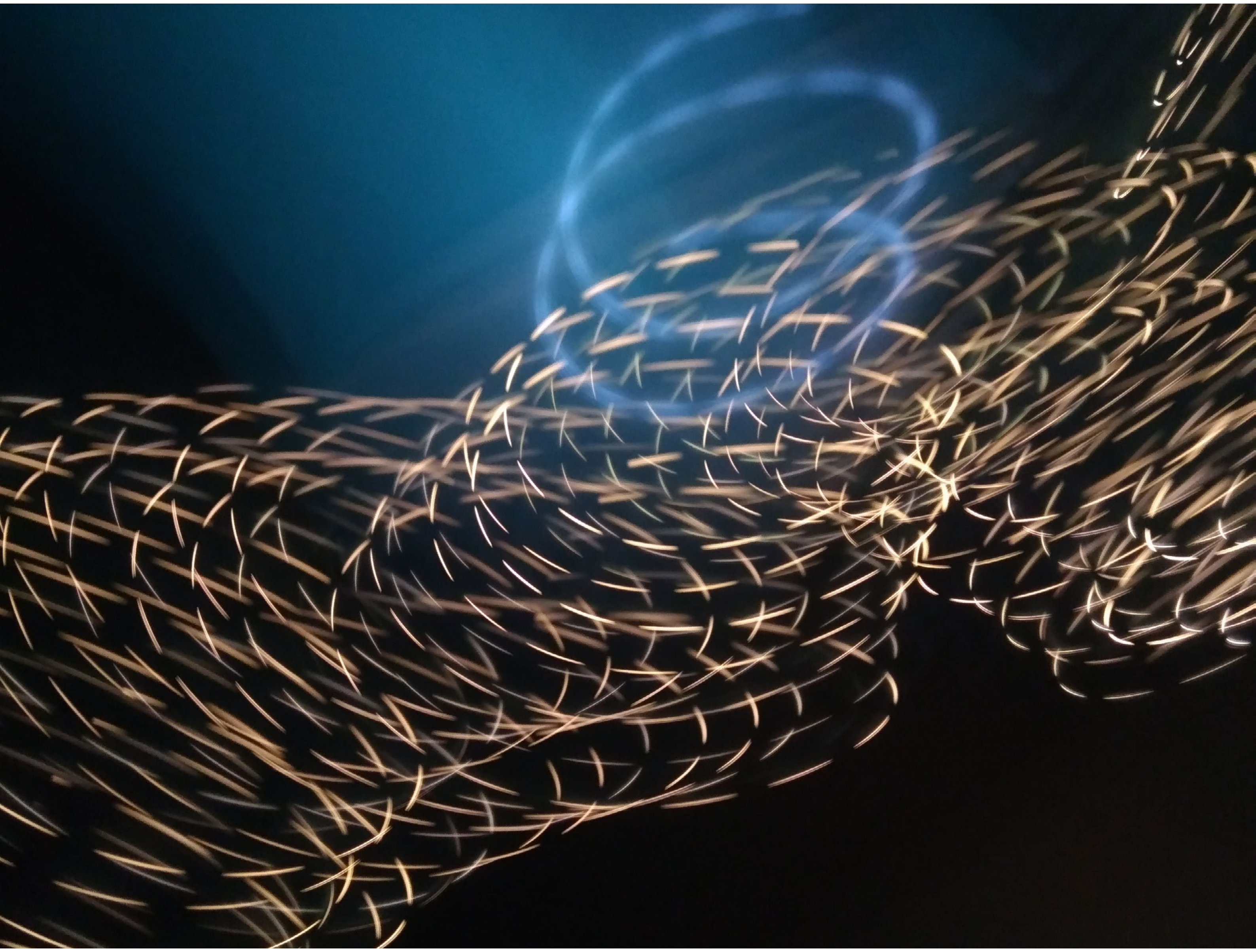
The Global Covid-19 FinTech Regulatory Rapid Assessment Study



with the support of

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The immense challenge of Covid-19 extends across all sectors of the global economy, and response to it has required flexibility and innovation by private sector firms and by public sector officials in countries around the world. This been particularly evident in the financial sector, where digital financial services (DFS) and fintech have expanded to facilitate continued transactions at arms-length. In many cases, financial regulators have taken steps to support the shift to digital channels, including waiving fees temporarily on digital payments, increasing limits for digital transfers and allowing for electronic know-your-customer (e-KYC) in lieu of in-person identity verification. Digital channels have been leveraged to quickly and efficiently deliver Covid-19-related relief payments to both individuals and firms. Digital saving, lending and investing products and services have also enabled consumers to manage their financial lives virtually, helping to reduce the need for in-person interaction.

The expansion of digital financial services started well before the pandemic. Its development has been well-documented by national financial regulators, the World Bank and other multilaterals and industry associations over the past decade. Global Findex data show that since 2011, approximately 1.2 billion people gained access to formal finance, with mobile money playing an important role in increasing financial inclusion. Research has shown the positive impact of digital finance, including new, transformative fintech business models. For example, in Malaysia, equity crowdfunding is providing opportunities for women and young entrepreneurs who now make up an estimated 70 percent of the Malaysian firms funded online. In Ghana, mobile money account ownership increased by nearly 200 percent in just 3 years (2014-2017) and reached more than a third of adults in rural areas. This was driven by the entry of mobile network operators (MNOs) into digital payments. In Ethiopia, alternative data are being collected and analyzed to support lending to women microentrepreneurs.

There are also risks that accompany the shift to digital finance and fintech, and which require vigilance on the part of providers, regulators and consumers. These risks may increase during an emergency when people are more vulnerable, and supervision and compliance systems are under greater stress. Cybersecurity and operational risks, consumer protection risks, including for data protection and privacy, and prudential and macro-financial risks must be addressed, just as is the case for traditional financial services. However, the speed and volume of digital financial transactions pose challenges for regulators and require new approaches, including expanded use of regtech and suptech, to effectively and efficiently supervise DFS providers. By reducing uncertainty, regulatory initiatives, such as innovation offices and regulatory sandboxes, can also help authorities to manage risks while supporting private sector innovation.

The research presented in this report was undertaken by the World Bank and the Cambridge Centre for Alternative Finance in order to better understand the experiences of financial regulators as they face the impact of COVID-19 and increased utilization of digital financial services and fintech. Regulators from more than 110 countries participated in this research, conducted between June and August 2020. They shared their insights into the challenges they faced and measures they have adopted to support digital finance during the COVID-19 emergency. The research shows that COVID-19 has in many cases accelerated policies and programs that support a shift to digital finance. Many regulators in jurisdictions that had gaps in the legal or regulatory framework for DFS have taken steps to support digital finance and close these gaps. We hope the findings herein will provide valuable and timely information for the regulators who generously gave of their time to make this report possible. We believe that it will help stakeholders in both the private and public sectors advance digital financial inclusion, speed recovery and support a more resilient economic system.

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The Covid-19 pandemic presents unprecedented challenges to the global economy, including the provision and regulation of digital financial services and FinTech activities in both advanced and emerging market and developing economies.

How have central banks and financial regulators been coping with remote working, limited access to IT infrastructure and data, the prioritisation of resources, and coordination domestically and internationally amid a global pandemic? Have they shifted their regulatory stance towards FinTech, adapted their regulatory approach, revamped their supervisory practices and/or devised bespoke regulatory measures to respond to both the opportunities and the risks? Will the increasingly digitised provision of financial services spur more innovation and digitalisation by regulatory authorities? What kind of support and assistance are regulatory authorities currently seeking to embrace the opportunities, and mitigate the challenges of Covid-19? These are some of the questions that the World Bank-CCAF research team set out to answer through this *Global Covid-19 FinTech Regulatory Rapid Assessment Study*.

The research team conducted semi-structured interviews and gathered offline responses from 118 financial regulatory authorities in 114 jurisdictions between June and August 2020, with 66% of respondents from emerging market and developing economies. It is thanks to these regulators' generous offering of time and support under extraordinary circumstances that such a globally representative study was possible.

This comprehensive and valuable dataset offers a unique view into the world of regulators as they observe and respond to the latest FinTech market developments, assess and manage risks, respond to challenges, and harness opportunities. The sector-wide and FinTech-specific regulatory measures that they have taken in light of Covid-19, and the most pressing internal challenges, are observable. It is possible to see the pace and scale of regulatory innovation initiatives, and how these have evolved since the onset of the pandemic. Many of the regulatory experiences and learnings shared by these authorities will be beneficial for their peers and the global regulatory community to reference, emulate and adapt as their own.

At the CCAF, we very much appreciate the opportunity to once again work with colleagues at the World Bank on the subject of FinTech and regulation through producing this study. We are particularly thankful for the leadership of Mahesh Uttamchandani and Margaret Miller at the World Bank Group's Finance, Competitiveness, and Innovation Global Practice. We are also grateful for the foundational funding provided by the UK Foreign, Commonwealth & Development Office (FCDO) through the Prosperity Fund Global Finance Programme to the Cambridge Alternative Finance Collaboration Network (CAFCN), which also supported this research.

Global challenges such as Covid-19 require global efforts and local solutions. We hope that the regulators of FinTech markets around the world will find this study immediately and practically useful in facilitating policy learning, formulating regulatory innovation initiatives and informing evidence-based regulation, both during the pandemic and beyond.

Bryan Zhang
Co-Founder and Executive Director
Cambridge Centre for Alternative Finance

Philip Rowan
Lead in Regulatory Innovation
Cambridge Centre for Alternative Finance

UKaid
from the British people

It is increasingly clear that the indirect economic impacts of Covid-19 are running ahead of the health impacts in many countries. The most fragile and poorest countries have limited economic tools to respond to the global economic downturn and offset the economic cost of containment measures.

Financial Technology (FinTech) has allowed developing countries to leapfrog the traditional model of brick and mortar bank branches and make substantial progress in increasing the reach of financial services to the most vulnerable people. FinTech can also improve the functioning, transparency and effectiveness of financial services. When regulated appropriately and informed by evidence, financial innovation can contribute to financial inclusion, poverty reduction, and help economies grow.

Covid-19 is accelerating the change in the way that people interact with financial services. It has led to unprecedented demand from developing countries to progress their transition to secure and inclusive digital finance. The use of physical cash is diminishing due to Covid-19 transmission risks, and social distancing measures continue to impact on access to traditional financial services. FinTech provides the opportunity to help the most vulnerable segments of the population to recover from the economic impacts, providing access to basic services like insurance, credit and pensions.

As innovation continues to move at pace, it is crucial that regulators, policy makers and industry work together to ensure it is done in a secure way that protects consumers and encourages competition. We must make the most of this unique window of opportunity to progress FinTech, building on the political will and growing customer demand for digital solutions.

The Global Covid-19 FinTech Regulatory Rapid Assessment Study provides an excellent evidence-based summary of how central banks and other financial regulators around the world are responding to the challenges Covid-19 has presented in regulating and supervising FinTech. It is fantastic to see that regulators are accelerating regulatory innovation initiatives to keep up with the pace of FinTech innovation. CCAF and the World Bank have set out a number of recommendations to take forward the opportunities FinTech offers and overcome its challenges. I trust that this report will inform and inspire countries around the world, help support their FinTech regulatory strategies and encourage greater collaboration across jurisdictions.

James Duddridge MP
The UK's Minister for Africa
Foreign, Commonwealth & Development Office (FCDO)

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The World Bank would like to thank again the many regulators who made this research possible with their generous commitment of time and willingness to share their experiences. Many World Bank regional financial experts supported outreach efforts to regulators, and we would like to recognize their support: A.K.M Abdullah, Ratchada Anantavrasilpa, Patricia Caraballo, Ana Fiorella Carvajal, Pierre-Laurent Chatain, Loic Chiquier, Thomas Haven, Dahlia Khalifa, Anoma Kulathunga, Jean Michel Lobet, Oscar Madeddu, Oliver Masetti, Cedric Mousset, Daniel Ortiz del Salto, Rafael Pardo, Bujana Perolli, Vidaovanh Phounvixay, Viet Quoc Trieu, Mehnaz Safavian, Marlon Ralston Rollins, Sabin Raj Shrestha, Craig Thorburn, and Thomas Vis. Oya Pinar Ardic Alper, Erik Feyen, Harish Natarajan and Matthew Saal provided excellent support to the team, providing advice on a number of project aspects and decisions and ensuring it was well aligned with the World Bank Group's comprehensive efforts on fintech. Caroline Freund, Alfonso Garcia Mora and Mahesh Uttamchandani provided valuable guidance and management support. Stefanie Ridenour and Elizabeth Price provided support on communications and dissemination strategies for the World Bank Group.

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Acronyms

AFI	Alliance for Financial Inclusion
AML/CFT	Anti-Money Laundering/ Combating the Financing of Terrorism
APAC	The Asia-Pacific
BCP	Business Continuity Planning
BIS	Bank for International Settlements
CDD	Customer Due Diligence
COVID-19	Coronavirus Disease 2019
DFS	Digital Financial Services
EMDE	Emerging Market and Developing Economies
FATF	Financial Action Task Force
G2P	Government to Person
GFIN	Global Financial Innovation Network
GPFI	Global Partnership for Financial Inclusion
IOSCO	International Organization of Securities Commissions
KYC	Know Your Customer; electronic-KYC (eKYC)
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
MNO	Mobile Network Operator
MSMEs	Micro, Small and Medium Enterprises
NLP	Natural Language Processing
OxCGRT	Oxford COVID-19 Government Response Tracker
QR	Quick Response
SSA	Sub-Saharan Africa
UNSGSA	UN Secretary-General's Special Advocate for Inclusive Finance for Development

Glossary

Digital financial services: Financial products and services, including payments, transfers, savings, credit, insurance, securities, financial planning and account statements that are delivered via digital/electronic technology, such as e-money, payment cards and a regular bank account. DFS is a broader concept than FinTech for the purposes of this study, since it incorporates both a broader set of financial activities, and a wider set of providers (incorporating traditional financial services providers).

Digital infrastructure: Digital infrastructure refers to the enabling digital structures, facilities, ecosystem and capabilities surrounding the provision of FinTech/DFS, but can be more widely applicable beyond financial services. For the purposes of this study, this might typically include infrastructure related to identity (e.g. digital identity initiatives), data analytics and sharing, credit information and/or payment systems and risk mitigations. While these may be directly or indirectly relevant for the regulation and supervision of FinTech/DFS, not all of these may be under the remit or influence of financial regulators.[1]

FinTech: FinTech is defined as encompassing advances in technology and changes in business models that have the potential to transform the provision of financial services through the development of innovative instruments, channels and systems. For the purposes of this study, FinTech refers to a set of activities (which may be either regulated or unregulated, according to each jurisdiction) contributing to the provision of financial services facilitated predominately by entities emerging from outside of the traditional finance system (such as the banking industry or capital markets).

FinTech Market: The provision, transaction and facilitation of financial activities across emerging verticals including digital lending (e.g. P2P lending), digital capital raising (e.g. equity-based crowdfunding), digital banking, digital savings, digital payments and remittances, digital custody, InsurTech, WealthTech, cryptoasset exchanges and the supply of enterprise technologies, RegTech, alternative data analytics and other services.

Innovation Office: A dedicated function within a regulator which engages with and provides regulatory clarification to innovative financial services providers. These may also be known as Innovation or FinTech "Hubs".

RegTech/SupTech: For the purposes of this study, SupTech refers to the use of innovative technologies *by regulators* to tackle regulatory or supervisory challenges. It is a subset of RegTech, which includes any use of technology to match structured and unstructured data to information taxonomies or decision rules that are meaningful to both regulators and regulated entities, in order to automate compliance or oversight processes. The two terms are used interchangeably for this study given their varying usage by regulators, and the potential for commonly adopted definitions, standards and protocols.

Regulatory Innovation Initiatives: A broad set of activities carried out by regulators to innovate regulatory and supervisory functions, processes, organizations and applications, which often but not necessarily involve the use of technological solutions.

Regulatory Sandbox: Formal regulatory programmes that allow market participants to test new financial services or models with live customers, subject to certain safeguards and oversight.

Executive Summary

This global study seeks to assess how central banks and other financial regulators are responding to the challenges of Covid-19 in regulating and supervising FinTech activities and other forms of Digital Financial Services (DFS). It is a joint product of the World Bank and the Cambridge Centre for Alternative Finance (CCAF) at the University of Cambridge Judge Business School.

FinTech and other forms of DFS can play a vital role in extending the reach and widening the access of financial services. They have already helped to bring access to financial services to millions of consumers and MSMEs (Micro, Small and Medium Enterprises) around the world. The Covid-19 pandemic has severely impacted the global economy, including FinTech activities as well as their regulation and supervision.

Between June and August 2020, the joint World Bank and CCAF research team surveyed 118 central banks and other financial regulatory authorities from 114 jurisdictions. 66% of surveyed regulators are from emerging market and developing economies. This represents one of the largest empirical studies to date on the impact of Covid-19 regarding the regulation and supervision of FinTech, as well as related regulatory innovation initiatives.

The study finds that regulators are responding to the challenges of Covid-19 and increasing digitalization of financial services by taking both sector-wide and, to a lesser extent, FinTech-specific regulatory measures, as well as accelerating the pace of regulatory innovation initiatives.

