

## The Digital Economy and the Future of Work and Education

G20 Japan 

# Digital Innovation Can Improve Financial Access for SMEs

Miriam Koreen (OECD)

Naoko Nemoto (Asian Development Bank Institute (ADBI))

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**This Policy Brief summarizes the small and medium-sized enterprise (SME) credit and equity gap and proposes ways that emerging technologies and innovative business models can improve SMEs' access to financial services and boost long-term economic growth. The measures described are intended to: (1) improve traditional lending using new technology and big data; (2) broaden funding tools, including capital market finance; (3) enhance the consultation function of financial institutions; and (4) design an appropriate regulatory environment for fintech.**

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## Challenge

Small and medium-sized enterprises (SMEs) go through several phases in their life cycles—start-up, growth, maturity, and renewal/rebirth or decline—and their financing needs vary depending on those phases. This Policy Brief primarily focuses on the “growth” and “renewal” phases, although our proposal to utilize new fintech technology is also useful for “start-up” firms.

### Access to bank lending is more challenging for SMEs than for large businesses

> SMEs are key contributors to economic activity as an important source of employment, growth, and innovation. Despite their essential role, SMEs receive a disproportionately small share of credit from the financial system, a trend that persists across developed and developing countries (ADBOECD 2014). There appear to be structural barriers that impede bank lending to SMEs, including information asymmetries, high transaction costs, the possible decline of traditional-relationship lending, and the insufficient financial capabilities of SME owners and entrepreneurs.

1. Financial institutions may find loans to SMEs less profitable, even if they charge higher interest rates to account for greater credit risk (1). With tightened capital and liquidity regulations after the global financial crisis, banks have the incentive to scrutinize and charge higher interest rates for loans to SMEs (Griggs 2012; Bucă and Vermeulen 2017).
2. Lack of public information and the sometimes-inadequate quality and lower frequency of financial statements compared to large enterprises makes it difficult for banks to assess and monitor the credit risks posed by SMEs (Yoshino and Yamagami 2017).

SMEs are over-reliant on straight debt

1. Bank credit is not always the most appropriate form of financing for new, innovative, and high-growth SMEs. Alternative financing tools, such as equity finance, corporate bonds issuance, and mezzanine finance are generally underutilized by SMEs. In particular, alternative finance is needed for companies seeking to transform their activities, such as a change in ownership or expansion into new markets.

2. This problem is compounded for start-up firms with limited credit histories and untested business models.

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### **Fintech solutions could help fill the credit and equity gap, but many issues remain**

> Despite the potential social and economic benefits of fintech in increasing access to financial services and financial inclusion for the underserved and allowing easier and cheaper cross-border payments and transfers (e.g., remittances), the use of these innovative options remains limited compared to traditional debt finance for several reasons.

1. These instruments are likely accessible only to SMEs with financial and digital literacy and access to reliable information and infrastructure.

2. Alternative finance (such as equity crowdfunding and P2P lending) carries inherent risks. Investors risk losing invested funds. Fraud risk, information leaks, and cyberattacks are additional concerns (Federal Reserve Bank of New York 2017). Most of these challenges extend to blockchain-based financing (e.g., Initial Coin Offerings and syndicated lending). The design of regulatory regimes is critical, but incomplete and inconsistent.

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## Proposal

### **Improve Traditional Lending using New Technology and Big Data**

> Emerging financial technology and innovations in traditional business models can take advantage of the rapidly digitizing economy to expand SMEs' access to credit.

#### **1. Process automation**

The traditional lending process may benefit from the use of online applications and the automation of underwriting, due diligence, loan servicing, and regulatory compliance tasks. Financial institutions will enhance their productivity and lower their operating costs. As for borrowers, the use of technology (such as cloud-based accounting, digital payments, and the automation of invoicing and settlement processes) could enable them to substantiate their business activities and become eligible for finance. Recent research shows that blockchains can significantly improve the efficiency of trade finance, which involves extensive paperwork across multiple ledgers (Creehan 2018).

