role of coordination between authorities is crucial both at the national and the international levels. Facilitating coordination between different authorities and agencies responsible for such activities is a pre-requisite for the development of a sound framework at the national level, covering aspects from prudential regulation to consumer protection and competition conditions. The latter is particularly important given the potential benefits of MPL/FinTech lending activity in the competitive landscape of SME lending and in light of BigTech growing footprint in financial services. For example, competition at cross-border level. Cooperation at the international level will support the safe expansion of credit at the cross-border level. Cooperation with authorities responsible for data protection could allow for the safe access of online lenders to government- or industry-held data through open banking initiatives for the ultimate benefit of consumers.

References

- Adams, R. (2018), "Do Marketplace Lending Platforms Offer Lower Rates to Consumers? FEDS Notes", *Federal Reserve*, Vol. 2018/2268, <https://doi.org/10.17016/2380-7172.2268>. [2
1]
- American Banker (2020), *Fintechs hope PPP performance will lead to expanded role with SBA* | *American Banker*, <https://www.americanbanker.com/news/fintechs-hope-ppp-performance-will-lead-to-expanded-role-with-sba>. [9
5]
- American Banker (2020), *PPP is a compliance minefield for banks*, <https://www.americanbanker.com/opinion/ppp-is-a-compliance-minefield-for-banks>. [7
4]
- Atkinson, A. (2017), "Financial Education for MSMEs and Potential Entrepreneurs", *OECD Working Papers on Finance, Insurance and Private Pensions*, No. 43, <https://doi.org/10.1787/bb2cd70c-en>. [1
4]
- Atkins, R., L. Cook and R. Seamans (2021), "Discrimination in Lending? Evidence from the Paycheck Protection Program", *SSRN Electronic Journal*, <https://doi.org/10.2139/SSRN.3774992>. [2
7]
- Balyuk, T. and S. Davydenko (2019), "Reintermediation in FinTech: Evidence from Online Lending", *SSRN Electronic Journal*, Michael J. Brennan Irish Finance Working Paper Series Research Paper 18-17 (2019), <https://doi.org/10.2139/SSRN.3189236>. [5
]
- Bank of England (2020), *Open data for SME finance: what we proposed and what we have learnt* | *Bank of England*, <https://www.bankofengland.co.uk/paper/2020/open-data-for-sme-finance>. [9
7]
- Bank of Italy (2019), *Corporate default forecasting with machine learning*. [3
0]
- Barbara J. Lipman and Ann Marie Wiersch (2018), *Browsing to Borrow: "Mom & Pop" Small Business Perspectives on Online Lenders*, <https://www.federalreserve.gov/publications/files/2018-small-business-lending.pdf>. [5
2]
- Barron's (2020), *Why Small Business Rescue Loans Are Hard to Get*, <https://www.barrons.com/articles/a-crash-course-in-the-small-business-bailout-51586553690>. [9
0]
- BEIS (2021), "Department for Business, Energy and Industrial Strategy, Annual report and accounts 2020-21", <http://www.gov.uk/official-documents>. [7
9]
- Berg, T., A. Fuster and M. Puri (2021), "FinTech Lending", *NBER WORKING PAPER SERIES FINTECH LENDING*, Vol. 29421, <http://www.nber.org/papers/w29421>. [2
2]
- Bholat, D., M. Gharbawi and O. Thew (2020), *The impact of Covid on machine learning and data science in UK banking* | *Bank of England*, Bank of England Quarterly Bulletin Q4 2020, [4
0]