The observed impact of Covid-19 on FinTech markets

Regulators observed strong increases in the use or offering of many FinTech products and services since the outbreak of the pandemic, in particular **digital payments and remittances** (60% of respondents reporting an increase), digital banks (22%), and digital savings or deposits (19%). Respondents in jurisdictions with more stringent Covid-19 containment and closure measures are more likely to have reported an increase in digital payments and remittances services.

Regulators in emerging market and developing economies are more likely to have reported increases in the usage of digital payments and digital banks. In advanced economies, there is evidence of an increase in the usage or offering of InsurTech and WealthTech (both reported as a 24% increase).

Respondents see rising risks in the FinTech market concerning cybersecurity (78% referencing as a top three risk), operational risks (54%), consumer protection (27%) and fraud and scams (18%). 90% of surveyed regulators from advanced economies see cybersecurity as one of their top three increasing risks associated with FinTech activities due to Covid-19.

The priority of FinTech for regulators has either increased, or remained high, in light of Covid-19. In emerging market and developing economies, almost two-thirds of regulators said it has increased in priority. Over half of regulators in advanced economies said it has remained high. Central banks are more likely to have increased the prioritization of their FinTech work relative to other financial regulators in light of Covid-19 (65% among central banks versus 38% among other financial regulators).

Regulators recognize that FinTech can play a role in supporting regulatory objectives in light of Covid-19. FinTech may be especially helpful in advancing regulatory objectives to support financial inclusion (70% overall considered it supportive, and 81% in emerging market and developing economies), market development (61% overall) and promoting competition (47% overall).

The regulatory responses in light of Covid-19

The majority of regulators have taken policy measures in light of Covid-19, but the majority of these measures were not specifically targeted at FinTech. These financial sector-wide measures which may have implications for FinTech included actions in relation to anti-money laundering (AML) and digital identity (49% of respondents), economic relief schemes (42%), business continuity plans (39%), measures to enhance cybersecurity (29%) and measures focusing on promoting employment and talent (17%).

37% of surveyed regulators have taken at least one regulatory measure specifically targeting FinTech sectors or activities. The most salient measures, especially in emerging market and developing economies, were directed at digital payments and remittances (65% of respondents in emerging market and developing economies), such as waiving transaction fees, partially or in whole, and raising transaction thresholds. Other measures included facilitating digital capital raising and creating digital banking frameworks.

80% of regulators felt that they have been resilient and adaptable in their response to the challenges of Covid-19. Just over half (54%) regarded themselves as being 'well prepared', 80% considered themselves resilient and able to adapt, and 59% felt that they had adequate resources at their disposal.

Key internal challenges for regulators have emerged. Most common are challenges to perform core regulatory functions (e.g. on-site inspections of firms) (49% overall, and 65% of respondents from advanced economies), coordination with other domestic agencies (39%), access to accurate and timely data (29%), increased demand on resources (29%), and restricted access to essential information or technology (28%). Regulators in jurisdictions with more stringent Covid-19 measures are more likely to have indicated that domestic coordination is challenging (46% vs 34%).

Regulators observed ongoing support by FinTechs to Covid-19 relief efforts in their jurisdictions. The top five use cases were digital disbursement of payments and remittances (38%), delivery of governmental relief and stimulus funding (28%), healthcare applications for contact tracing (22%), ensuring business continuity (17%) and support for SMEs (12%).

To support their work on FinTech in light of Covid-19, regulators considered they would benefit most from skills development (80%) and technical support (67%), with more demand from regulators in emerging market and developing economies.

The impact of Covid-19 on regulatory innovation initiatives

The majority of respondent regulators have either accelerated existing regulatory innovation initiatives or introduced new initiatives. For example, 72% of respondents have either accelerated or introduced initiatives on digital infrastructure, 58% have either accelerated or introduced initiatives regarding RegTech/SupTech, and 56% did so in regard to innovation offices. Regulators from emerging market and developing economies are more likely to have developed new initiatives or accelerated planned initiatives.

No surveyed regulators reported the cancellation of an innovation initiative due to Covid-19, although around 20% indicated they had delays.

Regulators in jurisdictions with high Covid-19 stringency measures are more likely to have accelerated their regulatory sandbox initiatives (42%) compared to those in lower stringency jurisdictions (33%). Regulators in lower stringency jurisdictions are more like to have launched a new regulatory sandbox in light of Covid-19 (21% vs 13%).

Non-central bank financial regulators are more likely to have accelerated (39% vs 26%) and introduced (32% vs 17%) RegTech/SupTech initiatives in light of Covid-19. Respondents in high stringency jurisdictions are more than twice as likely (43% vs 21%) to have accelerated RegTech/SupTech initiatives compared to lower stringency jurisdictions.

The main challenges for planning and implementing regulatory innovation initiatives are around communication and coordination. In particular, respondents noted challenges regarding difficulty with external communications (43%), coordination with other domestic agencies (43%), reprioritization of funding and resources (34%), required speed of delivery (30%) and restricted access to and availability of necessary technology (25%). Respondents from high Covid-19 stringency jurisdictions reported a higher degree of challenges across the board. Central banks indicated more challenges regarding the speed of delivery for regulatory innovation initiatives (56%) compared to other financial regulators (15%).

Lessons learned and future considerations

Seven lessons learned have been extracted from this research, informed by the insights, recent experience and perspectives shared by responding regulators.

Lessons learned which can be applied immediately (short term)

(1) Experiment with nimble measures to rapidly respond to the challenges created by the pandemic
Regulators felt they were generally well-resourced and able to operate in an agile manner in their immediate response to the pandemic, being able to mobilize and take measures more quickly in response to immediate challenges. Nimble measures taken in the short term may also help facilitate and provide a platform for regulators to develop longer-term plans to developing digital infrastructure.

(2) Facilitate engagement between financial regulators and the industry
A number of regulators commented on the utility of their existing outreach programmes with the FinTech industry, or the need to strengthen industry engagement in order to cultivate trust, seek feedback, and provide guidance in an uncertain environment. In jurisdictions where this approach was adopted, regulators commented on a higher degree of buy-in and compliance by the industry.

(3) Facilitate knowledge transfer among regulators at both the domestic and international level
Given compressed decision-making timelines and processes, regulators require, more than ever, timely information and insights, together with policy learnings from other jurisdictions. It is evident that regulators would benefit from more effective regional and global regulatory benchmarking exercises, information exchange and peer learning initiatives, which can be delivered virtually at scale.

(4) Consider increasing support for the development of regulatory innovation initiatives
There appears to be a general theme of the acceleration of regulatory innovation initiatives such as innovation offices, sandboxes and RegTech/SupTech. At the same time, many

regulators have identified resource and funding constraints as well as gaps in talent and expertise, as key challenges in the development of these initiatives. This combination of factors strongly suggests the need for more support in regulatory innovation, with possible resources, expertise and technical assistance sourced externally.

Lessons learned for the longer term

(5) Strategically strengthen RegTech/SupTech capabilities

The rapid growth in certain FinTech sectors during Covid-19 may also exacerbate existing risks or induce emergent risks. Respondents are evidently concerned about specific risks in relation to FinTech, such as cybersecurity risks and fraud. Given the focus on digital solutions during Covid-19, there are opportunities for regulators to harness available technologies, forge internal consensus, collaborate creatively with external parties to develop a long-term RegTech/SupTech strategy and increase a range of capabilities.

(6) Support the long-term transition to digital infrastructure

The Covid-19 crisis has forced many regulators to reconsider the foundational building blocks of their digital infrastructure and its interoperability with the wider digital ecosystem. The long-term development of digital infrastructure involves both capital intensive investments as well as the building of data repositories and digital ID systems that leverage technological solutions and advanced IT infrastructure.

(7) Consider the wider implications of the digitalization of financial services, including competition, exclusion and financial literacy

The Covid-19 crisis has accelerated the wider adoption of FinTech/DFS, which is unlikely to reverse once the current crisis abates.[2] Regulators will therefore benefit from considering the long-term regulatory implications and challenges of this trend of digitalization. Based on the feedback gathered through this study, these are likely to include nuanced and holistic considerations around competition, financial and digital exclusion, financial literacy and data privacy.

1. Introduction and research motivation

1. Introduction and research motivation

Covid-19 has had a devastating impact on the global economy, leading to the deepest recession in eight decades and sending millions into poverty as businesses close and jobs are lost. Both the public and private sectors have reacted to the challenges of Covid-19 with a shift to transacting digitally where possible, to limit the spread of the virus and its impact on the economy. However, not all countries were equally prepared for this rapid shift to digital channels. Further, within individual countries there are frequently significant differences – by geography, gender and income - in access to digital infrastructure and use of digital tools for business including the use of FinTech and a wider array of digital financial services (DFS).

Digital financial inclusion was already recognized as a development priority before the Covid-19 pandemic. There was ample evidence of the positive impact of digital financial services and the development of FinTech markets for consumers, including reductions in poverty,[3] increased resilience, and improved access to credit for small firms. A recent IMF report shows that DFS which results in higher levels of financial inclusion is associated with higher GDP growth.[4]

DFS are regarded as an integral part of a country's Covid-19 response and critical infrastructure. In the short run, DFS can provide a means for safely and efficiently extending emergency financial relief such as sending payments to families in crisis or providing credit lifelines to small businesses. In the longer term, DFS, including many forms of FinTech activities, are potentially critical for recovery efforts, to facilitate payments, savings, credit and insurance and to support the development of digital economies and e-government.

The current Covid-19 pandemic has amplified the benefits of expanding DFS, because it significantly reduces the need for physical contact in retail and financial transactions and helps government respond more quickly to extend liquidity to firms and people most at risk.

(Source: Digital Financial Services, World Bank, 2020)

Over time, the movement towards a digital economy accelerated by Covid-19 - including a shift to remote work, use of e-commerce platforms and arms-length transactions – will increase demand for many forms of FinTech activities and DFS, not just for digital payments. Money management and budgeting tools, robo-advice (including for micro-investments), individually tailored and digital micro products (for savings, credit and insurance), digital currencies and online training for financial capability and digital skills are likely to be growing market segments.

Financial regulators[5] have a critical role to play in the response to Covid-19 as they help to create the conditions and necessary interventions for sustainable development of FinTech markets and the expansion in the usage of DFS, while simultaneously monitoring and managing growing risks. These risks include stability of financial systems facing liquidity and portfolio performance issues, cyberthreats which may increase during this major shift to online services, exclusion for consumers who lack the means to quickly move from cash or physical branch banking to DFS and a wide range of consumer protection risks and financial literacy challenges.

An appropriate legal and regulatory framework for DFS and FinTech is therefore fundamental to the growth of the sector and its ability to advance financial inclusion. Recent World Bank research provides empirical evidence of this relationship, showing that for a variety of financial products, including e-money and agent banking, improvements in the quality of regulation increases financial inclusion.[6]

"Authorities should employ the embedded flexibility of regulatory, supervisory, and accounting frameworks while continuing to uphold minimum regulatory standards. This would avoid imposing further harm on an already fragile economy, or significantly eroding financial policy credibility once the crisis has passed."
(Source: IMF-WB Staff Position Note, 2020)

Building on the World Bank and CCAF's past collaborative work, especially the inaugural *"Regulating Alternative Finance: Results from a Global Regulator Survey"* (World Bank and CCAF, 2019), this study provides new and empirical data on how Covid-19 is impacting financial regulators' approach to FinTech and DFS. This study is unique in that it is supported by both a quantitative and qualitative approach through responses gathered from 118 regulatory authorities in 114 jurisdictions around the world, encompassing central banks, securities and capital market authorities, insurance regulators and other regulatory and supervisory authorities.

The ambition is to understand how the global FinTech industry and DFS more broadly will emerge from the Covid-19 pandemic, the measures regulators are taking with respect to FinTech and DFS in response to the pandemic, the challenges they are facing regarding their approach to FinTech and DFS, and the nature of the assistance regulators are seeking commensurate with these. Given that many regulators have responded to the challenge of balancing the benefits and risks of technology-enabled financial innovation by innovating themselves, the study has a particular focus on the impact of these regulatory innovation initiatives, such as innovation offices, regulatory sandboxes, and RegTech/SupTech initiatives.

While unique in its scope and findings, this study should be seen as complementary to a number of other Covid-19-related studies, include the forthcoming "*Global Covid-19 FinTech Market Rapid Assessment Survey*" jointly conducted by the Cambridge Centre for Alternative Finance, the World Bank and the World Economic Forum. Guidance for policymakers seeking to accelerate digital financial inclusion has been developed by global bodies including the G20 Global Partnership for Financial Inclusion (GPFI) High Level Policy Guidelines (2020, 2016)[7], the IMF and World Bank through the Bali FinTech Agenda[8], and the Committee on Payments and Market Infrastructure in development of the Payment Aspects of Financial Inclusion (PAFI) in the FinTech Era. These documents share a number of priority topics and help to identify the path many policymakers follow as they move to strengthen DFS and FinTech.

The report is organized as follows: Chapter 2 presents the study methodology, including instrument design, data collection methods and response rates by regions. Chapter 3 examines changes in FinTech and DFS usage, emergent opportunities and risks for regulators, and regulators' perceived levels of preparedness in light of Covid-19. Chapter 4 examines the measures financial regulators have taken in light of Covid-19 that affect FinTech and DFS more broadly. It also includes an overview of the broad nature of assistance which regulators are seeking regarding their approach to FinTech in light of Covid-19. Chapter 5 reports the impact of Covid-19 on regulatory innovation initiatives. Chapter 6 concludes with lessons learned and future considerations for the regulatory community on how to balance the opportunities and risks which Covid-19 presents for its approach to FinTech.

2. Study methodology and sample

2. Study methodology and sample

2.1 Survey administration and fieldwork

The Global Covid-19 FinTech Regulatory Rapid Assessment Study was designed and implemented between March and August 2020, primarily through a series of semi-structured interviews as well as questionnaire-based responses offline. The primary target audience is financial regulators who have jurisdiction over the regulation and supervision of FinTech activities and DFS more broadly. This includes financial conduct authorities, central banks, securities and capital market regulators and insurance regulators.

Given the focus on emerging market and developing economies, the target sample weighted regulators from these jurisdictions more heavily. A number of channels were utilized to identify suitable respondents and request their participation in the study. This includes previous participants in the 2019 World Bank-CCAF study *"Regulating Alternative Finance: Results from a Global Regulator Survey"*[9], participants from CCAF's online FinTech programme for policymakers and regulators[10], and regulators within the CCAF and the World Bank's global networks. The written version of the interview guide was also circulated by the Global Financial Innovation Network (GFIN)[11], specifically targeting its members who did not participate via interview.

Respondents included regulatory and/or supervisory authorities[12] (approximately 55% of respondents) and central banks[13] (43% of the sample). Some specific respondents were included with a view to providing insights where primary regulators were unable or unavailable to do so, or to triangulate data provided by primary targets. This includes self-regulatory (industry) bodies (approximately 2% of the sample) as well as regulatory units/functions sitting within government ministries or bodies (approximately 1% of the sample). For the purposes of the analysis which follows, "other financial regulators" incorporates all non-central bank respondents.

The specific individuals within each institution targeted for interview or offline response were those familiar with their institution's regulatory approach, framework(s) and practices to regulate and/or supervise FinTech activities, entities and related digital financial services. In this study, FinTech activities are deemed to be a 'subset' of the broader DFS which are predominately facilitated by entities emerging from outside of the traditional financial system.

The interview guide was designed and refined by the joint World Bank-CCAF research team and relevant stakeholders within the wider World Bank Group. A pilot study was carried out with a small number of regulators in order to determine the set of most pertinent and relevant questions, the appropriate wording and terms, and to ensure that responses could be captured in an effective and timely manner.

Given the nature of the pandemic, research objectives and the broad set of respondents' geographies, the most suitable data collection method was deemed to be a combination of semi-structured interviews alongside an offline questionnaire-based survey. Responses were captured through either a telephone/video-based interview, or by completing the questionnaire derived from the interview guide offline. Careful steps were taken to ensure the consistency and robustness of collection and analysis of the data via these two research methods.

Responses were received from 118 regulators from 114 jurisdictions, with approximately 70 (59%) of these via interview, and the remainder collected via completion of the questionnaire. The data collected from the respondents was translated into a dataset to enable both qualitative and quantitative analysis. Additional classification variables were introduced to allow responses to be tabulated and analyzed by level of economic development, geographic region, and across different types of regulatory organizations (i.e. central banks versus other financial regulators).

This study also utilizes data collected in other Covid-19 related studies, notably the Oxford COVID-19 Government Response Tracker (OxCGRT).[14] Specifically, this study uses OxCGRT's Covid-19 *Stringency Index*, which "records the strictness of 'lockdown style' policies that primarily restrict people's behaviour,"[15] with a view to assessing any connection between such policies and the data in this study. To this end, the median level of stringency (i.e. the relative strictness of 'lockdown style' policies) was calculated for each jurisdiction (where available) between the 1st of June 2020 and the 18th of August 2020 (the period over which responses were recorded). Recognizing these data points may effectively conceal or obscure variations within that same time frame, the use of OxCGRT's stringency index was mainly used to contextualize the environment in which regulators are operating.

2.1.1 Sample by geography and income classification

The final sample is geographically diverse and representative of World Bank Country and Lending Groups. Figure 2.1 maps the 114 geographic jurisdictions of the 118 regulators who responded to the study. The full list is available in Annex 1.