#### **2. Encourage innovative use of technology and data sharing**

Data on SMEs could be integrated, generalized, and shared among financial institutions and other players, such as fintech firms. The accuracy of credit risk models tends to increase as the data pool becomes larger. In Japan, the Japan Risk Data Bank (RDB) and Credit Risk Database (CRD) (2) cover most financial institutions, including credit unions. In France, the FIBEN (Fichier bancaire des entreprises) database collects a relatively comprehensive set of data on SMEs (Boschmans and Pissareva 2018). Such data has been utilized for loan reviews, interest rate setting, and portfolio management. They have also contributed to the advancement of credit risk analyses by banks. In emerging countries, credit scoring methods and the development of common databases are still in the developmental stage (ADB 2014).

Several innovative banks and nonbanks are leveraging alternative data (including data on bank account information, e-commerce transactions, invoice data, and customer surveys) generated by the growing social and economic activities taking place online to support credit scoring. According to research by the Asian Development Bank Institute, bank account information (such as information on deposits and cash flows) are not fully accounted for in traditional scoring systems. If such alternative data is utilized, banks can enhance their credit risk scoring accuracy and reduce their credit costs and loan review time and costs, making SME financing smoother and more efficient (Nemoto et al. 2018).

In addition, banks could take more account of the value of intangible assets such as patents, software, and contractual agreements when making lending decisions. Even though these assets make up an increasing share of SMEs' overall assets, they are often of limited relevance when securing credit (Brassell and Boschmans 2019). The Chinese government sees clear potential for the use of alternative data. Ant Financial Services Group, which is associated with Alibaba, has succeeded in providing loan services to SMEs promptly and efficiently, leveraging data on ecommerce and artificial intelligence.

### **3. Enhance credit guarantee programs**

The public credit guarantee scheme is a tool to reduce the supply-demand gap in SME finance. The clear majority of the Organization for Economic Cooperation and Development (OECD) countries have adopted public guarantee schemes, as have an increasing number of governments in emerging countries (OECD 2018a). On the other hand, credit guarantee systems may (3) be subject to moral hazard problems, keeping unviable enterprises in business and causing deadweight losses (Ono et al. 2014). To tackle these issues, the following points should be considered: (1) the business sustainability of SMEs; (2) proper risk sharing; and (3) credit infrastructure to enhance borrower performance (ADBOECD 2014; OECD 2018b).

#### **Broaden the Range of Financing**

##### **1. Form special investment funds for SMEs**

Many studies have indicated that funding diversification has had a positive impact on corporate performance (Guo et al. 2011). But for most SMEs, the use of equity finance is still quite limited (Department of Business Innovation and Skills of the UK 2012). This is attributable to the difficulties of SMEs in providing enough qualified information to investors (OECD 2018b). In addition, financial intermediaries (such as brokerage firms) have few incentives to support SMEs in tapping the capital market, considering the costs and returns. In light of these constraints, the G20/OECD High-level Principles on SME Financing, welcomed by G20 Leaders in 2015, call for a two-pronged policy approach to stimulate the development of a broad range of finance instruments and to strengthen SME access to traditional bank financing (G20/OECD 2015). Many countries have taken actions to enable SMEs to diversify sources and instruments to meet their financing needs (G20/OECD 2018). For example, the formation of special funds initiated by the public sector has contributed to filling the gap in equity needs in the United Kingdom (UK) and other countries. In Kenya, the government has set up the Kenya Micro, Small, and Medium Enterprise Competitiveness Project in collaboration with the World Bank, which has led to the diversification of SME funding (Hua 2013). The fund has deep knowledge on local investees and has provided advisory services coupled with financial investment to SMEs, which are a key success factor for the project.