- <https://www.bankofengland.co.uk/quarterly-bulletin/2020/2020-q4/the-impact-of-covid-on-machine-learning-and-data-science-in-uk-banking>.
- BIS (2022), "Platform-based business models and financial inclusion", <https://www.bis.org/publ/work986.htm>. [4
4]
- BIS (2020), *Data vs collateral*, <http://www.bis.org>. [3
1]
- BIS (2020), *Regulating fintech financing: digital banks and fintech platforms*, <http://www.bis.org/emailalerts.htm>. [4
3]
- Bloomberg (2021), *PPP Loans: Scammers Used Fintech Companies to Carry Out Fraud - Bloomberg*, <https://www.bloomberg.com/news/articles/2020-10-07/ppp-loans-scammers-used-fintech-companies-to-carry-out-fraud>. [8
1]
- Branzoli, N. and I. Supino (2020), "FinTech credit: a critical review of the empirical literature". [4
7]
- Brei, M., C. Borio and L. Gambacorta (2019), "Bank intermediation activity in a low interest rate environment", *BIS Working Papers*, No. 807, Bank for International Settlements, <https://www.bis.org/publ/work807.htm>. [1
9]
- British Business Bank (2020), *Bounce Back Loan Scheme (BBLs) - Current accredited lenders and partners - British Business Bank*, <https://www.british-business-bank.co.uk/ourpartners/coronavirus-business-interruption-loan-schemes/bounce-back-loans/current-accredited-lenders-and-partners/>. [7
0]
- British Business Bank (2020), *Coronavirus Business Interruption Loan Scheme (CBILs) - Current Accredited Lenders and Partners - British Business Bank*, <https://www.british-business-bank.co.uk/ourpartners/coronavirus-business-interruption-loan-scheme-cbils-2/current-accredited-lenders-and-partners/>. [6
9]
- Brookings (2020), *Reducing bias in AI-based financial services*, <https://www.brookings.edu/research/reducing-bias-in-ai-based-financial-services/>. [3
2]
- Buchak, G. et al. (2018), "Fintech, regulatory arbitrage, and the rise of shadow banks", *Journal of Financial Economics*, Vol. 130/3, pp. 453-483, <https://doi.org/10.1016/J.JFINECO.2018.03.011>. [1
6]
- Cambridge Centre for Alternative Finance (2021), *The 2nd Global Alternative Finance Market Benchmarking Report - CCAF publications - Cambridge Judge Business School*, Cambridge Centre for Alternative Finance, <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/the-2nd-global-alternative-finance-market-benchmarking-report/>. [4
1]
- CCAF (2020), *The Global Alternative Finance Market Benchmarking Report - CCAF publications - Cambridge Judge Business School*, Cambridge Centre for Alternative Finance, <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/the-global-alternative-finance-market-benchmarking-report/>. [7
1]
- CCAF, W. (2020), *Global COVID-19 FinTech Market Rapid Assessment Study - CCAF publications - Cambridge Judge Business School*, University of Cambridge, World Bank Group and the World Economic Forum, <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/2020-global-covid-19-fintech-market-rapid-assessment-study/>. [6
2]
- CeicData (2020), *China | P2P Lending: Number of Platform | CEIC*, <https://www.ceicdata.com/en/china/p2p-lending-number-of-platform>. [1
2]