Figure 2.1: Geographical distribution of study respondents

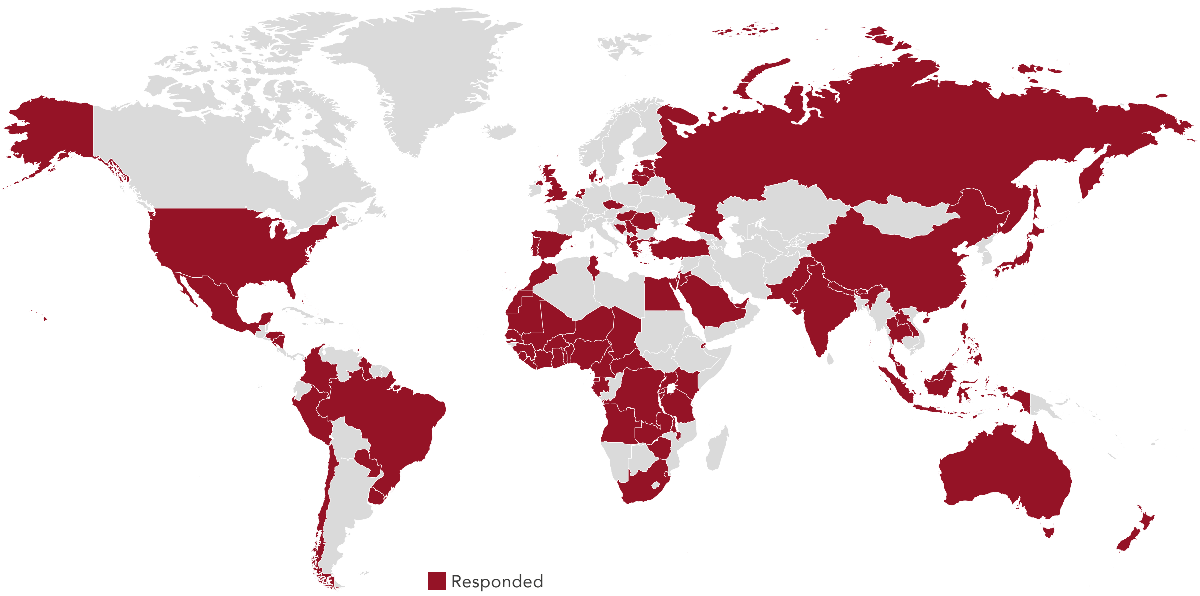


Figure 2.2 provides a breakdown of participating regulators by World Bank region classification.[16] Sub-Saharan Africa had the largest number of respondents and represents nearly 30% of the overall sample. This is followed by Europe and Central Asia with 24 respondents, accounting for 20% of the total responses. While North America and South Asia had the lowest number of respondents, the corresponding jurisdiction of these respondents covered 67% and 63% of their geographic regions respectively.

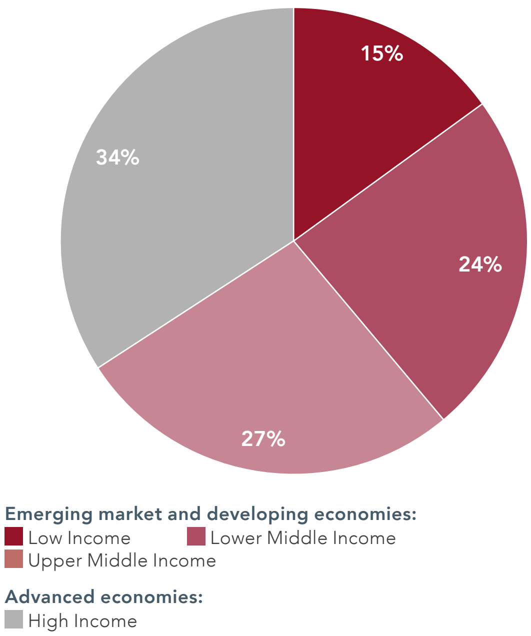
Figure 2.2: Geographical distribution of respondents by region

REGION	# OF RESPONDENTS	% OF SAMPLE BY REGION	% OF REGION COVERED
East Asia and Pacific	19	16%	39%
Europe and Central Asia	24	20%	38%
Latin America and the Caribbean	13	11%	48%
Middle East and North Africa	16	14%	48%
North America	5	4%	67%
South Asia	8	7%	63%
Sub-Saharan Africa	33	28%	71%
Total	118	100%	

Figure 2.3 illustrates the distribution of responses according to the World Bank's classification by income level.[3] The sample contains responses from jurisdictions across all four income classifications with 39% of the sample from either lower or lower middle-income jurisdictions.

In accordance with the World Bank Country and Lending Groups, "Advanced economies", includes high-income economies, while "Emerging market and developing economies (EMDEs)" includes upper-middle-income, lower-middle-income and low-income economies.[17] According to this classification, 66% of respondents in the sample are from "emerging market and developing economies" and 34% from "advanced economies"

Figure 2.3: Breakdown of respondents by World Bank income groups



3. FinTech Market Developments

3. FinTech Market Developments

This chapter first considers the impact of Covid-19 on the FinTech industry as observed by central banks and other financial regulators, examining discernible changes in FinTech offerings and DFS usage more broadly. This chapter will also focus on emerging risks and challenges in marketplaces, regulators' prioritization of FinTech in light of Covid-19, as well as regulators' perception of institutional preparedness and resilience in the wake of Covid-19.

3.1 The impact of Covid-19 on financial services and FinTech

Respondents were asked to describe how the Covid-19 global pandemic has impacted the provision of financial services in general as well as on FinTech activities specifically.

3.1.1 The impact of Covid-19 on the provision of financial services in general

The global pandemic has unevenly affected the provision of financial services across jurisdictions. Responses by regulators across jurisdictions range from broadly neutral (e.g. "business as usual") to broadly negative assessments of Covid-19's impact on the provision of financial services. Those regulators who highlighted a 'neutral' assessment tend to underscore the importance of government and industry measures in ensuring the proper functioning of financial services, including the official designation of financial services as "essential services". As one regulator from the APAC region illustrates:

"Financial services have been classified as an essential service (which) allowed financial service providers to operate fully through all phases of the lockdown."

At the industry level, financial institutions' rapid roll-out of contingency plans (backup site, recovery facilities, alternative communications, etc.) and the implementation and/or acceleration of digitalizing processes (across front-office and back-office tasks) are perceived to have played a significant role in mitigating the negative impacts of Covid-19 (see Chapter 4 for more on this).

Among those asserting a broadly negative assessment of Covid-19's impact on the provision of financial services, regulators with jurisdiction over banking services highlighted negative impacts such as temporary bank branch closures and access limitations, restrictions on opening hours, restrictions on branch visitations, and the impact of physical movement restrictions.

3.1.2 Changes in FinTech development in light of Covid-19

While central banks and other financial regulators demonstrate an awareness of changes in the usage or offering of FinTech products and services, sometimes beyond their remit and jurisdiction, observations focused on those areas where their relevant regulatory framework(s) could directly enable them to gauge changes in FinTech markets in light of Covid-19.

However, when FinTech services and products fall within their immediate regulatory remit, respondents remained nonetheless cautious in providing a *definitive* view on Covid-19 induced changes in FinTech. Given the fluidity of the pandemic and complexity of market dynamics, many respondents understandably cautioned that that it may be too early to tell whether Covid-19 has triggered a definite change in FinTech usage and offerings. As one regulator in Europe and Central Asia stressed:

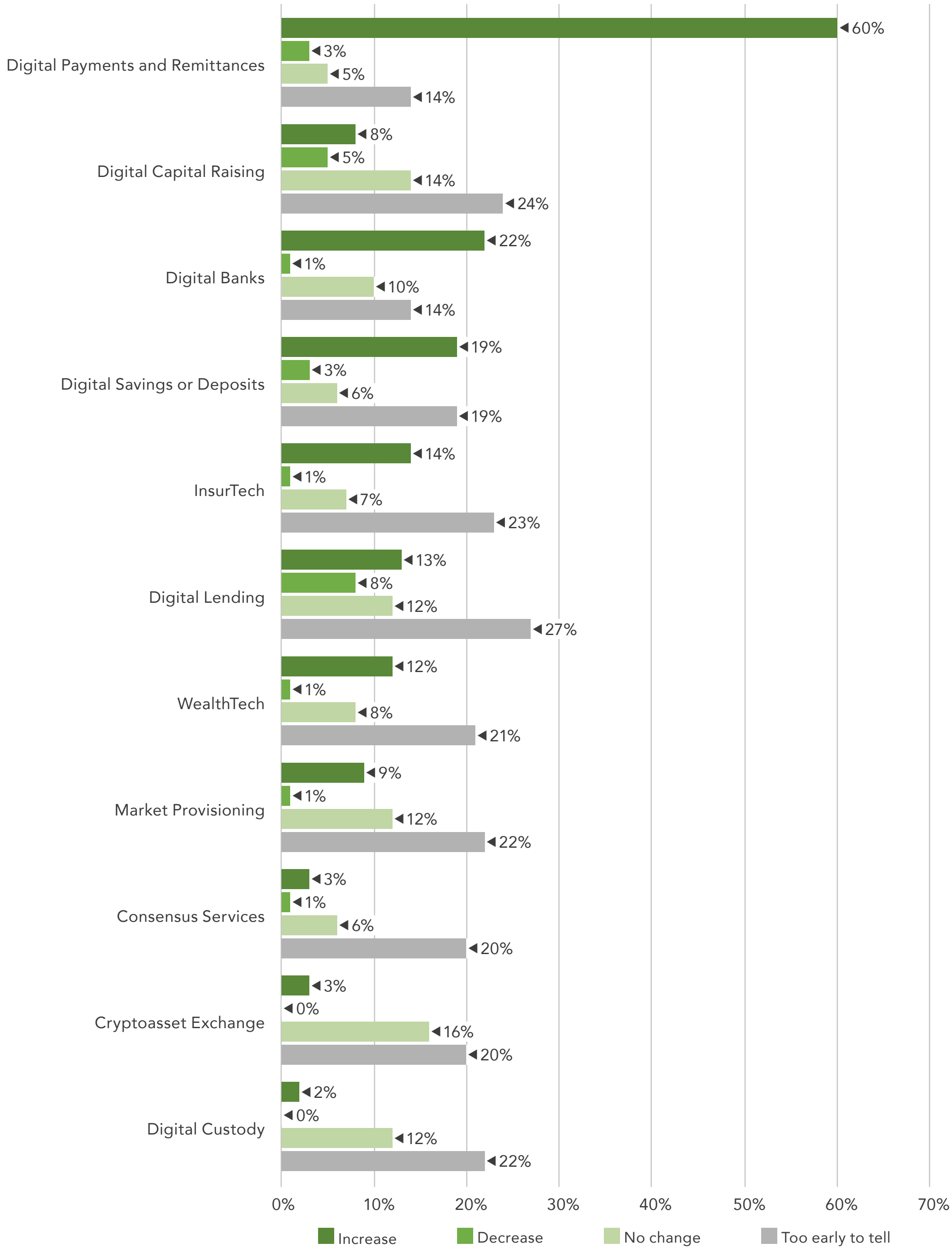
"The current picture across FinTech is very mixed. It is not clear whether the impact on individual FinTech (activity) is short-term and driven by the pandemic, or longer-term driven by structural changes occurring in the market that are being accelerated by the pandemic.

These changes may positively or negatively impact FinTech business models after the pandemic is over."

Nonetheless, respondents generally held positive expectations regarding the impact of Covid-19 on FinTech adoption and usage, with specific FinTech sectors particularly eliciting a more confident assessment. For example, Figure 3.1 below illustrates that more than 60% of respondents observe an increase in the digital payments and remittances sector in light of Covid-19. As one regulator in the MENA region states:

"Statistics clearly show a 'quantum jump' in digital payments."

Figure 3.1: Observed changes in usage or offering of FinTech products and services in light of Covid-19 (N=97)[18]

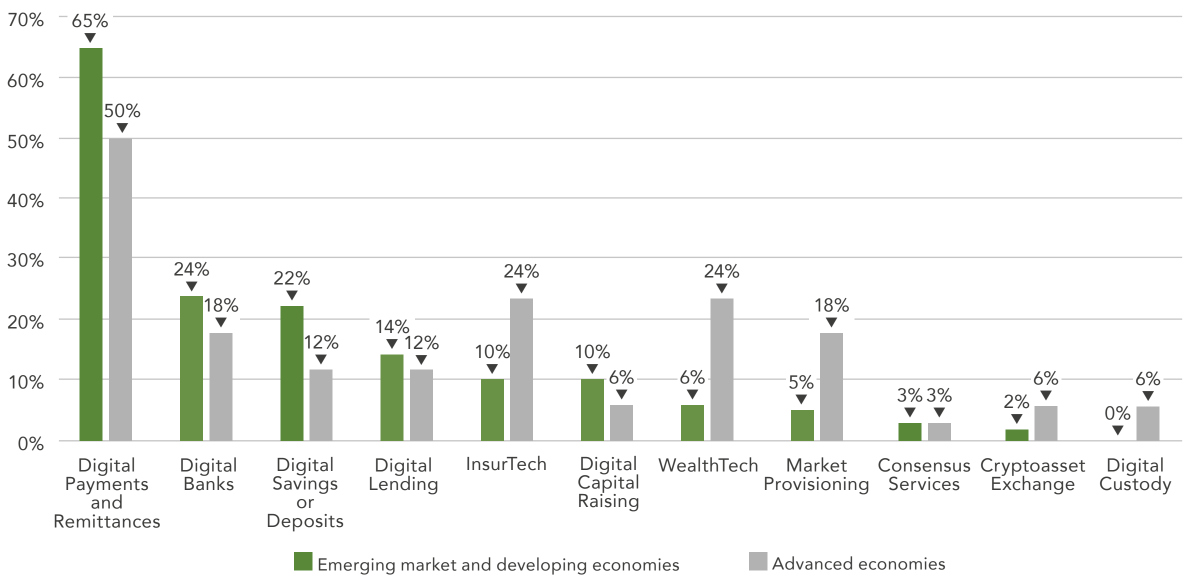


This finding is unsurprising, given concerns regarding the transmission of Covid-19 through cash and card transactions. This also affirms the findings of other studies referencing an acceleration in the shift to digital payments.[19] Respondents in jurisdictions with more stringent containment and closure measures[20] were slightly more likely to report an increase in digital payments and remittances services. As one regulator in Europe and Central Asia emphasized:

"We gave recommendations to initiate cashless transactions because there was concern that Covid-19 would spread through bank notes so a priority was given to the health of our population. It was important to initiate cashless transactions using payment cards."

Figure 3.2 below illustrates that respondents in emerging market and developing economies are particularly more likely to report an increase in the usage or offering of digital payments and remittances (65% of respondents in these economies versus 50% in advanced economies), digital banks (24% vs 18%) and digital savings or deposits (22% vs 12%). However, it should be noted that in many advanced economies, FinTech usage was likely higher before Covid-19, compared to that of emerging market and developing economies.

Figure 3.2: Percentage of respondents who reported an increase in FinTech usage or offering in light of Covid-19 - Emerging market and developing economies versus Advanced economies (N=97)



3.2 FinTech regulatory challenges and opportunities: the impact of Covid-19

The following section focuses on key regulatory challenges and opportunities in light of Covid-19, from the prioritization of regulatory agendas regarding FinTech, to FinTech-related risks and perceived regulatory preparedness and resilience in the wake of Covid-19.

3.2.1 The prioritization of FinTech in light of Covid-19

Perhaps unsurprisingly, respondents highlighted that Covid-19 has generally increased the prioritization of FinTech within their organization. As Figure 3.3 below illustrates, the majority of respondents indicate a high or increasing focus on FinTech in light of Covid-19. Anecdotally it appears that regulators with more nascent FinTech markets and limited digital capabilities are more likely to have deprioritized their FinTech work.

Figure 3.3: The priority of FinTech within regulators in light of Covid-19 (N=72)

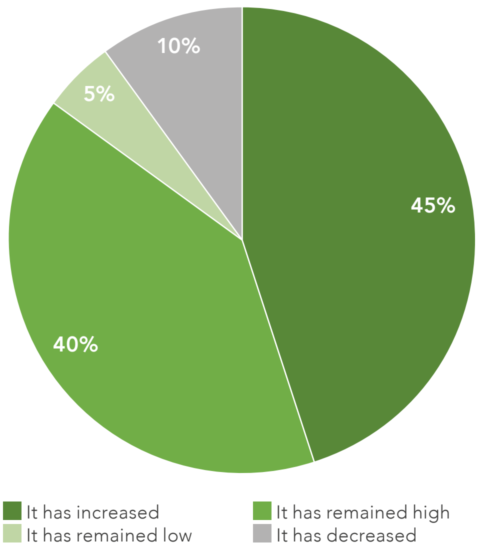


Figure 3.4 below illustrates the differences in FinTech priority between regulators from advanced economies and those from emerging market and developing economies. 64% of regulators from emerging market and developing economies who responded to this question indicated that their prioritization of FinTech has increased compared to 17% of respondents in advanced economies. In comparison, nearly two thirds of respondents from advanced economies indicated that FinTech *remains* high on their list of priorities.

As one regulator in Europe and Central Asia stated:

"Innovation has always been a high priority area for us and continues to be a priority (…). If anything, the extreme impact that Covid-19 is having on all our lives re-emphasizes the importance of innovation across the financial services sector and indeed within our organization."

