



PART 2
Application and
Action

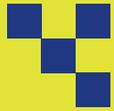
People do not invest in technologies; they invest in solutions to their problems. Understanding the technologies is an important first step, but understanding how we can use those technologies to support development is how we complete the journey.

Having explored six of the key technologies that shape fintech in Part I, this Toolkit looks in Part 2 at how countries can use those technologies to achieve development goals.

- Chapter 7 explores how disruptive technologies such as artificial intelligence (AI) and/or digital financial

services can help to promote development outcomes.

- Chapter 8 highlights the nuanced considerations to which countries must pay attention depending on their size and/or region.
- Chapter 9 outlines an action framework for governments seeking to create an enabling environment for fintech and fintech applications.
- Chapter 10 highlights case studies from four countries of fintech initiatives successfully applied to tackle development challenges.



Chapter 7

Policy Interventions and Outcomes



Policy Interventions and Outcomes

Key points

- **Financial inclusion** is a result of and also can result in:
 - stronger consumer protection;
 - lowered costs of complying with anti-money-laundering (AML) and know your customer (KYC) rules;
 - increased levels of financial and data literacy;
 - inclusion of those with historically marginalised identities; and
 - lower rates of identity theft.
- **Improved cross-border transactions and trade** both result from and result in:
 - lowered costs of remittances;
 - lowered costs of AML/KYC compliance; and
 - more robust cybersecurity.
- **Improved economic growth** will not only result from and in quicker transactions, but also facilitate the financial support of small and medium-sized enterprises (SMEs).

7.1 Introduction

In taking steps to create an enabling environment for fintech, governments can take strides towards commonly key policy interventions and outcomes.

This chapter will look at how disruptive technologies such as artificial intelligence (AI) and/or digital financial services (DFS) can help to promote three specific policy areas as examples. In this way, this Toolkit aims to equip countries with the principles that will allow them to use fintech to tackle a broader range of development goals.

In this chapter, we therefore look at **financial inclusion** and its capacity to result in:

- stronger consumer protection;
- lowered costs of complying with anti-money-laundering (AML) and know your customer (KYC) rules;
- increased levels of financial and data literacy;
- inclusion of those with historically marginalised identities; and
- lower rates of identity theft.

We look at improvements that can be delivered in **cross-border transactions and trade**, resulting in:

- lowered costs of remittances;
- lowered costs of AML/KYC compliance; and
- more robust cybersecurity.

Finally, we consider the **economic growth** that can result from and in quicker transactions, while also facilitating the financial support of small and medium-sized enterprises (SMEs).

7.2 Financial Inclusion

Financial inclusion¹ is one of the key tools with which governments can reduce poverty and bolster prosperity.² Despite this fact, approximately 1.7 billion adults globally remain unbanked—that is, without access to an account at any financial institution or to mobile banking services. In developing economies, in particular, few people and small businesses fully participate in the formal financial system. Instead, they transact exclusively in cash, have no safe way of saving or investing money, and cannot access credit other than through informal lenders and personal networks. Even those with financial accounts may have only limited product choice and face high fees. As a result, a significant amount of wealth is stored outside the financial system, and credit is scarce and expensive. This prevents individuals from engaging in economic activities that could transform their lives, which impacts negatively on economic growth.³

The rapid digitalisation of services, along with the rapid spread of digital technologies, offers institutions the opportunity to provide financial services at much lower cost, which has the potential to result in financial inclusion and large productivity gains across the economy. In 2016, consulting firm McKinsey & Co. positioned fintech as one of the key tools with which we can drive local economic

development and reduce poverty⁴—one of the United Nations Sustainable Development Goals (SDGs).⁵ Among other global voices, the World Bank, the G20, the US Agency for International Development (USAID), the Bill & Melinda Gates Foundation, Citibank and MasterCard have all equally advocated for the potential of fintech to facilitate financial inclusion.⁶

7.2.1 Key Policy Interventions

Research findings confirm that growing access to financial instruments has a positive impact on self-employment, business activities and household consumption, among other things.⁷

There are several successful examples of government-level policies and programmes established to increase financial inclusion. In 2007, the M-Pesa programme—a phone-based money transfer programme—launched in Kenya (see Case Study 10.2). In 2006, Kenyan stakeholders had launched FinAccess: a national household survey programme dedicated to improving financial access in the country, which has been updated several times since then. The initiatives have contributed to a significant rise from 26.3 per cent to 83 per cent in formal financial inclusion,⁸ and by 2019, 24.5 million Kenyans were using M-Pesa.⁹