- Cornelli, G. et al. (2020), "Fintech and big tech credit: a new database", <https://www.bis.org/publ/work887.htm> (accessed on 25 January 2022). [10]
- Davis, K. (2016), *Peer-to-Peer lending: structures, risks and regulations*, <http://kevindavis.com.au/secondpages/acadpubs/2016/MMFC%20Paper%20-%20P2P%20Lending%20-%20Davis%20and%20Murphy.pdf>. [46]
- Deloitte (2016), "A temporary phenomenon? Marketplace lending. An analysis of the UK market", <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/financial-services/deloitte-uk-fs-marketplace-lending.pdf>. [18]
- Di Maggio, M. and V. Yao (2021), "Fintech Borrowers: Lax Screening or Cream-Skimming?", *The Review of Financial Studies*, Vol. 34/10, pp. 4565-4618, <https://doi.org/10.1093/RFS/HHAA142>. [49]
- EBA (2021), "Report on the use of Digital Platforms in the EU Banking and Payments sector". [42]
- EIB (2022), *European Guarantee Fund*, <https://www.eib.org/en/products/egf/index.htm?q=&sortColumn=projectsSignedDate&sortDir=desc&pageNumber=0&itemPerPage=25&pageable=true&language=EN&defaultLanguage=EN&statuses=signed&orstatuses=true&abstractProject=false&orabstractProject=true&orCountries=true&beneficiaries=Small+and+medium+companies&orBeneficiaries=true&website=EIF&orWebsite=true>. [73]
- Equifax (2017), *Equifax Announces Cybersecurity Incident Involving Consumer Information*, <https://investor.equifax.com/news-and-events/press-releases/2017/09-07-2017-213000628>. [36]
- Erel, I. and J. Liebersohn (2020), "Does FinTech Substitute for Banks? Evidence from the Paycheck Protection Program", <https://doi.org/10.3386/W27659>. [94]
- Experian (2021), *UK bank account fraud soars during first half of 2021*, <https://www.experianplc.com/media/latest-news/2021/uk-bank-account-fraud-soars-during-first-half-of-2021/> (accessed on 24 January 2022). [84]
- FDIC (2021), "Quarterly Quarterly Banking Profile: Second Quarter 2021 The Importance of Technology Investments for Community Bank Lending and Deposit Taking During the Pandemic", <http://www.fdic.gov>. (accessed on 9 February 2022). [87]
- Federal Reserve Bank of New York (2021), *Who Received PPP Loans by Fintech Lenders? - Liberty Street Economics*, <https://libertystreeteconomics.newyorkfed.org/2021/05/who-received-ppp-loans-by-fintech-lenders/>. [93]
- Federal Reserve Bank of New York (2018), *The Role of Technology in Mortgage Lending - FEDERAL RESERVE BANK of NEW YORK*, https://www.newyorkfed.org/research/staff_reports/sr836. [17]
- Federal Reserve Banks (2021), "Small Business Credit Survey, 2020 report on employer firms, Federal Reserve Banks of Atlanta, Boston, Chicago, Cleveland, Dallas, Kansas City, Minneapolis", <http://www.fedsmallbusiness.org>. [26]
- FED, FDIC and OCC (2021), *Proposed Interagency Guidance on Third-Party Relationships: Risk Management*, <https://www.fdic.gov/news/press-releases/2021/pr21061a.pdf>. [75]
- FinReg Lab (2019), *The Use of Cash-Flow Data in Underwriting Credit*, <http://www.flourishventures.com>. [35]

- Forbes (2020), *Why FinTechs Are Declaring Victory In PPP Loans*, <https://www.forbes.com/sites/megangorman/2020/08/13/why-fintechs-are-declaring-victory-in-ppp-loans/#5919d11e2205>. [9
1]
- FSB (2017), *Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities' Attention*, <http://www.fsb.org/emailalert>. [1
]
- FSB, B. (2017), *FinTech credit Market structure, business models and financial stability implications*, <http://www.fsb.org/emailalert>. [2
]
- FT (2021), *UK tax body opens almost 13,000 probes into use of Covid schemes* | *Financial Times*, <https://www.ft.com/content/31fce506-e1bc-483e-8c71-bdd0ffa6ba70> (accessed on 24 January 2022). [8
0]
- FT (2020), "Non-bank lenders raise concerns over access to 'bounce back' loans | *Financial Times*", <https://www.ft.com/content/6bcd5e54-74a2-4173-b9d8-8b260ffc590f> (accessed on 3 September 2020). [5
7]
- Gopal, M. and P. Schnabl (2021), "The Rise of Finance Companies and FinTech Lenders in Small Business Lending", *SSRN Electronic Journal*, <https://doi.org/10.2139/SSRN.3600068>. [2
8]
- Griffin, J., S. Kruger and P. Mahajan (2021), "Did FinTech Lenders Facilitate PPP Fraud? * Did FinTech Lenders Facilitate PPP Fraud?". [8
2]
- HM Treasury (2021), *Review of the Securitisation Regulation: Call for evidence*. [5
8]
- HM Treasury (2021), "Review of the Securitisation Regulation: Report and call for evidence response". [5
9]
- House of Commons Library (2021), *Coronavirus business support schemes: Statistics*, UK Parliament, <https://commonslibrary.parliament.uk/research-briefings/cbp-8938/>. [7
1]
- Johannes Ehrentraud et al. (2020), "Policy responses to fintech: a cross-country overview", *FSI Insights*, No. 23, FSI Insights, <https://www.bis.org/fsi/publ/insights23.htm>. [5
6]
- JPMorgan Chase Institute (2019), "Place Matters: Small Business Financial Health in Urban Communities". [2
5]
- Kabbage (2020), *Kabbage Funding Update*, <https://newsroom.kabbage.com/news/ceo-statement-kabbage-funding-update/>. [9
2]
- Kabbage (2020), *Kabbage Report — Paycheck Protection Program*, https://newsroom.kabbage.com/news/kabbage_ppp_results_report/. [8
6]
- KPMG (2020), *How COVID-19 is accelerating digitalisation*, <https://home.kpmg/in/en/blogs/home/posts/2020/07/how-covid-19-accelerating-digitalisation-banking-payments-industry.html>. [6
1]
- Kutzbach, M. and J. Pogach (2022), "Bank Technology and the COVID-19 Pandemic Bank Technology and the COVID-19 Pandemic *". [8
8]
- LendingClub (2021), *Important Updates to the LendingClub Notes Platform – LendingClub*, <https://help.lendingclub.com/hc/en-us/articles/360050574891-Important-Updates-to-the-LendingClub-Notes-Platform>. [6
1]