Figure 3.4: The priority of FinTech within regulators in light of Covid-19 – Emerging market and developing economies versus Advanced economies (N=72)

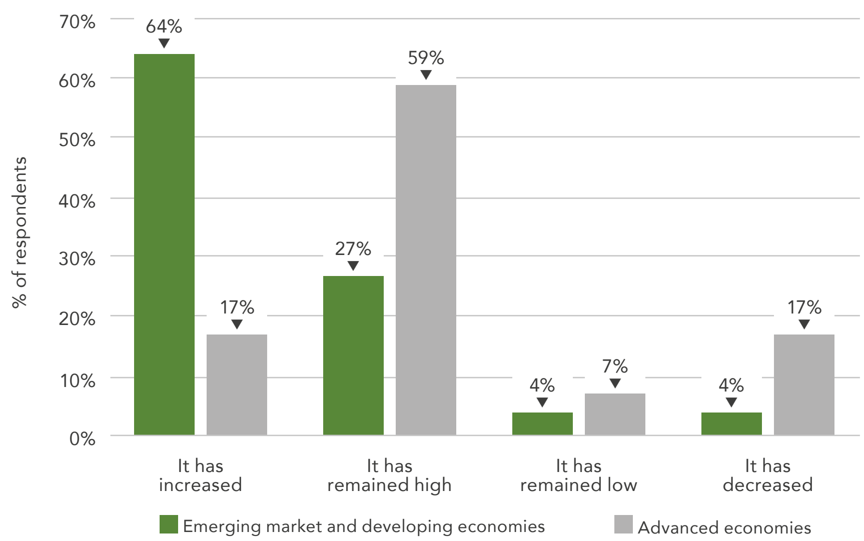
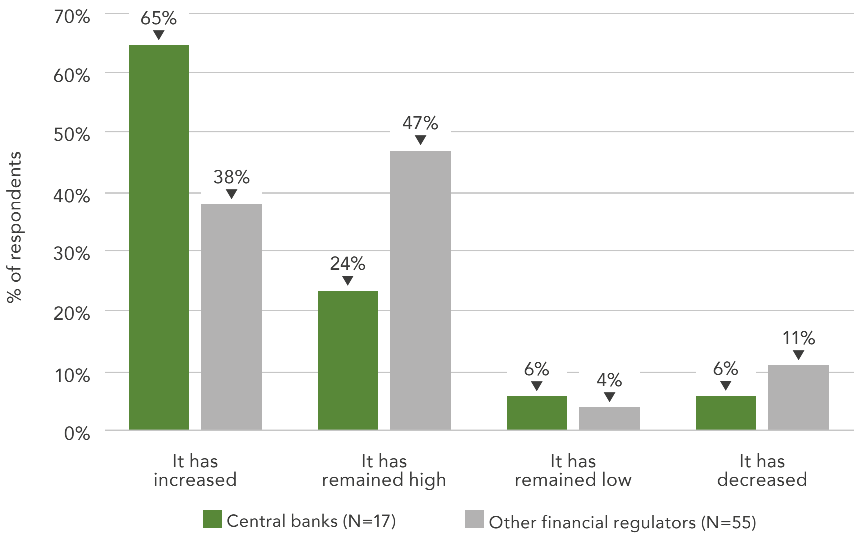


Figure 3.5 below illustrates that central banks are more likely to have increased the prioritization of FinTech than other financial regulators in light of Covid-19 (65% of respondent central banks versus 38% of other financial regulators). This may be a reflection of the increased focus on digital payments due to Covid-19 which typically falls under a central bank's jurisdiction, or the high level of engagement with FinTech work by other financial regulators prior to Covid-19.

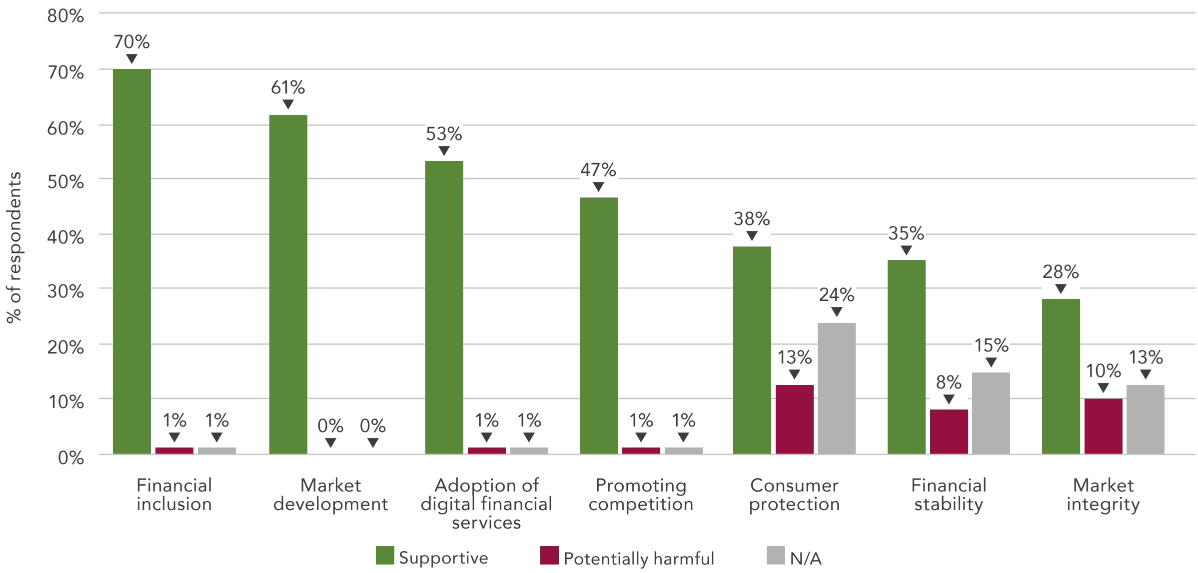
Figure 3.5: The prioritization of FinTech within regulators in light of Covid-19 – Central banks versus Other financial regulators (N=72)



3.2.2 FinTech and regulatory objectives in light of Covid-19

Respondents were asked to share whether FinTech is perceived as supportive or harmful to achieving their authority's regulatory objectives in light of Covid-19. Figure 3.6 highlights that, among respondents to this question, FinTech was generally seen as potentially supportive of financial inclusion, market development, the adoption of digital financial services and the promotion of competition. This finding is broadly in line with findings in the previous report (World Bank and CCAF, 2019).[21]

Figure 3.6: Perceived impact of FinTech on regulatory objectives in light of Covid-19 (N=88)



FinTech's potential for widening access and serving vulnerable and underserved consumers has resonated strongly among the regulatory community, particularly in emerging market and developing economies, where more than 81% of respondents regarded the potential impact of FinTech on financial inclusion as positive in light of

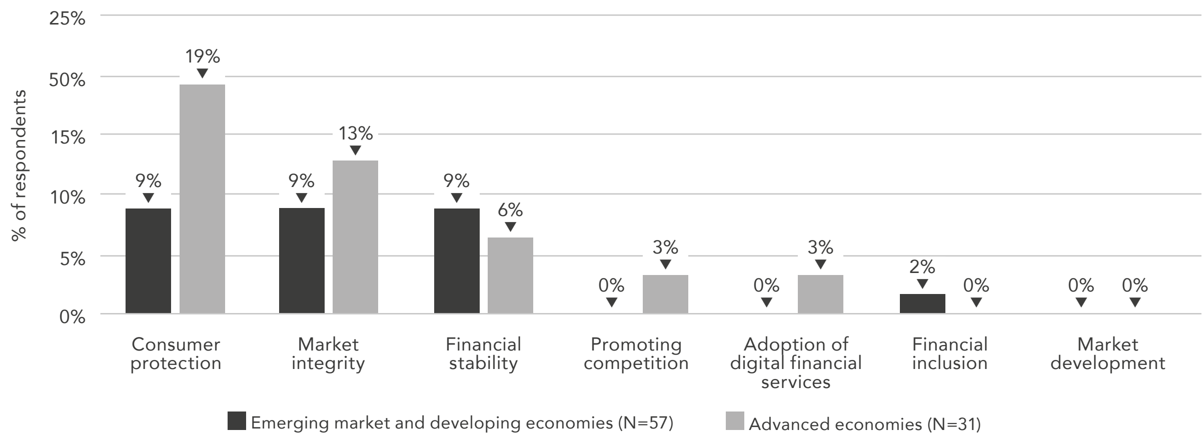
Covid-19 (compared to 52% of respondents in advanced economies). Regulators from advanced economies perceived a slightly more positive impact of FinTech in light of Covid-19 than those in emerging market and developing economies on consumer protection (45% vs 33%), market integrity (39% vs 23%) and the promotion of competition (52% vs 44%).

19% of respondents from advanced economies considered FinTech as potentially harmful to consumer protection in light of Covid-19, citing real or expected increases in the instances of frauds and scams, particularly where the existing regulatory framework may be weak or lacking. As one regulator from the SSA region stated:

"So many companies are now doing e-commerce and they are largely supported by FinTech, e.g. (digital) payments. However, there is no clear framework for dealing with consumer protection issues."

The perceived harm of FinTech to consumer protection and market integrity objectives due to Covid-19 is significantly higher in advanced economies. Figure 3.7 shows that 19% of surveyed respondents from advanced economies see FinTech as potentially negatively affecting consumer protection (versus 9% for emerging market and developing economies) and 13% of respondents from advanced economies see FinTech as potentially harmful to market integrity (versus 9% in emerging market and developing economies) in light of Covid-19.

Figure 3.7: Perceived negative impact of FinTech on regulatory objectives in light of Covid-19 – Emerging market and developing economies versus Advanced economies (N=88)



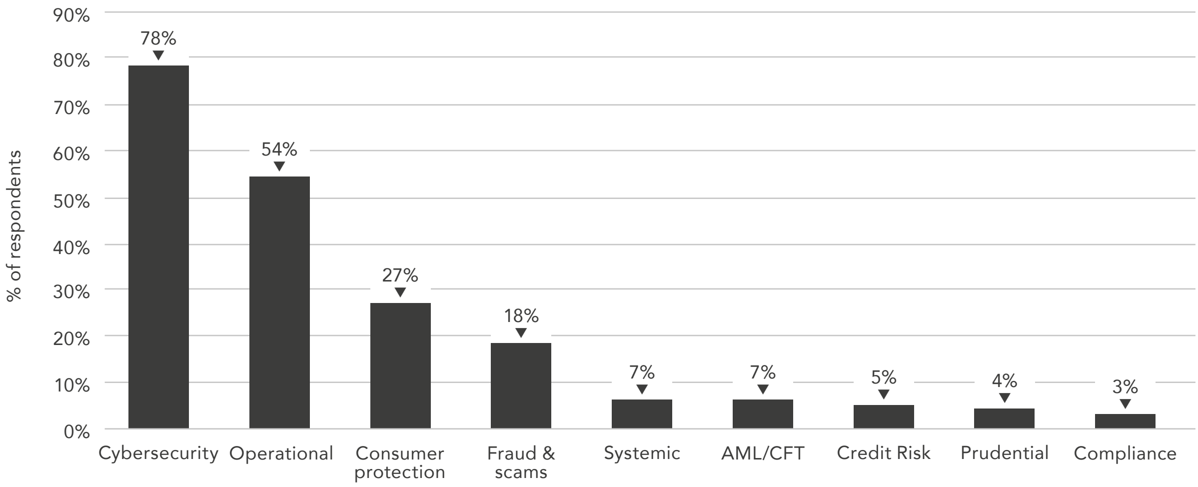
3.2.3 FinTech-related risks in light of Covid-19

Respondents shared the top three risks they believe to have increased in the FinTech market due to Covid-19. As Figure 3.8 shows, 78% of respondents highlighted cybersecurity among their top 3 increasing risks, followed by operational risks (54%), consumer protection (27%) and frauds & scams (18%).

While Covid-19 may have magnified regulatory attention on certain risks, many regulators emphasized that cybersecurity and fraud risks are not inherently novel or unique to issues related to Covid-19. In this respect, it is interesting to note that cybersecurity risks are expected to be a "new normal" in increasingly digitalized economies, beyond the realm of financial services. A regulator in Europe and Central Asia spoke to this particular point:

"Cybersecurity is always a concern, but it is not just a FinTech problem."

Figure 3.8: Top perceived increasing FinTech risks in light of Covid-19 (N=92)[22]



There is a significant reduction in the magnitude of the perceived importance of other risks in light of Covid-19. Indeed systemic, credit, prudential, compliance, and Anti-Money Laundering/Combatting the finance of terrorism risk (AML/CFT) are each cited by 7% or fewer respondents. However, it should be noted that the risks identified by regulators may naturally be driven by their regulatory remit, with not all regulators having responsibility for financial stability, consumer protection and/or market integrity.

Respondents identified a number of Covid-19 specific risks related to FinTech, such as data privacy concerns, concentration risk, decreased liquidity among digital capital raising providers, and prudential risks resulting from economic uncertainty. Respondents in advanced economies regarded cybersecurity risks more prominently than those in emerging market and developing economies, with 90% stating cybersecurity as a top three increasing FinTech risk, compared to 73% in emerging market and developing economies.

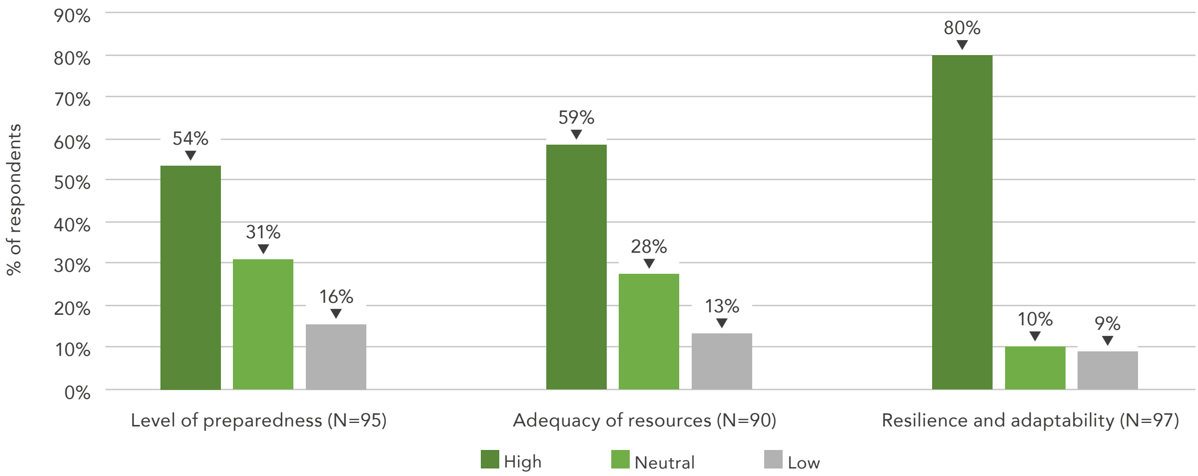
3.2.4 Regulators' organizational preparedness and resilience

Covid-19 has created unprecedented challenges to the way individuals, companies and societies work around the world. Respondents were asked to assess how well their organization was prepared for, has been resilient in responding to and has been adaptable to mitigate the impacts of Covid-19 as 'high', 'neutral' or 'low'.

Overall, central banks and other financial regulators reported high levels of organizational preparedness, resilience, and adequacy of resources in the wake of Covid-19, as illustrated by Figure 3.9 below.

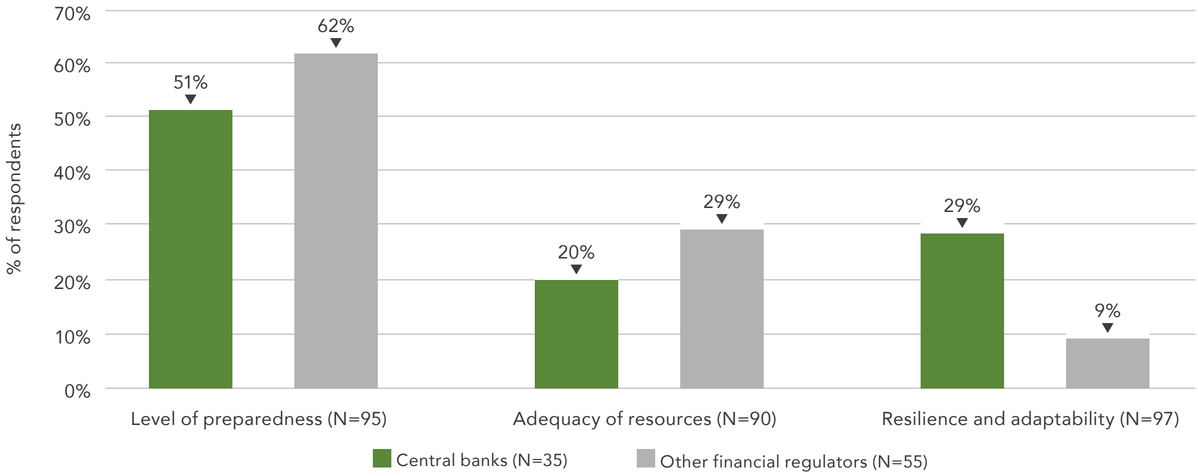
Respondents generally appear to be more resilient and adaptable in the face of Covid-19, rather than being prepared from the outset for a pandemic of this magnitude. Just 54% of respondents scored their organization as "high" with respect to preparedness, while in contrast 80% felt that their organization has been resilient and adaptable in tackling regulatory and supervisory challenges brought about by Covid-19. Just over half (59%) of respondents felt that their resources were adequate in light of Covid-19.