##### **2. Improve SME access to capital markets**

Capital markets could contribute to mitigating the SME financing gap, especially for segments in the SME population for which bank credit is not particularly appropriate or may be difficult to obtain (Thompson et al. 2018). Cross-border transactions and listings on foreign exchanges should be considered, as SMEs would benefit from high liquidity and diversified investors. Some studies have indicated the adoption of network cooperation among major European exchanges are associated with higher market capitalization, lower transaction costs, and higher growth of companies (Hasan and Schmiedel 2004). Exchanges in Asia trail their global peers in terms of the presence of foreign firms (apart from Singapore). The Japan Exchange Group and other exchanges are working toward standardizing IPO guidelines and opening markets for high-growth emerging companies, which is a positive step for market integration.

#### **Enhance the Consultative Functions of Financial Institutions**

1. Alternative data can be an effective tool for financial institutions for analyzing the business and financial conditions of their customers and providing effective consulting services. Several innovative banks and nonbanks provide comprehensive services to SMEs for marketing, staff recruitment, and business restructuring. The consultation function of financial institutions could be further augmented by developing an effective community or ecosystem among public entities, universities, and the private sector (Acs et al. 2018).

2. Demographic change and the increasing needs for business transfer are areas of concern. In Japan, 2.5 million SME owners will be over 70 years of age between now and 2027. Around half of them do not have clear succession plans for their businesses. According to the Japan Ministry of Economy, Trade and Industry, this trend will result in 6.5 million or 9.7% fewer workers and \$200 billion in gross domestic product. In response, financial institutions and local governments are taking proactive steps to support business succession (for further information and proposals, please refer to the Policy Brief, "Business Transfer as an Engine for SME Growth").

#### **Design an Appropriate Regulatory Environment for Fintech**

The design of regulatory regimes is critical. The challenges for regulators are to protect against systemic risks, ensure compliance with

The design of regulatory regimes is critical. The challenges for regulators are to protect against systemic risks, ensure compliance with regulations on personal data, and maintain a fair, safe, and competitive market.

Policymakers should remember the following points to capitalize on the benefits to users and investors.

1. Financial literacy and education for borrowers and investors
2. The detection of fraud, data leaks, and cyber criminality
3. Fair competition and transparency
4. Financial stability concerns
5. Enabling a legal framework to accommodate technological changes (e.g., contracts, data ownership, and digital payments)

The UK is an effective model for the regulation of alternative finance, including crowd finance and P2P lending. Authorities in the UK provide feedback to companies on the regulatory implications of their plans and run a regulatory sandbox to allow selected firms to test new models on the market. Regulatory action to date suggests that it has helped to build an understanding of the issues and responsiveness to evolving industry dynamics (Nemoto et al. 2019).

The Payment Service Directive Revised (PSD2, issued in the European Union in 2016 and became effective in 2018) is a new regulation affecting most banks in European markets. One of the main consequences of PSD2 is the appearance of Account Information Service Providers.

This will allow individual account owners holding accounts in several banks to share their information with an account aggregator. It remains to be seen how this will affect the business models of banks and nonbanks and the quality of services (4) (Neyer 2017).

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1 Intensifying competition from other industries, including fintech firms, and pressure on profitability have led to reductions in staff and branches for many banks. According to the European Banking Federation Report (2018), the number of domestic banks branches in Europe fell by 21%, and the number of bank employees declined by 12% during 2009–2016. Japan's second largest bank has announced that they will slim down by one-fourth of their total employees and decrease the number of branches by 20% by 2027.

2 The Japan RDB anonymously covers credit information on 910, 000 companies, and the CRD covers 2.4 million companies. In addition to financial data, data on transactions through companies' bank account information is collected and constantly updated. It is still rare even in developed markets for most private banks, including credit unions, to have a shared database on SMEs.

3 This model has been pursued by Amazon and other companies in Western countries.

4 The sandbox approach has been adopted by many other jurisdictions (BIS 2017).

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## Existing Initiatives & Analysis