- LendingClub (2020), "FORM10-K". [8]
- LendingClub (2018), "Form 10-K". [9]
- Liberty Street Economics, F. (2020), "Where Have the Paycheck Protection Loans Gone So Far? - Liberty Street Economics", <https://libertystreeteconomics.newyorkfed.org/2020/05/where-have-the-paycheck-protection-loans-gone-so-far.html>. [8]
- Lieberman, S., N. York and B. Lipman (2019), "An update on online lender applicants from the small business credit survey". [5]
- Lipman, B. and A. Wiersch (2015), "Alternative Lending through the Eyes of "Mom-and-Pop" Small-Business Owners", *Special Reports*, <https://www.clevelandfed.org/newsroom-and-events/publications/special-reports/sr-20150825-alternative-lending-through-the-eyes-of-mom-and-pop-small-business-owners>. [5]
- McKinsey (2020), *Managing and Monitoring Credit risk after COVID-19*, <https://www.mckinsey.com/business-functions/risk/our-insights/managing-and-monitoring-credit-risk-after-the-covid-19-pandemic> (accessed on 2 September 2020). [3]
- McKinsey (2018), *How digital lending is remaking credit, including digital mortgages* | McKinsey, <https://www.mckinsey.com/business-functions/risk/our-insights/the-lending-revolution-how-digital-credit-is-changing-banks-from-the-inside>. [2]
- McKinsey (2018), *What today's shake-out in China's peer-to-peer lending market means for fintech* | McKinsey & Company, <https://www.mckinsey.com/cn/our-insights/perspectives-on-china-blog/what-todays-shakeout-in-chinas-peer-to-peer-lending-market-means-for-fintech>. [1]
- Moody's (2019), *Yves Mersch of ECB Examines Impact of Fintech on Credit Business*, <https://www.moodyanalytics.com/regulatory-news/feb-26-19-yves-mersch-of-ecb-examines-potential-impact-of-fintech-on-credit-business>. [4]
- Nassr, I. and G. Wehinger (2015), "Unlocking SME finance through market-based debt: Securitisation, private placements and bonds", *OECD Journal: Financial Market Trends*, Vol. 2014, p. 2, <https://doi.org/10.1787/fmt-2014-5js3bg1g53ln>. [3]
- National Audit Office (2021), *The Bounce Back Loan Scheme: an update*, National Audit Office. [7]
- Nikkei Asia (2021), *Fintechs and traditional lenders do battle across Southeast Asia* - Nikkei Asia, <https://asia.nikkei.com/Business/Business-Spotlight/Fintechs-and-traditional-lenders-do-battle-across-Southeast-Asia>. [2]
- OCC (2020), "Proposed Rules - partnerships between a bank and a third party, such as a marketplace lender", *Federal Registry*, <http://www.regulations.gov/>. [9]
- OECD (2021), *Artificial Intelligence, Machine Learning and Big Data in Finance Opportunities, Challenges and Implications for Policy Makers*, <https://www.oecd.org/finance/financial-markets/Artificial-intelligence-machine-learning-big-data-in-finance.pdf>. [2]
- OECD (2021), *COVID-19 Government Financing Support Programmes for Businesses*, <https://www.oecd.org/finance/COVID-19-Government-Financing-Support-Programmes-for-Businesses-2021-Update.pdf>. [9]
- OECD (2018), *Regulatory Framework for the loan-based crowdfunding platforms*, OECD Economics [4]