Figure 3.9: Perceived levels of preparedness, resilience and adaptability, and adequacy of resources in the wake of Covid-19



There are some notable differences between central banks and other financial regulators, as illustrated by Figure 3.10 below. Other financial regulators were relatively more likely to feel highly prepared and well-resourced during Covid-19 than surveyed central banks. Among surveyed central banks who felt that their preparedness was relatively low, many of them were from emerging market and developing economies.

Figure 3.10: Perceived level of organizational preparedness – Central banks versus Other financial regulators (N=90)



Financial regulators from advanced economies tended to have felt better prepared (78% vs 41%), more resilient (75% vs 50%) and have more adequate resources to deploy. Indeed, no regulator from advanced economies indicated having 'low' level of preparedness, whilst 24% of surveyed regulators in emerging market and developing economies did. Similarly, no regulators from advanced economies indicated a 'low' level of resilience and adaptability, compared to 21% of surveyed regulators in emerging market and developing economies. A regulator from an advanced economy in the MENA region illustrated that:

"[We] had been working diligently to digitize before the Covid-19 crisis had occurred. Therefore, to our advantage, we were initially prepared to cope, but had to expedite all processes into action. We had also migrated

to the Cloud prior to the pandemic, which was primarily the reason behind the smooth transition to working from home for staff."

Importantly, many respondents in the Sub-Saharan Africa and Asia Pacific regions cited experience from previous crises (including health crises such as Ebola and SARS) as having informed and supported their operational preparedness and resilience in dealing with the challenges of Covid-19. As one regulator in the SSA region emphasized:

"We were a victim of Ebola so we were better prepared this time around for the Covid-19 health crisis. It was not perfect but there were some premises and measures that we could put in place."

CASE STUDY - MONETARY AUTHORITY OF SINGAPORE'S COVID-19 RESPONSES

The Monetary Authority of Singapore (MAS) hosts three organisational mandates under one roof: it is the Central Bank of Singapore, the island's consolidated financial sector supervisor, as well as the development agency for financial services, including FinTech. Under the latter mandate, it has set up a dedicated FinTech and Innovation Group (FTIG).[23]

During the Covid-19 pandemic, the MAS put significant focus on supporting the FinTech community in Singapore, pivoting existing programmes and launching new ones under its market development mandate. The initiatives were launched under the umbrella "COVID-19 Support Package for FinTechs".[24]

Under the Package, MAS announced a grant scheme for both the financial and FinTech sectors to deal with the immediate challenges from COVID-19.[25] The grant scheme covers the following areas:

Skills and Talent – grants are available for training, subsidies for courses, and subsidies for hiring Singaporean graduates. Although the scheme is not targeted specifically at FinTech or digital finance, skills that support the provision of digital financial services are emphasized.

Digitalization and Operational Resilience – this grants subsidies to encourage the adoption of new digital solutions by both smaller financial institutions and FinTechs, as well as collaborations between smaller financial institutions to customize digital products.

Additionally, MAS launched a "FinTech Solidarity Grant" to help support Singapore-based FinTech firms to maintain their operations and retain local employees, as well as enable them to continue to partner with financial institutions.[26] This includes helping FinTechs offset a proportion of the cost for running proof-of-concepts on the digital sandbox, API Exchange (APIX)..[27]

Separately, MAS and the SFA set up a digital self-assessment framework comparing a company's operations against MAS' Outsourcing and TRM Guidelines, also hosted on APIX. Completing the self-assessment will help FinTech firms provide a first-level assurance to financial institutions about the quality of their solutions

Finally, MAS pivoted its annual innovation challenge towards Covid-19 resilience and green finance and adapted the Singapore FinTech Festival to Singapore FinTech Festival to a hybrid physical and digital model in order to model in order to engage its wide international audience under the travel restraints. Under the challenge, companies can participate in two separate formats – depending on their level of maturity – to demonstrate how they address either of the two pertinent challenges.

4. The Covid-19 Regulatory Response

4. The Covid-19 Regulatory Response

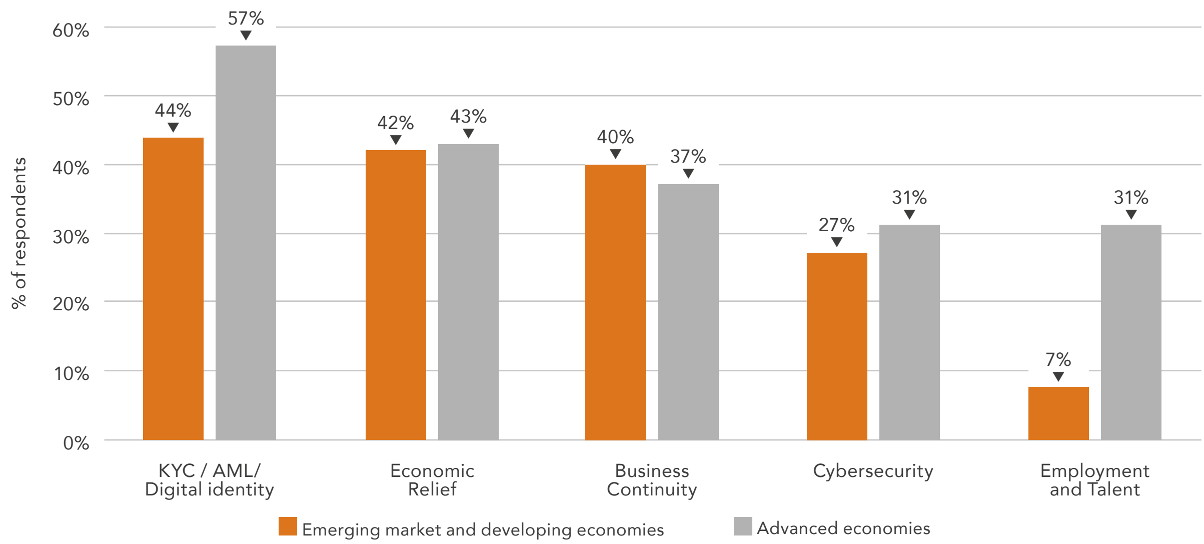
This chapter considers the various measures financial regulators across the globe have undertaken in light of Covid-19 that affect wider DFS (section 4.1) and FinTech in particular (section 4.2). These are decoupled where possible but there may be a blurring of responses in some instances, given that some measures that were relevant for, or applicable to, financial services and DFS in general, might also affect FinTech activities and providers.

4.1 Measures affecting Digital Financial Services and FinTech providers

The findings suggest that the majority of respondents have undertaken measures relating to Covid-19 that either directly or indirectly affect DFS in general or FinTech activities in particular. However, few regulators have undertaken measures that are *specifically* targeted at DFS or FinTech activities. Instead, the majority of regulators in both advanced economies and emerging market and developing economies (EMDE) shared *general* measures they have undertaken with regard to the wider financial services sector, which may *also* impact the regulation and supervision of FinTech activities.

Figure 4.1 below illustrates that the main measures undertaken by regulators which might affect FinTech activities and DFS fall into five main areas. These are measures related to Know Your Customer (KYC), Anti-Money Laundering (AML) and digital identity, economic relief measures, business continuity measures, and employment and talent.

Figure 4.1: Instances of regulatory measures taken by respondents - Emerging market and developing economies versus Advanced economies (N=90)



4.1.1 Know Your Customer/Anti-Money Laundering/Digital identity

Regulatory responses relating to KYC, AML and digital identity have taken center stage in many jurisdictions during Covid-19, with 49% of respondents undertaking measures in this area. The measures implemented by regulators in this area suggest that the pandemic might have had a catalytic effect on increasing digitalization in financial services and, as a result, prompted regulatory action with respect to KYC requirements.

Examples of this include facilitating or permitting electronic KYC (eKYC) processes where previously not permitted, or simplifying KYC processes and practices. This also includes a range of measures in the area of digital on-boarding, from facilitating or permitting the use of digital identities, digital/electronic signatures, simplified and/or digital customer due diligence (CDD) checks (such as through the use of facial recognition), to accepting digital copies of physical documents and permitting the digital onboarding of customers by providers.

The above measures have been implemented through the issuance of both guidance/guidelines, as well as the enactment of fully formed regulations. In one jurisdiction, for example, the regulator issued eKYC regulation in order to support and encourage the usage of a recently developed national digital identity scheme in light of Covid-19. Other regulators took softer approaches such as *recommending* that financial services providers utilize digital identity schemes to meet AML requirements in their jurisdiction.

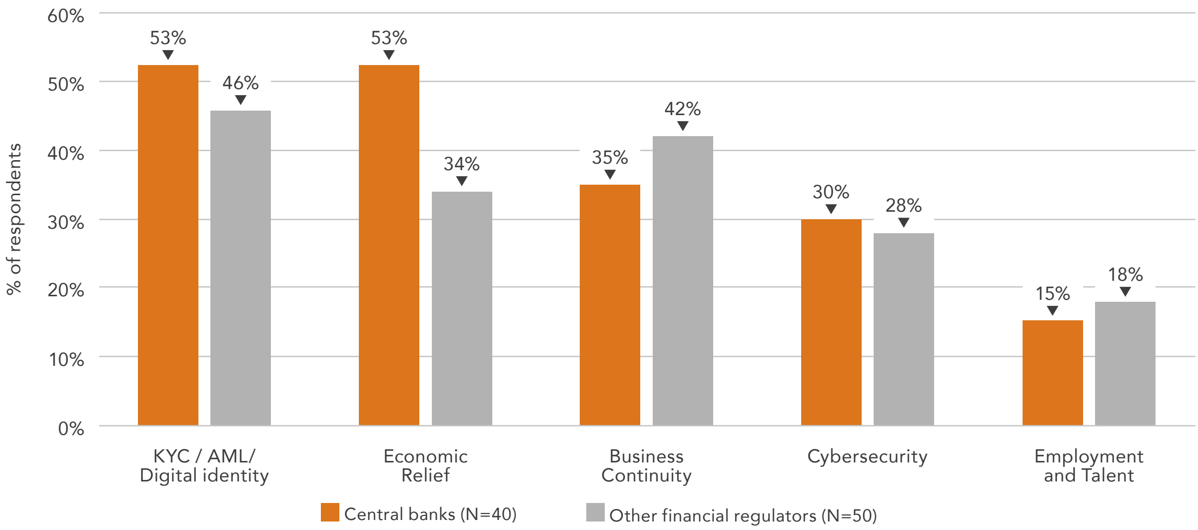
It does, however, remain to be seen how permanent some of these measures will be. To cite just one example of the tentative nature of such measures, one regulator issued a circular recommending that financial providers later physically verify the identity of customers who open a bank account digitally during the period of crisis.

4.1.2 Economic Relief

42% of respondents have undertaken economic relief measures in their jurisdictions, mainly with a view to providing economic stimulus to the wider economy and, by extension, the financial services sectors including FinTech. Figure 4.2 below illustrates a greater propensity of economic relief measures undertaken by central banks (53%) relative to other financial regulators (34%). For instance, a central bank from Europe and Central Asia commented that:

"Emergency liquidity facilities were extended to all financial institutions, including FinTech firms. However financial institutions can only request this measure if it is their final option."

Figure 4.2 Instances of regulatory measures taken by respondents - Central banks versus Other financial regulators (N=90)



Whereas in many cases, economic relief measures mentioned are likely to be a part of broader government policy measures targeting the entire financial sector, some regulators have devised policies specifically with FinTech and DFS in mind. For instance, in the MENA region, one regulator is planning to provide funds directly to the FinTech community to help firms deal with the economic downturn.

Economic relief has also been offered through concessional funding for commercial banks and credit institutions for lending to firms, including to SMEs and start-ups. Responses suggest that the MSME sector is being particularly targeted by economic relief measures, in recognition of the role it plays in promoting economic growth, employment and poverty alleviation.[28] This is typically where indirect economic relief measures have affected FinTech and DFS providers, of which many are MSMEs themselves. As one regulator explained:

"We look at FinTech as part of MSME rather than as a specific sector. In this way small businesses including FinTechs whose businesses have suffered can access the fund created by the government".

4.1.3 Business Continuity Planning

Business Continuity Planning (BCP) measures have also been a key area of focus for regulators with respect to Covid-19, with 39% of regulators undertaking measures in this regard. This is the first of two measures with a greater incidence among other financial regulators (42%) when compared to central banks (35%).[29] Central banks may be more focused on BCP for banks than the FinTech sector, while other financial regulators may be concerned about the threats to continued FinTech operations during a crisis.

Regulators have issued memoranda, circulars and guidelines to supervised financial institutions regarding BCP. A number of regulators have also required enhancements to BCP frameworks and increased the monitoring of the implementation of Business Continuity Plans. To minimize disruption in the offering of financial services, regulators have highlighted additional measures they categorize as falling within BCP for the purpose of facilitating providers continued operations. Examples of specific measures include permitting virtual Annual General Meetings (AGMs), extending regulatory reporting timelines and conducting remote meetings with firms through video conferencing facilities.

4.1.4 Cybersecurity

As illustrated in Chapter 3, many regulators perceive that the digitalization of financial services may increase new, or exacerbate existing, cybersecurity risks. Indeed, during the pandemic FinTech firms have on average experienced a 15% increase in cybersecurity breaches.[30] It is therefore perhaps unsurprising that 29% of surveyed regulators have undertaken measures with respect to cybersecurity in light of Covid-19, with this figure broadly consistent across income groups and among different financial regulators.

Specific measures cited include the enhancement of requirements or controls (such as information security controls), strengthened cybersecurity oversight and supervision, recommendations for cybersecurity protocols, and encouraging providers to conduct cybersecurity risk assessments. Some regulators have gone further by drafting cybersecurity guidelines while others are developing more comprehensive regulatory frameworks. Regulators have also targeted sensitization campaigns at the public following the rise of phishing attacks and fraud due to the increased digitalization of financial services.

4.1.5 More 'digital' approach to regulation

Regulators have also tried to shift from physical, manual or in-person processes, to the adoption of a "digital first approach" to licensing, correspondence, meetings, inspections, virtual AGMs, and electronic submission of regulatory returns. As one regulator in the SSA region highlighted:

"We realized that it just wasn't possible to do things physically anymore, so we switched to virtual/digital ways of doing things."

There is considerable overlap here with respect to the measures undertaken with respect to KYC and digital identity, with regulators permitting the use of digital contracts and digital signatures where previously not permitted. For example, one regulator in the Europe and Central Asia region highlighted that they quickly issued regulations to permit the usage of electronic signatures in light of Covid-19. However, the digital approach has presented some challenges. One regulator from an EMDE jurisdiction in the South Asia region stressed the challenge in their jurisdiction that:

"Digitalization is currently not end-to-end and excludes certain important stages, which limits what can be done digitally."

4.2 Measures affecting specific FinTech sectors

37% of responding regulators have undertaken at least one measure targeting one or more specific FinTech activities or sectors. There are a number of reasons why this number may not be higher. Firstly, regulators may have elected to introduce measures that are applicable to the wider financial sector more generally, as previously illustrated. Secondly, in some jurisdictions, the FinTech sector may be considered too small or nascent to justify targeted regulatory measures. Thirdly, a given jurisdiction might not yet have a fit-for-purpose or bespoke FinTech regulatory framework to allow for more explicit interventions on FinTech activities. As one regulator in Sub-Saharan Africa illustrates:

"No specific FinTech measures have been introduced because we do not yet have the legislation that would grant us the direct mandate."

In other jurisdictions, the FinTech sector may not have been considered to be negatively impacted. For example, one regulator in the East Asia and Pacific region stated that:

"Overall, the pandemic has had little impact on our FinTech providers. Therefore, not much specific regulatory assistance for the FinTech providers or designated sectors is required."

Figure 4.3 below demonstrates that, where FinTech specific measures have been taken, the digital payments and remittances sector has been most commonly targeted, with 61% of respondents undertaking a measure in this sector.