Another example is found in India, where the Government of India and the Reserve Bank of India have positioned the National Mission for Financial Inclusion (Pradhan Mantri Jan Dhan Yojana, or PMJDY) as one of their most important objectives. Measures have included:

- all banks opening basic saving bank deposit (BSBD) accounts with minimum common facilities, such as no minimum balance, the ability to deposit and withdraw cash at bank branches and

by card through an automatic teller machine (ATM), and the ability to receive or send money through electronic payment channels;

- relaxed and simplified know your customer (KYC) rules to make opening bank accounts easier for individuals whom traditional identity requirements might otherwise exclude (see Chapter 4 on digital identity); and
- a simplified branch authorisation policy, to address the uneven spread of bank branches across the country, and a compulsory requirement to open branches in unbanked villages.

When the programme launched in India, financial inclusion was at 53 per cent, but this figure has since soared to 80 per cent.¹⁰

Ironically, those developing economies in which large population segments are unserved or underserved by traditional financial services represent opportunity for fintech such as blockchain. Shallow banking infrastructure in developing economies lessens the 'technology debt' involved when legacy infrastructure has to be replaced, and it can mean that there is less social and institutional resistance to the new technology. In addition, while blockchain may be a disruptive technology in established markets, regulators and providers in emerging financial services markets are less likely to resist blockchain-based new entrants, who will not significantly disrupt existing market conditions.¹¹

In 2015, Accenture said that, with a scalable proof of concept for a viable mobile banking business model, blockchain could advance financial inclusion by serving previously unprofitable customers and SMEs to generate US\$380 billion in additional revenues.¹² Digital

finance has the potential to reach more than 1.6 billion new retail customers in developing economies and to increase the volume of loans extended to individuals and businesses by US\$2.1 trillion.¹³

Because digital payments allow people to transact in small amounts, known as micropayments, they create new opportunities based on pay-per-service, or pay-as-you-go, models. Businesses such as low-cost private school Bridge International Academies in Kenya, Uganda, Nigeria and India rely on technology enabling them to receive school fees and pay teacher salaries digitally as part of their cost-efficient business models.¹⁴ Digital payments also facilitate new business models such as e-commerce and the gig economy, with new ride-sharing and employment-matching service providers among them.¹⁵

Atlas is a start-up with teams in Ghana and Senegal that provides a mobile peer-to-peer (P2P) application, Access Network, aiming to give to communities in the developing world access to savings and credit through a decentralised solution that lets the unbanked 'bank with each other'.¹⁶ The app creates a network of people from local communities, which cultivates trust while building financial inclusion. In addition, the Atlas platform offers access to capital through savings accounts and loans. The blockchain underpinning the platform evidences proof of origin for the money and all transactions, ensuring that users know exactly where their money is and can see the latest transactions on their accounts.¹⁷

Indeed, lending more broadly is an area in which blockchain applications can open up opportunity by allowing lenders to verify a person's financial or personal history digitally and to assess whether they are looking to

finance a viable business or other prospect, eliminating much of the traditional process of securing credit.¹⁸

The merits and the scale of the opportunity that mobile finance represents are clear. Research by McKinsey & Co. indicates that the success of mobile money providers in emerging markets is predicated on preparation for the long term, adopting new methods of collaborative working—including with regulators—and investing to support scale until the benefits of network effects begin to show.¹⁹ Kenya's Capital Markets Authority has also proposed that it joins with the Central Bank of Kenya (CBK) to create a special unit that will monitor and facilitate a path for the adoption of digital currencies.²⁰

In 2018, the Asia-Pacific Economic Cooperation (APEC) recommended a series of policy initiatives, aiming to promote financial inclusion. Its first recommendation was that central banks should prioritise structural and regulatory reforms towards:

- Aiding the poor to accumulate productive assets and build greater long-term wealth and financial security.
- Enabling the poor to participate in the formal economy as represented by employment, wage growth, health insurance and pension schemes.
- Promoting investment in the NMSE [nano and micro sector enterprise] sector and providing pathways for informal enterprises to become formalised.
- Increasing the ability of women and other vulnerable populations to participate in economic activity in safe and effective ways.²¹



Digital payments allow people to transact in small amounts, known as micropayments, which create new opportunities based on pay-per-service or pay-as-you-go models.