- Department, <http://www.oecd.org/eco/workingpapers>.
- PWC (2020), *Banks' approach to COVID-19: Being data-driven and being human*, <https://www.pwc.com/ph/en/business-unusual/banks-approach-to-covid-19.html>. [3
7]
- Rau, P. (2020), "Law, Trust, and the Development of Crowdfunding", *SSRN Electronic Journal*, University of Cambridge, <https://doi.org/10.2139/SSRN.2989056>. [5
4]
- Reuters (2019), *China gives P2P lenders two years to exit industry: document* | Reuters, <https://www.reuters.com/article/us-china-p2p-idUSKBN1Y2039>. [1
5]
- Santos, J. (2014), "Evidence from the Bond Market on Banks' Too-Big-To-Fail Subsidy", *Economic Policy Review*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2419682. [7
7]
- SBA (2021), *Paycheck Protection Program (PPP) Report Summary of 2021 PPP Approved Lending Loans Approved Net Dollars Lender Count*, US Small Business Administration, https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf. [6
8]
- SBA (2020), "Fintech Companies Participating in Paycheck Protection Program", <https://squareup.com/us/en//sba-ppp-loans>. [6
6]
- SBA (2020), *Paycheck Protection Program*, <https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program>. [6
5]
- SBA (2020), *Paycheck Protection Program (PPP): Approvals through 08/08/2020*, US Small Business Administration, https://www.sba.gov/sites/default/files/2021-09/PPP_Report%20-%202020-08-10-508.pdf. [6
7]
- SBA (2020), *Paycheck Protection Program: Lender forms and guidance*, <https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program>. [6
3]
- Select Subcommittee (2021), *Select Subcommittee on the Coronavirus Crisis Launches Investigation into Role of FinTech Industry in PPP Fraud* | House Select Subcommittee on the Coronavirus Crisis, <https://coronavirus.house.gov/news/press-releases/select-subcommittee-launches-investigation-role-fintech-industry-ppp-fraud>. [8
3]
- St. Louis Fed (2021), *Banks See Surging Deposits, Tepid Loans during Pandemic*, St. Louis Fed, <https://www.stlouisfed.org/on-the-economy/2021/august/banks-navigate-surging-deposits-tepid-loan-activity>. [7
6]
- Swiss Bankers Association (2020), *The COVID-19 pandemic: six digital trends in the financial centre*, <https://www.swissbanking.org/en/services/blog/the-covid-19-pandemic-six-digital-trends-in-the-financial-centre>. [6
0]
- Tang, H. (2019), "Peer-to-peer lenders versus banks: substitutes or complements?", *The Review of Financial Studies*, Vol. 32/5, pp. 1900-1938. [4
8]
- The Wall Street Journal (2020), "Big Banks Favor Certain Customers in \$350 Billion Small-Business Loan Program", <https://www.wsj.com/articles/big-banks-favor-certain-customers-in-350-billion-small-business-loan-program-11586174401>. [8
5]
- US Treasury (2020), *Paycheck Protection Program Loans, Frequently Asked Questions*, <https://home.treasury.gov/system/files/136/Paycheck-Protection-Program-Frequently-Asked-> [6
4]

[Questions.pdf](#).