Figure 4.3 FinTech sector specific measures taken by regulators (N=46)

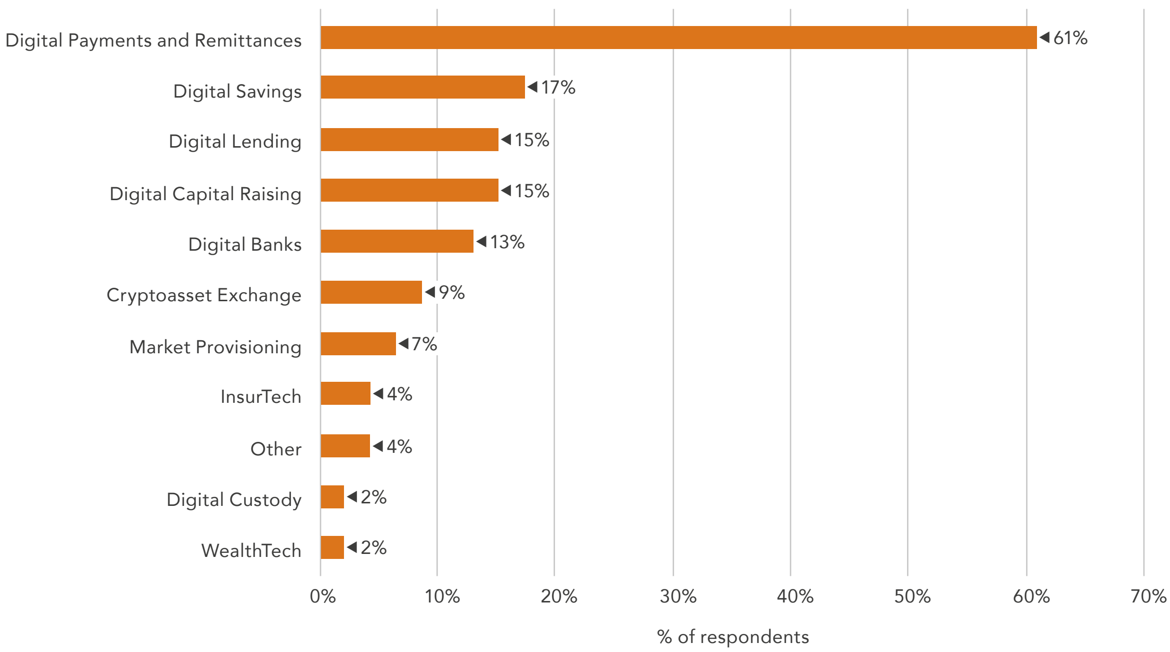
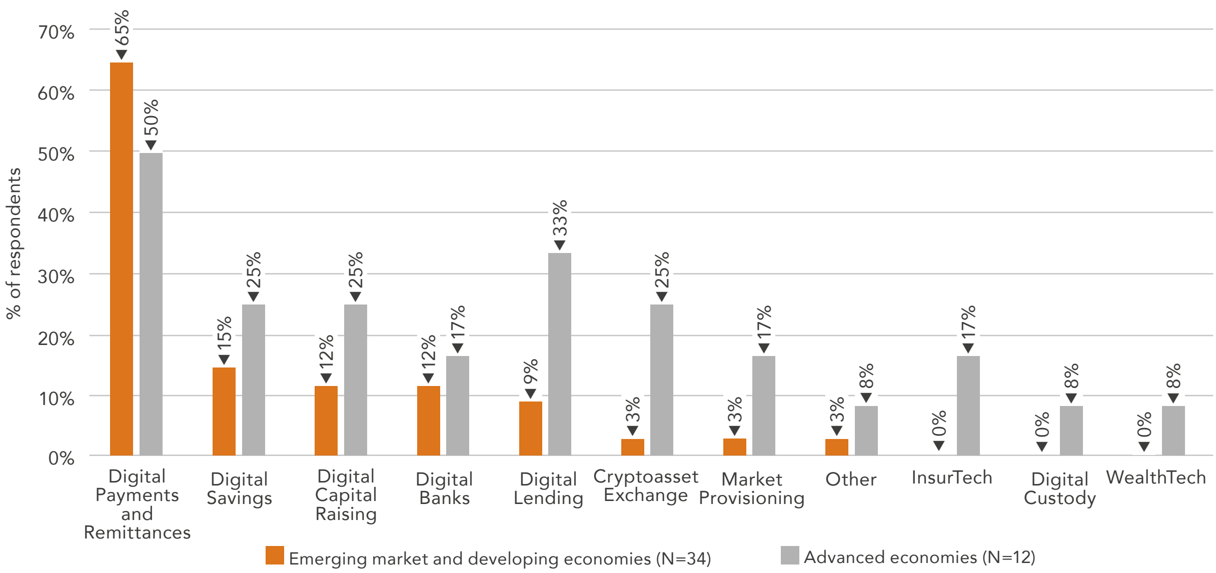


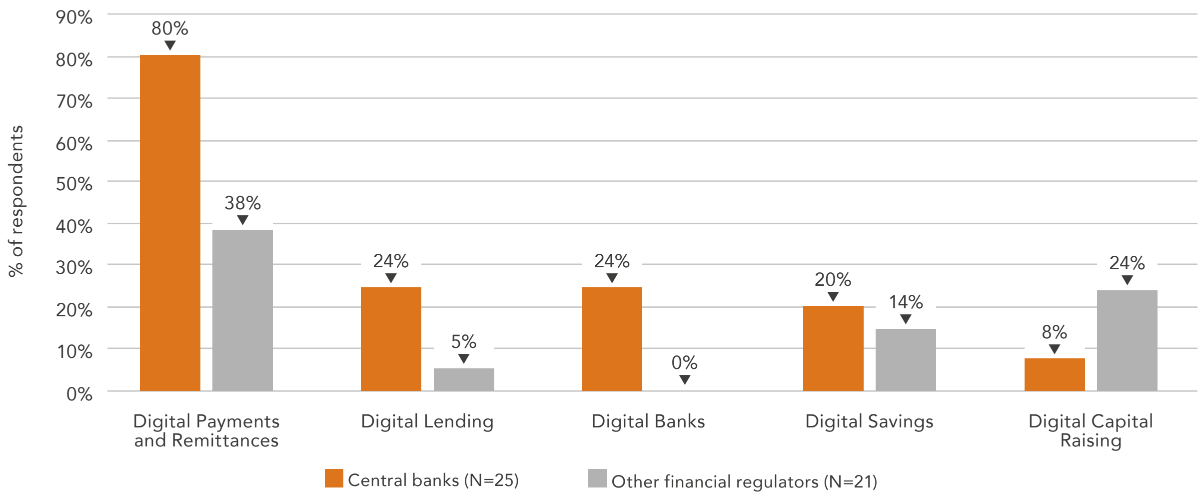
Figure 4.4 below illustrates that 65% of respondents in emerging market and developing economies have issued measures regarding digital payments and remittances, compared to 50% of those in advanced economies. This may not be considered surprising, given that payments and remittances are typically the largest FinTech sector in EMDEs, particularly in Sub-Saharan Africa. As illustrated in Chapter 3, regulators themselves have most strongly identified increases in the usage and offering of digital payments and remittances during the Covid-19 pandemic, when physical alternatives were not accessible or preferable.

Figure 4.4 FinTech sector specific measures – Emerging market and developing economies versus Advanced economies (N=46)



In addition to the above, a comparison of the relevant measures by different types of regulators in Figure 4.5 below indicates that measures in this sector have been undertaken more frequently by central banks (80% of respondents) in comparison to other financial regulators (38%). This may be attributed to the general primary remit of central banks over the payments sector.

Figure 4.5 FinTech sector specific measures - Central banks versus Other financial regulators (N=46)



In the digital payments and remittances sector, the types of measures that have been implemented broadly fall into two areas. The first is related to the temporary waiving of transaction fees (partially or wholly) for payments and remittances. This is particularly evident in jurisdictions where mobile money is prevalent.[31] An example from the East Asia and Pacific region is the temporary waiver of all fees on domestic and international remittances made using a mobile money platform. Several SSA jurisdictions also cited the temporary lowering of mobile money transaction fees. In another jurisdiction, costs to merchants were reduced and commissions paid by merchants on e-money transactions were waived. Elsewhere, digital payments/transfers were made free for customers, including MSMEs.

The reduction or waiver of transaction fees was not necessarily mandated. For instance, one regulator in the East Asia and Pacific region highlighted that they:

"…recommended, not mandated, a waiver in fees but the decision to change was voluntary."

Such measures may also introduce tension between the regulator and the regulated. One regulator in the South Asia region illustrates this:

"We removed fees for interbank/online money transfers. But banks want this to be reinstated and we expect that FinTechs will want the same. We will work with payment providers including banks and FinTechs to come up with a new scheme that is more acceptable to everyone. This will address the pre-Covid-19 environment where fees and charges were very high."

The second area of measures relates to the increase of transaction limits/thresholds. Examples include increases in daily maximum account balance and wallet limits, and increases in contactless payment and mobile money limits.

These two categories of measures have been part of the regulatory drive to encourage cashless transactions to minimize the spread of Covid-19. The increased usage and offering of digital payments and remittances, (as set out in Chapter 3) is likely a result of these interventions. This impact may have been much less prominent in jurisdictions where the digitalization of finance is considerably more advanced, as one regulator in Europe and Central Asia illustrates:

"Nearly all transactions are already non-cash based, so measures taken by other markets to promote digitalization of finance are not needed."

CASE STUDY - KENYA'S REGULATORY RESPONSE TO COVID-19 IN THE MOBILE MONEY SECTOR

The study findings indicate that the majority of FinTech-specific measures introduced by regulators in response to Covid-19 have been targeted at the digital payments and remittances sector (section 4.2). Mobile money is a leading sub-sector in this area and Kenya's regulatory response exemplifies the introduction of both temporary and permanent measures.[32] The Central Bank of Kenya implemented several emergency measures relating to the increase in transaction and balance limits, and fee waivers.

Transaction and balance limits were increased by 114% from KES 70,000 ($643) to KES 150,000 ($1,379) and from KES 140,000 ($1,287) to KES 300,000 ($2,758) respectively, accompanied by the removal of the monthly total limit. This measure was initially introduced from 16 March 2020[33] and was subsequently made permanent.[34] CBK has reported that the measure has led to "increased usage at higher amounts and greater convenience."[35] Further, GSMA (2020) suggests that the formalization has brought connected benefits for customers such as promoting "…the sustained use of mobile money by the SME sector where participation has been limited due to transaction limits."[36]

Other measures CBK has taken in response to Covid-19 have been more temporary in nature. This includes requiring the whole or partial waiving of transaction fees by mobile money providers in several areas. Charges were fully waived for transactions of up to KES 1,000 ($9). Additionally, the current tariff for transactions above KES 70,000 ($643) is to apply for transactions up to KES 150,000 ($1,379). Lastly, Payment Service Providers and commercial banks are prohibited from charging for transfers between mobile money wallets and bank accounts. These were to apply from 16 March until 30 June 2020 but have been extended until 31 December 2020.[37]

In contrast, in other jurisdictions, fee waivers have been re-introduced. Examples include Ghana, Zambia, Liberia, Uganda, and Lesotho.[38] It is also notable that the central bank in Ethiopia opted to allow telecoms firms to provide mobile money services for the first time, during the pandemic.[39]

This case study has provided illustrative examples of the implementation of nimble and agile regulatory measures in the mobile money sector in response to the pandemic. As set out in Chapter 6 below, regulators may benefit from considering the application of such measures in their jurisdiction.

With respect to other FinTech sectors, the most frequently cited measure is the issuance of regulations and guidelines to govern activities in specific FinTech sectors. While a number of these were cited as under development pre Covid-19, there are indications that the pandemic may have increased their priority on the regulatory agenda.

Figure 4.6 below sets out examples of a limited number of FinTech sector specific measures undertaken by regulators in light of Covid-19.

Figure 4.6: Examples of Covid-19 FinTech specific regulatory measures

FINTECH SECTOR	EXAMPLES OF REGULATORY MEASURES
Digital Payments and Remittances	Waiver of all/partial transaction fees.
	Increase of transaction limits/ thresholds.
Digital Savings or Deposits	New regulation to enable the provision of basic accounts for companies. This permits extension of amounts they can transact/hold as deposits.
	Cheque deposit via mobile phone, eliminating the need to visit branches.
Digital lending	Digital lending providers authorized to issue credit cards and fund operations with resources from the jurisdiction's development bank, targeting the underserved.
	National project for SME credit scoring to support digital lending.
Digital capital raising	Developing hybrid crowdfunding donation and debt regulations.
	Reviewing framework on use of Distributed Ledger Technology/Blockchain to govern, for example, the tokenization of assets.
Digital Banks	Developing digital bank regulations and frameworks.
	Increased transaction limits on transactions.
	Regulation on the promotion of digital banking.
Crypto asset exchange	Specific regulations issued.
	Draft Guidelines issued for Virtual Asset Service Providers.
InsurTech	Facilitation of InsurTech initiatives.
WealthTech	Issuance of robo-advisory regulations.
Market provisioning	Easing of eKYC checks.

4.3 FinTech and Covid-19 Relief Efforts

Respondents were also asked whether FinTech firms have supported their jurisdiction's Covid-19 relief efforts and/or, alternatively, whether there are areas where FinTech providers can potentially contribute to Covid-19 relief efforts. Figure 4.7 below indicates the instances where FinTechs have been able to either offer ongoing or potential support in a wide range of activities, from becoming a 'conduit' for the digital delivery of governmental stimulus funding, facilitating digital payments, supporting government loan guarantee measures to being directly involved in contact tracing and data analytics in relation to Covid-19.

Figure 4.7: Regulator awareness of FinTech providers currently supporting Covid-19 relief efforts, and perception of potential for this

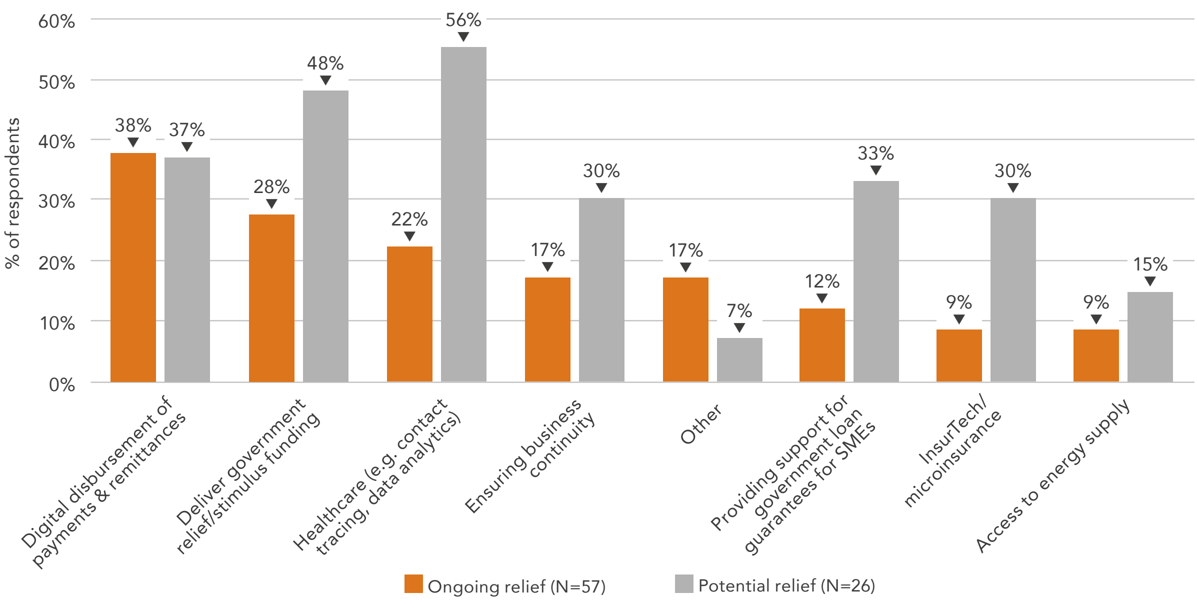
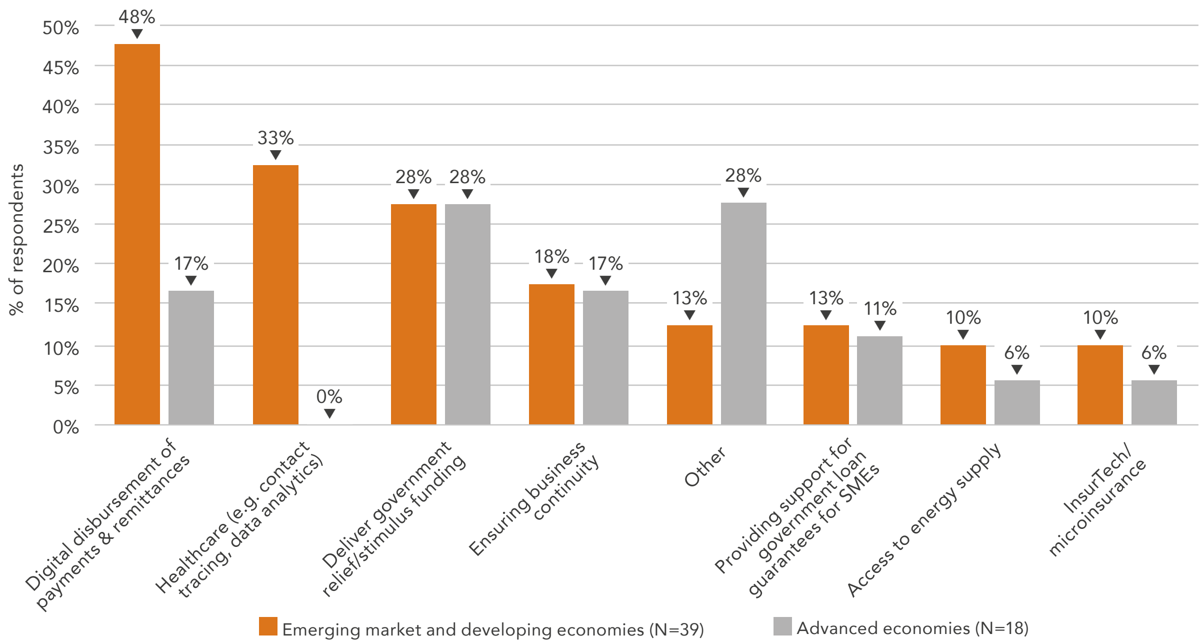


Figure 4.8: Regulator awareness of FinTech providers currently supporting Covid-19 relief efforts - Emerging market and developing economies versus Advanced economies



A considerable number of regulators cited their awareness of FinTech providers' current involvement in Covid-19 relief, as shown in Figure 4.8 above. The top three areas of ongoing support by FinTech firms are the digital disbursement of payments and remittances (particularly in EMDEs), healthcare (referenced by 33% of respondents in EMDEs) and the delivery of government relief/stimulus funding.