The second recommendation was that reforms should include developing and supplying a broader range of products and services, towards:

- Promoting financial education, and its role in developing financial health, among the underserved to increase pull from the demand side and creating incentives, or a more enabling regulatory environment, to encourage greater private sector investment into the supply of a broader range of products.
- Targeting the ability for financial institutions to develop and test innovative solutions involving new technology, which could assist them to diversify their product offerings.
- Regulators need to consider methods and policies, which can be introduced to help encourage the creation and use

of savings products that allow people to build assets and resilience. The lack of disposable incomes makes it difficult for the poor to absorb shocks, which often makes them more reliant on credit and susceptible to over indebtedness. Products which mix long-term saving with the ability to access in the event of emergencies can be particularly effective in helping the poor develop assets.

- Remittances (both domestic and international) have the potential to be a major driver of inclusive growth. By combining remittance services with other complementary services such as savings, insurance or payments, migrants and their families can increase their opportunities to accumulate assets and build wealth. Governments need to understand this potential and ensure that regulatory frameworks are conducive towards enabling the underserved to access a broader range of products and services through remittance channels.²²

Setting out these recommendations in 2019, the Foundation for Development Cooperation (FDC) goes on to note that gender issues are not often considered in national financial inclusion strategies. It recommends as a third point that a 'gender lens' should be applied across all components of financial inclusion strategies. This might involve:

- Including plans to collect and analyse sex-disaggregated data to inform and improve development policies.
- Ensuring that development strategies are truly inclusive of women by engaging with them as part of the design stage and continually

throughout implementation—it is important that this engagement is not added on later during implementation (i.e. as an afterthought) but is treated as a core component of the overall strategy from the design phase.

- Identifying and prioritising reforms, which reduce inequalities and support the ability of women to actively and meaningfully engage in economic activity. This should include considerations for technology and infrastructure, which has the potential to enhance women's access to essential services such as financial services, health care or education.²³

Governments can promote the rights and entitlements of women in this context by:

- Reviewing legal frameworks, infrastructure and economic structures to identify factors which may be creating inequalities and limiting women's access to economic opportunity. ...
- Identifying cultural elements which deepen inequalities and work[ing] with the private and civil society sectors to promote attitude changes through media campaigns and community-based interventions. Working with the private sector to leverage the influence of businesses on consumers is particularly important.
- Promoting financial literacy and education to increase levels of financial health among women and enhance their economic empowerment.²⁴

The FDC introduces into discussion the idea of the regulatory sandbox: a

regulator-controlled environment in which fintech and other innovative start-ups can test their ideas under market conditions. Regulatory sandboxes are an effective way in which governments can keep pace with innovation and ensure that their regulatory frameworks are effective, while limiting their risk exposure.

By applying the concept to cross-border issues such as trade or remittances, multi-economy regulatory sandboxes can be an effective way in which governments can co-operate on technology solutions. One government can also potentially leverage another's infrastructure to help to focus development of its own.

In its seventh recommendation, the FDC sets out some examples of areas in which governments could focus efforts to realise the benefits of technology for inclusive development, including:

- Developing and testing digital finance, or Fintech, solutions which enable the underserved to access to a broader range of digitally enabled products/ services (i.e. insurance, pensions, savings, remittances, payments, etc). The creation of regulatory sandboxes is an important method of testing and developing such innovations with the involvement of a broad range of stakeholders.
- Social transfers represent one of the most important opportunities for digital financial services, including payments and ID systems, to directly impact the lives of the poor. In many cases, social transfers are the only way to reach the poorest of the poor (lower 30%) and provide them with access to formal financial systems. By digitising social transfer accounts governments can

create an effective entry point for the poorest to gain access to other beneficial digital financial services.

- Regulation which allows for the creation of digital identification systems that are secure and reliable can have a significant impact on the lives of the underserved. ...²⁵

Focusing next on the informal economy, the FDC notes that governments often respond to the issue as being about social welfare rather than economic opportunity. Yet significantly, more people are employed within the informal economy than the formal economy; by officially recognising it—with initiatives that address the needs of stakeholders such as NMSEs—governments can realise those opportunities.

This will involve formulating policy frameworks that address the critical challenges facing such stakeholders, including:

- Lack of credit history or formal identification, which limits access to formal financial services—A potential solution may include the use of unstructured data to make credit decisions.
- Lack of customised financial products and services which meet the unique needs of the informal sector—Attempts to serve the NMSE markets often incorrectly assume that products and services designed for formal enterprises will also address the needs of informal enterprises. Products and services designed for the informal economy also need to have a particular focus on women who make up the majority of nano and micro entrepreneurs.