- US Treasury (2018), *A Financial System That Creates Economic Opportunities Nonbank Financials, Fintech, and Innovation Report to President Donald J. Trump Executive Order 13772 on Core Principles for Regulating the United States Financial System Counselor to the Secretary*. [3
4]
- US Treasury (2016), *Opportunities and Challenges in Online Marketplace Lending* May 10, 2016. [2
3]
- White & Case (2017), *Algorithms and bias: What lenders need to know*, [3
3]
<https://www.jdsupra.com/legalnews/algorithms-and-bias-what-lenders-need-67308/>.
- World Bank (2022), *Global Fintech-enabling regulations database*, [5
3]
<https://www.worldbank.org/en/topic/fintech/brief/global-fintech-enabling-regulations-database>.
- World Bank (2020), *The World Bank Group COVID-19 Policy Responses: Why Credit Reporting Matters in the Stabilization and Recovery Phases?*, [3
9]
<https://openknowledge.worldbank.org/bitstream/handle/10986/33814/COVID-19-Emergency-Policy-Responses-Why-Credit-Reporting-Matters-in-the-Stabilization-and-Recovery-Phases.txt?sequence=2&isAllowed=y>.
- World Bank and CCAF (2019), *Regulating Alternative Finance: Results from a Global Regulator Survey*, World Bank and CCAF, <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/regulating-alternative-finance/>. [5
5]
- Yale (2022), *COVID-19 Financial Response Tracker*, Yale, School of Management, Program on Financial Stability, <https://som.yale.edu/centers/program-on-financial-stability/covid-19-crisis>. [7
8]
- Zipser, D. et al. (2020), "Understanding Chinese Consumers: Growth Engine of the World Special edition", *McKinsey*. [1
1]

Notes

¹ Banks can be described as deposit-issuers, and deposit claims, sitting at the liability side of banks, differ from other claims issued by other financial intermediaries as these are generally accepted as a mean of payment.

² Some MPLs acquire a banking license, converging towards a (challenger) bank business model.

³ It should be noted that while CCAF seems to be the most comprehensive source of data around marketplace and P2P lending, it is collected on a voluntary basis and therefore does not represent a complete picture of all covered markets.

⁴ See endnote 3.

⁵ In some parts of the discussion, such as the participation of platforms in the distribution of COVID-19 government support loans and the credit rating discussion, other online FinTech platforms active in intermediation are also included in the discussion (e.g. online invoice trading or asset finance platforms).

⁶ Specifically referring to the mortgage part of the lending market.

⁷ For more on data-related issues around SME financing see (Nassr and Wehinger, 2015^[3]).

⁸ In the US, banks are reported to use pooled corporate treasury data to track cash-flow performance by region and sector (McKinsey, 2020^[38]).

⁹ Nevertheless, they would still need to be authorised, at least as non-bank financial intermediaries.

¹⁰ In some markets, MPLs are subject to capital requirements (FSB, 2017^[2]) or to risk retention requirements.

¹¹ Referring to the simplest form of MPLs, or Peer-to-Peer Lending, which was the norm only at the initial stages of the development of this market.

¹² Includes asset finance providers, invoice finance providers and any other specialty finance providers participating in such programmes, depending on the jurisdiction.

¹³ For more detailed information on COVID-19 government support schemes, see (OECD, 2021^[98]).

¹⁴ It should be noted that in this research FinTechs included FDIC-insured online banks (e.g. Cross River).

¹⁵ It has to be noted that even in cases where FinTechs were not allowed to participate, they acted as agents for approved lenders, making use of their competitive edge in such cooperation with traditional banks.

¹⁶ According to the proposal, a bank is the 'true lender' if, as of the date of origination, the bank is named as the lender in the loan agreement or funds the loan (OCC, 2020^[96]).

¹⁷ It should be noted that this analysis does not include platforms used only by (and for) 'crowdfunding service providers' within the scope of Regulation (EU) 2020/1503;10 or platforms used only by (and for) P2P lending.