CASE STUDY - REGULATORY INNOVATION INITIATIVES - CENTRAL BANK OF JORDAN (CBJ)

This study has illustrated that many regulators around the world have responded to the pandemic through the use of Covid-19-specific regulatory measures and regulatory innovation initiatives to support both inclusive financial innovation and economic relief. The Central Bank of Jordan (CBJ) provides an illustrative example of this, quickly enacting a number of measures to both embrace opportunities and mitigate the potential costs and challenges of the pandemic.

Firstly, in order to support the digitalization of payments, the CBJ has utilized mobile wallets to distribute government aid and salary payments to help limit the spread of infection. This has been targeted at specific demographics, such as army personnel and the retired.[40][41]

Relatedly, the CBJ has put measures in place to provide access to digital financial services to low income Jordanians and refugees. For example, in partnership with the World Food Program (WFP), it is to develop a digital platform to digitize payments for WFP beneficiaries.[42]

Secondly, the CBJ has launched the "COVID-19 Response Challenge Fund" to encourage the acceptance and usage of digital payments through digital wallets. The fund encourages payment services providers, merchants and users (particularly vulnerable groups) to shift from using cash to digital financial services.[43]

A number of other jurisdictions have also adopted measures to facilitate and/or encourage the usage of digital payments. For example, the Central Bank of Egypt has launched an eKYC solution to facilitate the electronic opening of bank accounts, while simultaneously increasing transaction limits for mobile financial services.[44]

Finally, the Central Bank of Jordan provides an illustrative example of the modification of a regulatory innovation initiative in light of the pandemic through their regulatory sandbox, which was launched in 2018. In response to the pandemic, the CBJ sought to explicitly target and encourage applicants from firms whose innovations might specifically help address Covid-19 related challenges, under the banner of "FinTech in Covid-19 and Beyond".[45]

Figure 4.9 below provides examples of ongoing FinTech involvement in Covid-19 related relief efforts across both EMDEs and advanced economies.

Figure 4.9: **Examples of ongoing FinTech involvement in Covid-19 related relief efforts**

AREA	NATURE OF FINTECH PROVIDERS' INVOLVEMENT IN RELIEF EFFORTS
Digital disbursement of payments and remittances	Provision of digital and payments infrastructure.
	Promotion of digital payments during the Covid-19 crisis.
	Employment of mobile wallets in G2P payments to distribute funds to those without bank accounts and to vulnerable groups.
	Reduction/waivers of transfer fees for interbank and mobile money transactions.
	Facilitation of inward remittances.
	Provision of remote bill payments, including waiving transaction fees for customers.
Delivering government relief/ stimulus funding	Administration of Government to Person (G2P) payments and emergency funds.
	Managing and facilitating SME loans.
	Offering solutions for vulnerable populations.
Healthcare	Provision of contact tracing apps.
	Provision of data for contact tracing.
	Facilitation of payments for health services such as telemedicine.
	Provision of free insurance coverage for key workers.
	Provision of donation-based crowdfunding targeted at healthcare.

4.4 Internal challenges to developing regulatory responses to FinTech in light of Covid-19

Financial regulators face considerable challenges due to Covid-19. While not all regulators may have the remit or regulatory framework to support the development of FinTech-specific measures, the findings from the study indicate a number of key challenges, as illustrated in Figure 4.10 below.

Figure 4.10: Internal challenges to developing regulatory responses to FinTech (N=83)

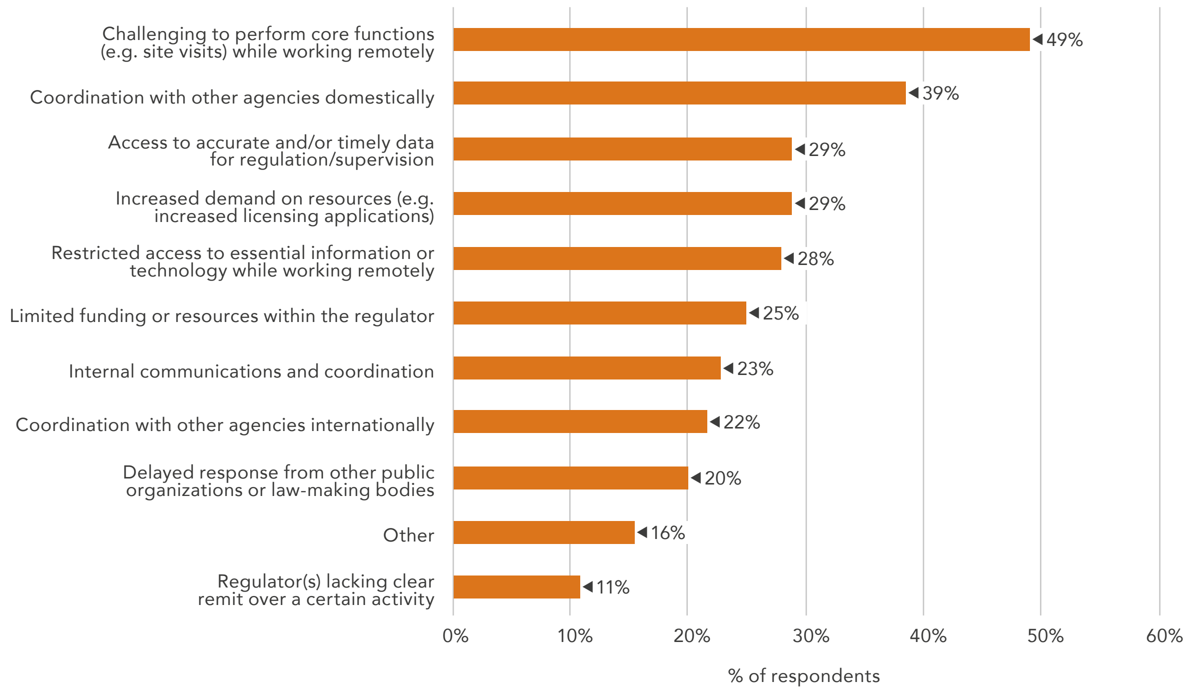
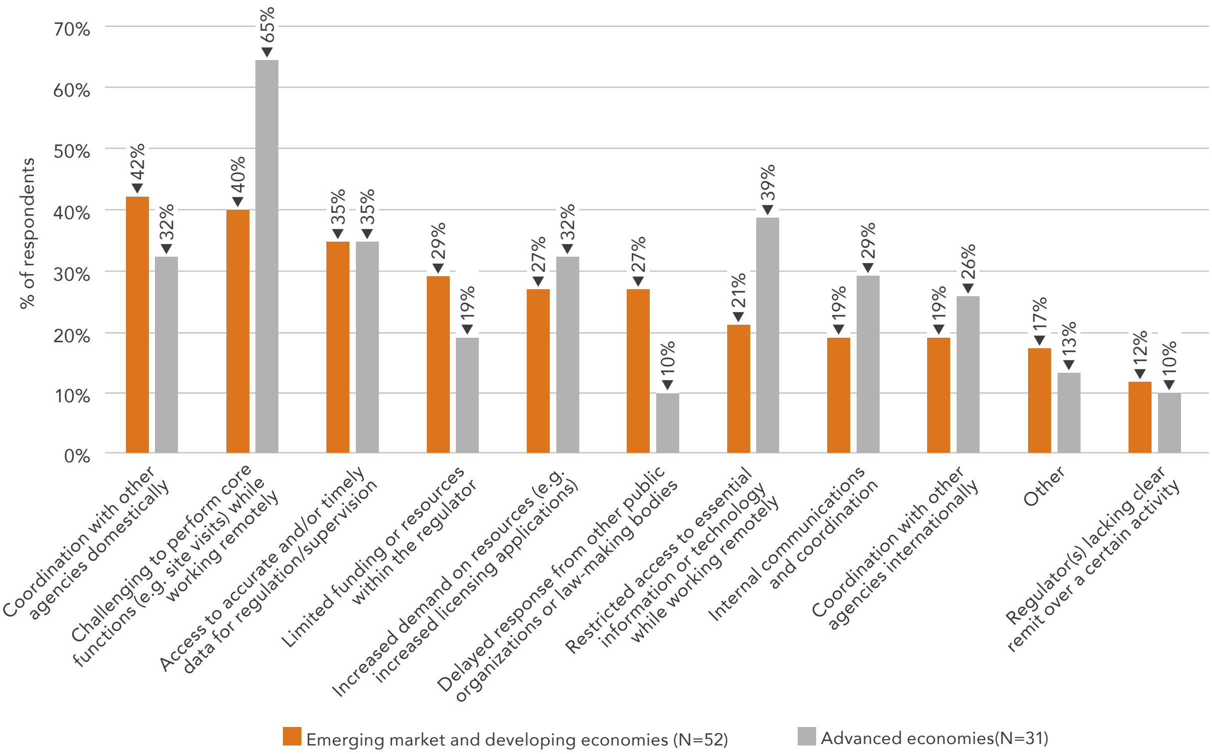


Figure 4.11 sets out how regulators in both advanced economies and emerging market and developing economies are facing a number of similar and differing challenges in developing their regulatory response to FinTech in light of Covid-19. Regulators were permitted to indicate as many challenges as desired, and clearly some are inter-related. For example, the most frequently identified challenge was that of performing core functions while working remotely, with almost one in two respondents selecting this. Not only does this present difficulties for carrying out activities that are customarily undertaken in-person (e.g. site visits), there are equally technological challenges with regard to the remote access to IT infrastructure, and access to accurate and/or timely data (identified by 29% of respondents). Given the constraints that many financial service providers are facing, timely regulatory and supervisory reporting is also a pressing challenge.

Figure 4.11: Internal challenges to developing regulatory responses to FinTech – Emerging market and developing economies versus Advanced economies (N=83)



Some of the systems regulators use (including RegTech/SupTech solutions) may have previously been restricted to on-site use given the sensitive nature of financial regulatory information. Alternatively, and particularly in EMDEs, even where off-site system accessibility was provided, other challenges such as unreliable internet connections, bandwidth issues, and power outages which affect accessibility to the internet, present additional difficulties for remote working. Summing up the challenges of remote working, a regulator from the LAC region explained that:

"Of our core activities (regulation, authorization, supervision and sanctioning), the most affected by the lockdown are authorization processes, on-site supervision and imposition of sanctions, because of the restricted access to essential information as well as limitations in the physical inspection of intermediaries' operations."

Certain challenges are cited more frequently by regulators in EMDEs, including regarding coordination with other agencies domestically (42% versus 32% for advanced economies). This finding is reflective of World Bank and CCAF (2019)[46], which found that regulators in low-income jurisdictions cite regulatory coordination as a challenge, even during 'normal' times.[47] This challenge may be particularly pronounced in the case of FinTech activities cutting across multiple regulatory bodies. As one regulator from Sub-Saharan Africa illustrated:

"Before Covid-19 the challenge of inter-agency coordination existed; with Covid-19, the problem became a hindrance."

Limited funding or resources within the regulators is also a key challenge for EMDEs (29% versus 19% for advanced economies) as one might expect. This is again a complementary finding to World Bank and CCAF (2019).[48]

Figure 4.12 below illustrates how the challenges faced by regulators differ according to the stringency of the containment and closure measures[49] undertaken in their jurisdiction. This reveals that the challenges of performing core functions while working remotely, restricted access to essential information or technology, and access to data are almost equally challenging in higher versus lower stringency jurisdictions. However, coordination with domestic agencies is, as expected, more challenging in those jurisdictions with higher stringency measures (46% versus 34% for lower stringency).

Figure 4.12: Internal challenges to developing regulatory responses to FinTech (N=79)

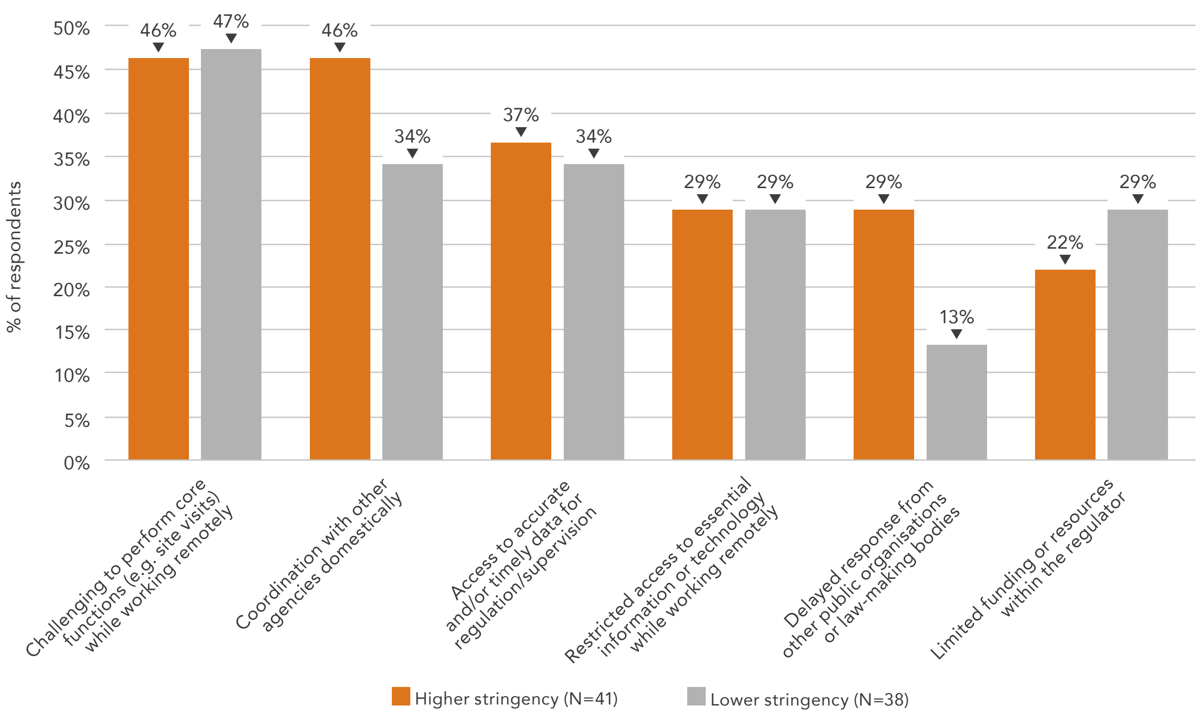
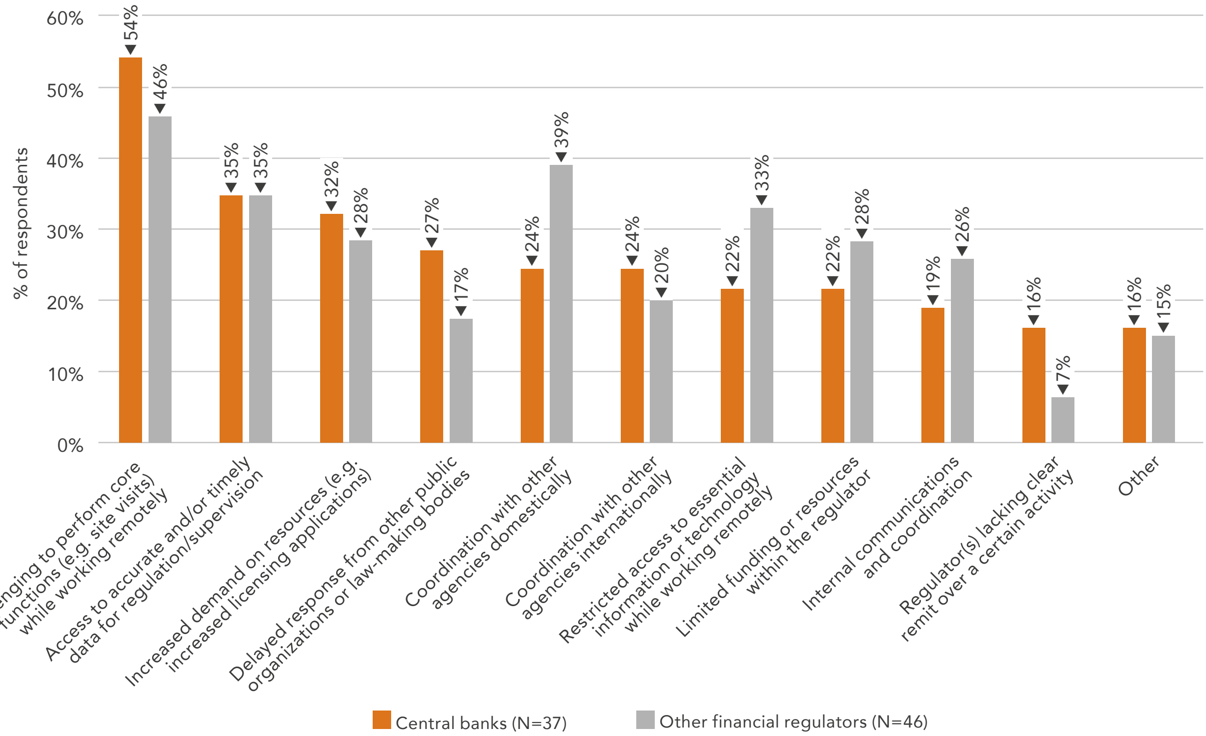


Figure 4.13 below compares the challenges faced by central banks as compared to other financial regulators. Central banks more frequently cited challenges relating to performing core functions while working remotely (54% versus 46% for other financial regulators). However, coordination with other domestic agencies was cited as more difficult for other financial regulators (39% versus 24% of central banks). This may be because central banks tend to be the primary FinTech regulator in multi-regulator jurisdictions, requiring greater flexibility on the part of other financial regulators. Other financial regulators also more commonly face the challenge of limited funding or resources, with 28% of respondents highlighting this compared to 22% of central banks.