- The need for access to non-financial services such as micro-medical insurance, school fee savings products, financial literacy or vocational training—Access to finance should be complimented [sic] with access to appropriate non-financial services to help translate financial inclusion into economic opportunity.
- The need for more diverse financing resources for smallholders— Examples may include specialised community-owned finance companies or co-operatives which can provide financing services to those unable to access credit from commercial banks.²⁶

Finally, we look here at the ninth recommendation, which advocates for policies that facilitate cross-border trade. For example, NMSEs might be allowed to settle cross-border payments in local currency, as is the case in Thailand, thereby dismantling a major barrier for many NMSEs across the region. By relaxing regulations, governments can increase the opportunities for these enterprises.²⁷

7.2.2 Key Policy Outcomes

Key policy outcomes for Commonwealth governments include:

- stronger consumer protection;
- lowered costs of complying with AML/ KYC rules;
- increased levels of financial and data literacy;
- inclusion of those with historically marginalised identities; and
- lower rates of identity theft.

Stronger Consumer Protection

Consumer protection remains front and centre when looking at fintech. On the one hand, AI audit tools can help a regulator to determine that a particular institution's lending practices are legally compliant; on the other hand, loan decision engines driven by machine learning might begin to exclude in practice the very disadvantaged individuals whom government is seeking to include in theory.

Regulatory perimeter is another issue that arises in relation to fintech and consumer protection. Some digital financial services are delivered by providers or channels that may fall beyond the reach of the conventional regulator, for example, a mobile communications company or an app on a smartphone. It is consequently essential, as new technologies and other innovations emerge to engage new customers, that governments regularly evaluate the scope and focus of their regulatory agencies.

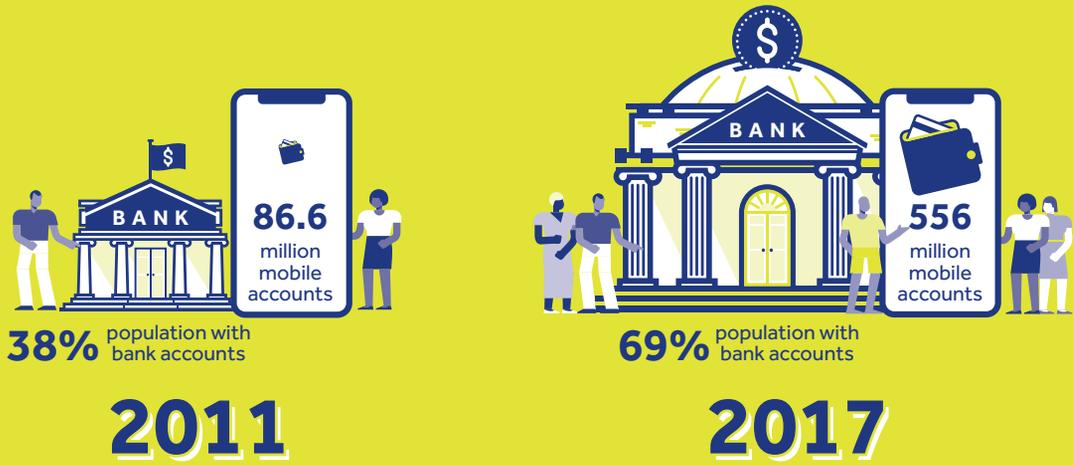
Lowered Costs of Complying with AML/ KYC Rules

Current AML systems tend to have an error rate of 85–95 per cent false positives (meaning that they incorrectly flag activity as suspicious), demanding manual reconciliation efforts on a massive scale. One 'top ten' global bank has dedicated more than 4,000 highly paid professionals to cleaning up false positives.²⁸

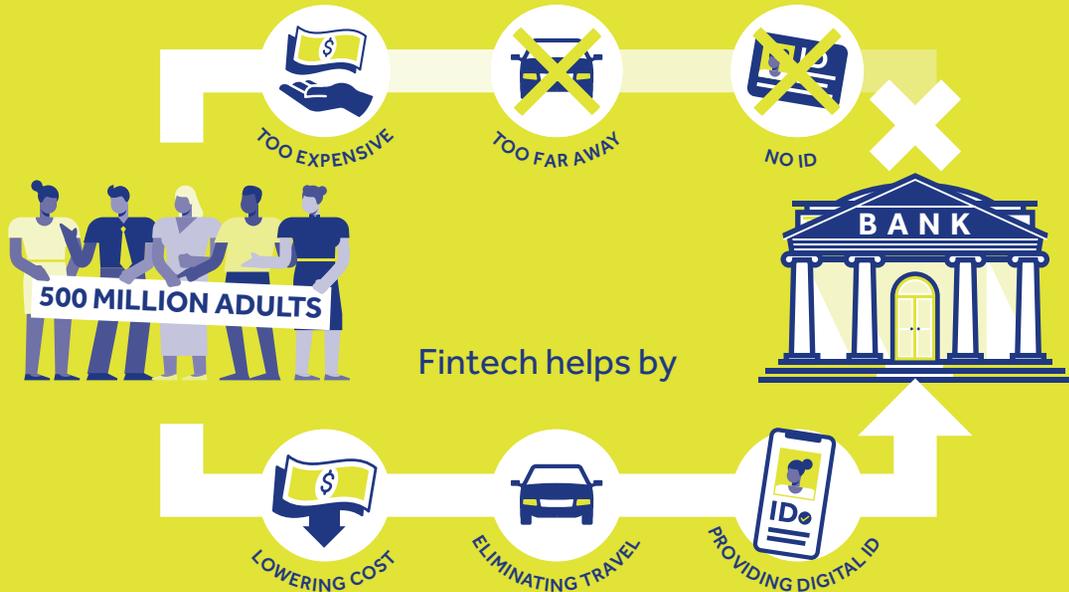
Complying with KYC rules can be equally labour-intensive. Policy-makers in regions in which the unbanked dominate should adopt strategies such as correspondent banking, savings groups, mobile branches and extending the reach of bank branches to the doorstep of the ordinary citizen. Another tool with which governments might ease the burden is a nationwide digital identity system such as Aadhaar in India (see Chapter 4).

FINTECH AND FINANCIAL INCLUSION

The number of people with bank accounts across the Commonwealth has increased.



However, 500 million Commonwealth adults still do not have bank accounts



Increased Levels of Financial and Data Literacy

As potential consumers begin to access new products and services, their financial literacy will begin to improve, and policy initiatives aiming to accelerate that improvement will see take-up escalate. Likewise, efforts to develop consumers’ data literacy can help them to recognise their rights and appreciate the benefits of government interventions such as data privacy regulations or open banking legislation.

Inclusion of Those with Historically Marginalised Identities/Lower Rates of Identity Theft

Among those rights is the right to a legal identity—a prerequisite to financial inclusion. Yet many millions of people worldwide—most commonly women and children—remain unable to document their identities and hence may be denied access to government services, financial services and health care.

Coupling blockchain with biometrics offers us an alternative. The independent computers that run on a blockchain’s decentralised network can update and maintain an ever-growing public ledger of transactions. They repeatedly reach a consensus on changes and thus are constantly vouching for the ledger’s integrity. Information on new transactions is built on top of all preceding records in a precise, time-stamped, interlinked manner, which means that anyone who tampers with past data will distort all later records and so expose their fraud. It is this permanence and incorruptibility, combined with the fact that it is completely open and uncontrolled, that makes blockchain so valuable to governments and so attractive to citizens, offering opportunity to transform identity digitally and to lower rates of identity theft.

By establishing a secure, reliable national identity system of unique identifiers and

empowering citizens to control their own records, governments can establish the foundations for many areas of digital innovation and fast-track financial inclusion goals. The underserved can set up bank accounts, start businesses and move money. Banks and microfinance providers can lend with more confidence and, in time, they may come to provide more sophisticated financial products such as insurance and investment services. The correlation of digital identity with digital tax systems will increase government revenue, while governments will be able to distribute aid and services more efficiently and more fairly.

7.3 Improved Cross-border Transactions and Trade

Disruptive technologies hold significant promise for improving cross-border transactions and trade, by reducing friction and unlocking trapped capital, resulting in:

- lowered costs of remittances;
- lowered costs of AML/KYC compliance; and
- more robust cybersecurity.

7.3.1 Lowered Costs of Remittances

Cross-border transactions and trade have been reliant on antiquated systems and interfaces. From both costs and cybersecurity standpoints, this has generated a number of risks and issues. Fintechs have aggressively pursued the remittance market, going after fees that, in developing economies, can reach 15 per cent, and exponential reductions in cost and improvements to speed and service. Digital financial services was instrumental in the first wave of such companies, while blockchain resulted in a second wave of remittance innovators.

Trade finance also enjoys significant time and cost advantages when better data systems and blockchain are implemented. Many of the world's trade corridors rely on manual, paper-based processes, from the transfer of ship manifests and bills of lading from ship captain to port office, to the management of letters of credit for goods in transit on a container ship. This is doubly true of commodities: more than 60 per cent of the costs of commodities result from middle- and back-office functions (primarily paperwork); commodities giant Louis Dreyfus was able to use blockchain to decrease transaction time by 80 per cent.²⁹ Such systems can put more money into the hands of suppliers such as farmers faster, and AI-enabled analytics of demand forecasting and weather forecasting can better manage volatility and risk.

In these contexts, the regulator's challenge is in ensuring equitable access to data and analytics, such that smaller or newer entrants to a market are not disadvantaged, and embedding compliance into new systems, such that the risk of fraud and abuse is mitigated.

7.3.2 Lowered Costs of AML/KYC Compliance

In the realm of cross-border trade and transactions, AML/KYC is a significant pain point. If central banks can eliminate duplication of effort by encouraging federated identity registries within their jurisdictions, they may see a resulting reduction in cost. Longer-term and more ambitious efforts would see the creation of supranational government-sponsored identity registries to help to lower AML compliance costs. Multinational bodies such as the African Union and Organisation for Economic Co-operation and Development (OECD) have already undertaken exploratory work in this area;

the Commonwealth itself would be a logical sponsor of such efforts.

7.3.3 More Robust Cybersecurity

Cybersecurity issues commonly arise in domain spaces within the financial ecosystem. Attacks on government systems have resulted in the theft of tens of millions of dollars, which have been rapidly transferred and hidden throughout the global financial services infrastructure.³⁰ Other issues connected with regulating for cybersecurity mean that it can be difficult to navigate correspondent banking or to penetrate cross-border remittances markets.

Among the tools that can help to reduce friction and costs are policy interventions aiming to:

- raise digital literacy and awareness of cyber crime among regulators and policy-makers;
- harmonise and elevate cybersecurity requirements across financial services and systems providers and central banks; and
- digitally identify known 'bad actors' and share that information across borders.

7.4 Improved Economic Growth

A proactive regulatory stance can facilitate economic growth within a given country or region. Growth fuelled by fintech can result from and in quicker transactions, while also facilitating the financial support of SMEs.

7.4.1 Transaction Speed and Cost

Transaction speed and cost are rate-limiting factors of economic development. High-speed transactions reduce financing costs and improve the turnover of money through an

“The inevitable consequence of all of this increased speed, of course, is increased risk.”

economic system, accelerating working capital cycles and offering opportunities for greater economic value added. Digital currencies and blockchain have the potential to speed up transactions exponentially—particularly for P2P payments—but they also may be more opaque than other kinds of digital transactions.

The inevitable consequence of all of this increased speed, of course, is increased risk. Fraud or cybercrime can now occur more quickly than law enforcement and other authorities can react, with tens or hundreds of millions of pounds moving in minutes—or even seconds—while investigations after the fact can take weeks, months or even years.

7.4.2 Financial Support for Small and Medium-sized Enterprises

For our purposes, we can segment SMEs as:

- sole proprietors;
- micro businesses (2–20 employees);
- small businesses (21–100 employees); and
- medium-sized businesses (101–1,000 employees).

These businesses are conventionally underserved by traditional financial

services. More than 95 per cent of the world’s small businesses are underbanked or unbanked—a figure that is troubling. It is all the more so when partnered with the fact that small businesses create four out of five new jobs—jobs badly needed in Africa and Asia, where 600 million new jobs need to be created in little more than a decade to stave off poverty and improve people’s lives.³¹

While SME finance is one of the most wide-reaching mechanisms with the most far-reaching potential to drive societal change and economic growth, there are barriers to its success. Credit underwriting and analysis of small businesses is challenging, for example, with few alternative data sources and poor-quality credit modelling. Among questions remaining are the following:

- How can we ensure equal access?
- How can we manage risk across a portfolio of small business loans?
- What securitisation opportunities exist to free up more liquidity to expand the loan book more rapidly while limiting risk exposure?
- How do we determine the ultimate beneficial owner (UBO) of any SME or in any given transaction and ensure that we comply with AML/KYC rules? (With even fewer reliable methodologies to ensure data quality, the identity challenges described elsewhere in this Toolkit are compounded in relation to SMEs.)

Central banks should therefore be encouraging further investment and experimentation, while regulators and policy-makers can address SME finance in

collaboration with private industry through a variety of mechanisms, from offering attractive rates through the discount window to sandboxing new lending models.

Endnotes

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