Figure 4.13: Internal challenges to developing regulatory responses to FinTech - Central banks versus Other financial regulators (N=83)



4.5 FinTech Regulatory Support and Assistance in light of Covid-19

This Study also seeks to identify the specific types of assistance which regulators would most benefit from in order to support their work on FinTech and DFS in light of Covid-19. Regulators were asked to identify types of assistance across three areas: FinTech policy and regulation, operational resilience and business continuity, and regulatory innovation initiatives. Respondents were able to select one type of assistance for each of the three areas mentioned above.

At the aggregate level, as Figure 4.14 illustrates, the most important type of assistance regulators stated they would benefit from is 'skills development', with 80% of respondents stating this as the most important across one or more of the three areas. The second most cited type of assistance is that of 'technical support', cited by 67% of respondents. RegTech and SupTech are a particular theme, with respondents requesting support to develop both roadmaps and strategies, but also specific technical tools. By way of example, one regulator in the East Asia and Pacific region advised that they require technical support in:

"[A]utomated tools to aid supervisory procedures, particularly those firms engaged in regulated activities without prior engagement with the regulators.".

28% of respondents identified 'content expertise' as the most important type of assistance across one or more of the three areas. Specific topics include the development of regulatory frameworks for FinTech, how to conceptualise and develop regulatory innovation initiatives, and FinTech domain specific knowledge. For instance, one capital markets regulator in Sub-Saharan Africa requested:

"Information and examples of policies on the development of FinTech in capital markets, such as crypto-assets".

Figure 4.14: Types of assistance regulators would most benefit from in order to support their work on FinTech in light of Covid-19 (N=83)

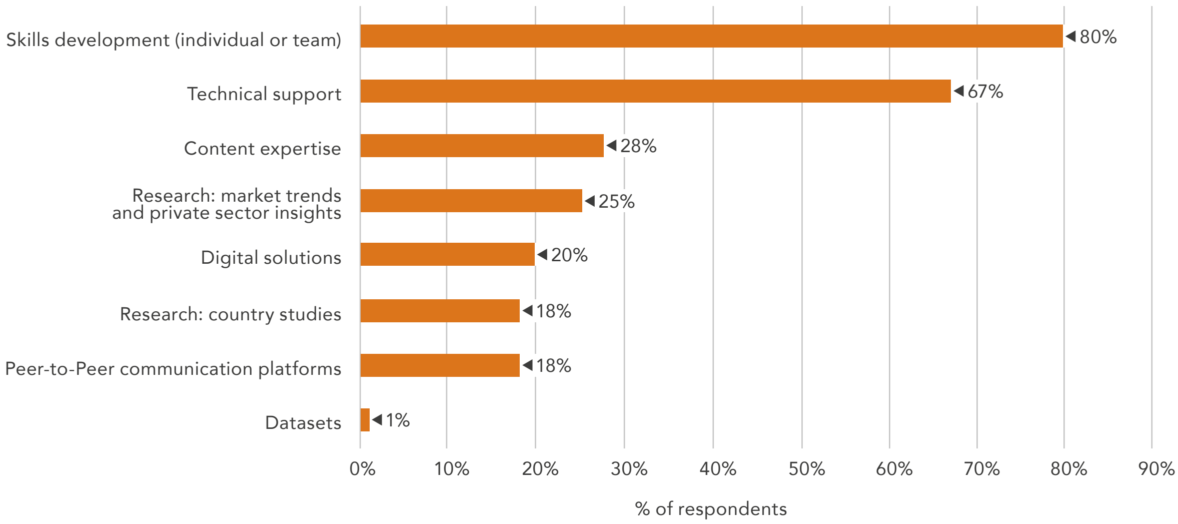
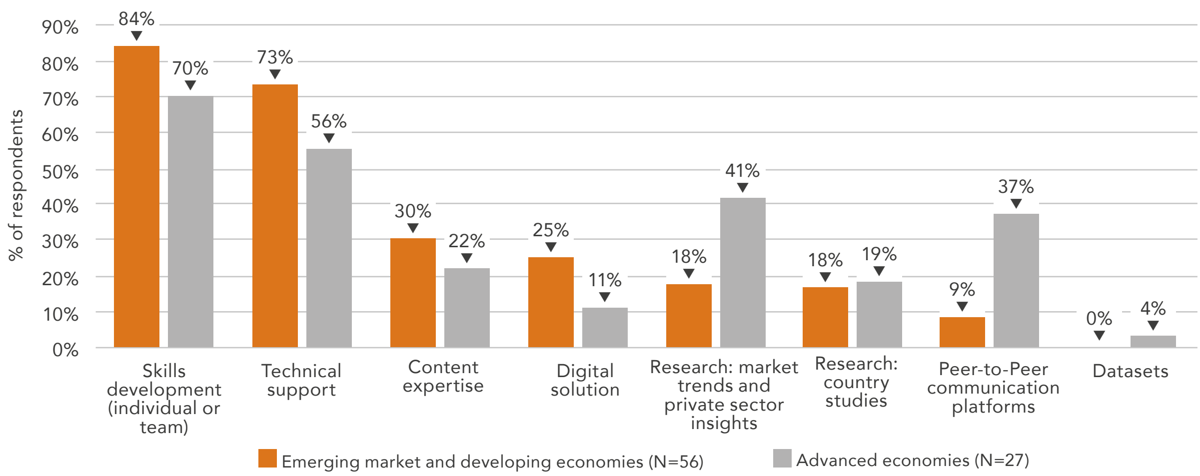


Figure 4.15 below sets out the responses by advanced economies and emerging market and developing economies. Skills development is a consistent theme highlighted by both groups of regulators, while technical support is particularly desired by regulators in emerging market and developing economies.

Figure 4.15: Types of assistance regulators would most benefit from in order to support their work on FinTech in light of Covid-19 - Emerging market and developing economies versus Advanced economies

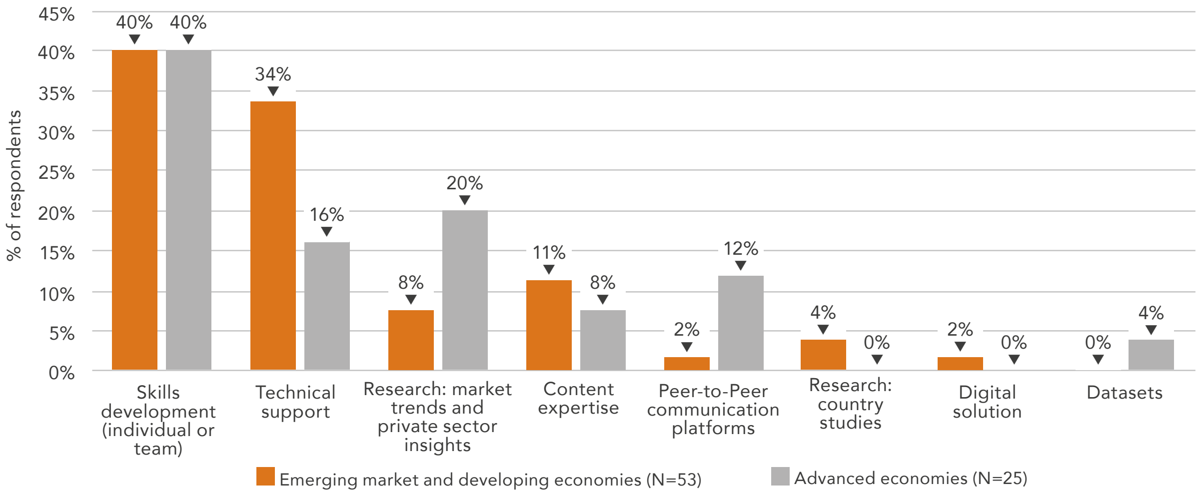


4.5.1 FinTech Policy and regulation

Respondents were asked what specific types of assistance they think their organization would most benefit from in order to support their *FinTech policy and regulation work* in light of Covid-19. Figure 4.16 sets out the responses to this.

Respondents across EMDEs and advanced economies equally cited 'skills development' as a potentially beneficial type of assistance in support of their work on FinTech policy and regulation. However, advanced economies and emerging market and developing economies differed in opinion regarding the importance of types of technical support, content expertise and research. Indeed, emerging market and developing economies are more likely to cite technical support (34% versus 16% for advanced economies) and content expertise (11% versus 8% for advanced economies).

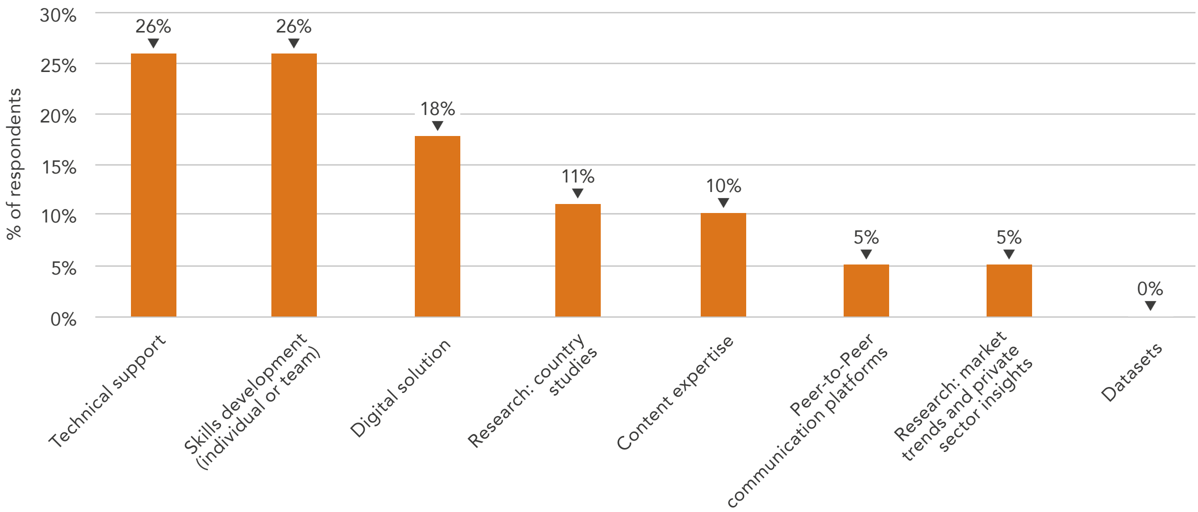
Figure 4.16: Types of assistance regulators would most benefit from in order to support their work on FinTech policy and regulation in light of Covid-19 - Emerging market and developing economies versus Advanced economies



4.5.2 Regulators Operational Resilience/Business continuity

Respondents also identified the specific types of assistance they believe their organization would most benefit from in order to support their operational resilience/business continuity in light of Covid-19. The most significant type of assistance to an individual regulator across their policy and regulatory workstreams on FinTech is that of technical support (26%) and 'skills development' (26%), followed by digital solutions (18%). Respondents in EMDEs were almost twice as likely (21% vs 11%) to cite digital solutions than those from advanced economies.

Figure 4.17: Types of assistance regulators would most benefit in order to support their work on operational resilience/business continuity in light of Covid-19 (N=62)

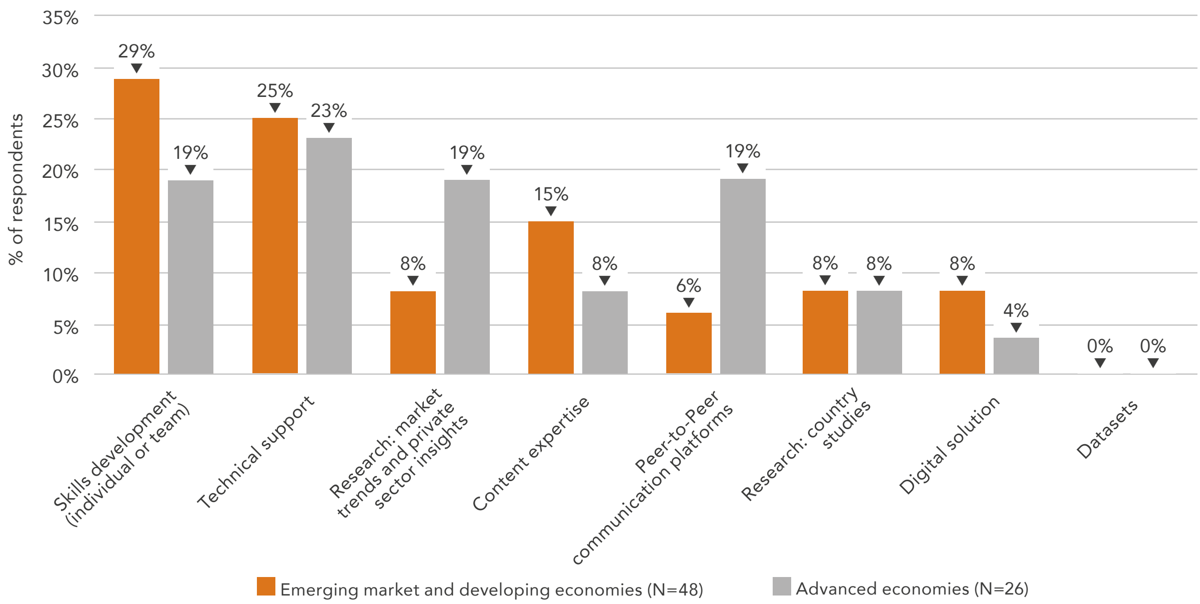


4.5.3 Regulatory Innovation Initiatives

Chapter 5 below sets out further detail regarding regulatory innovation initiatives. Regarding the types of assistance requested by regulators in this domain, EMDE respondents identified some significant differences in priorities compared to those in advanced economies. Regulators from

EMDEs tended to underline the importance of skills development, technical support, content expertise and digital solutions. This is illustrated in Figure 4.18 below. Examples included how to strike an appropriate balance between innovation and consumer protection, research on international regulatory benchmarks, and greater coordination on cyber-security enforcement.

Figure 4.18: Types of assistance regulators would most benefit from in order to support their work on regulatory innovation initiatives in light of Covid-19 – Emerging market and developing economies versus Advanced economies (N=74)



4.6 Mapping Regulatory Benchmarking Patterns

Respondents were asked whether they had studied or referenced other jurisdictions in order to inform their regulatory approach to FinTech in light of Covid-19. Previous studies have noted that historical ties, legal traditions and language typically shape benchmarking patterns, but there are also regional and global leaders that regulators generally look to for examples and references.[50]

The study findings indicate that in developing their regulatory approach to FinTech in light of Covid-19, regulators are more likely to look to those within their region. Some regulators explained this tendency towards a regional focus as informed by the need to learn from jurisdictions that are at "at the same stage of economic development." Figure 4.19 below summarizes the jurisdictions which are most benchmarked against by region.

Figure 4.19: Most benchmarked jurisdictions within selected regions in 2020 and 2019

REGION	MOST BENCHMARKED JURISDICTIONS WITHIN REGION— 2020	MOST BENCHMARKED JURISDICTIONS WITHIN REGION—2019
East Asia and Pacific	Singapore	Singapore, Malaysia
Europe and Central Asia	European Supervisory Authorities, United Kingdom,	United Kingdom, Spain
Latin America and the Caribbean	IOSCO[51]	Mexico
Middle East and North Africa	UAE	UAE
Sub-Saharan Africa	Kenya	Kenya

It is also notable that at times of crisis regulators appear to look to networks of their peers, such as the Global Financial Innovation Network (GFIN) and the Alliance for Financial Inclusion (AFI), as well as to global regulatory bodies such as the International Organization of Securities Commissions (IOSCO). As one regulator stated:

"Our GFIN membership has really supported us in sharing learnings and experiences with other global regulators on mutual policy challenges."

Moreover, particularly in light of Covid-19, jurisdictions have been utilizing policy and other trackers to follow measures which have been introduced in response to the pandemic. This includes trackers provided by the Alliance for Financial Inclusion (AFI), the International Monetary Fund (IMF) and other multilateral development banks.

5. Covid-19 and Regulatory Innovation Initiatives

5. Covid-19 and Regulatory Innovation Initiatives

Many regulators around the world have responded to the challenge of balancing the benefits and risks of technology-enabled financial innovation and the increasing digitalization of the global economy by innovating themselves. These regulatory innovation initiatives include innovation offices, regulatory sandboxes, RegTech/SupTech programmes, and digital infrastructure initiatives. This chapter considers the impact of Covid-19 on these important regulatory initiatives.

5.1 The impact of Covid-19 on Regulatory Innovation Initiatives

Figure 5.1 illustrates the impact of Covid-19 on each of these regulatory innovation initiatives, with Covid-19 impacting 80% or more of these in one way or another. Digital infrastructure (96% of respondents) and RegTech/SupTech (92% of respondents) initiatives have been the most impacted by Covid-19. Regulatory sandboxes are both the most frequently cited regulatory innovation initiative (75 responses), and the initiative least impacted by Covid-19 (80% of respondents).

Figure 5.1: The impact of Covid-19 on regulatory innovation initiatives

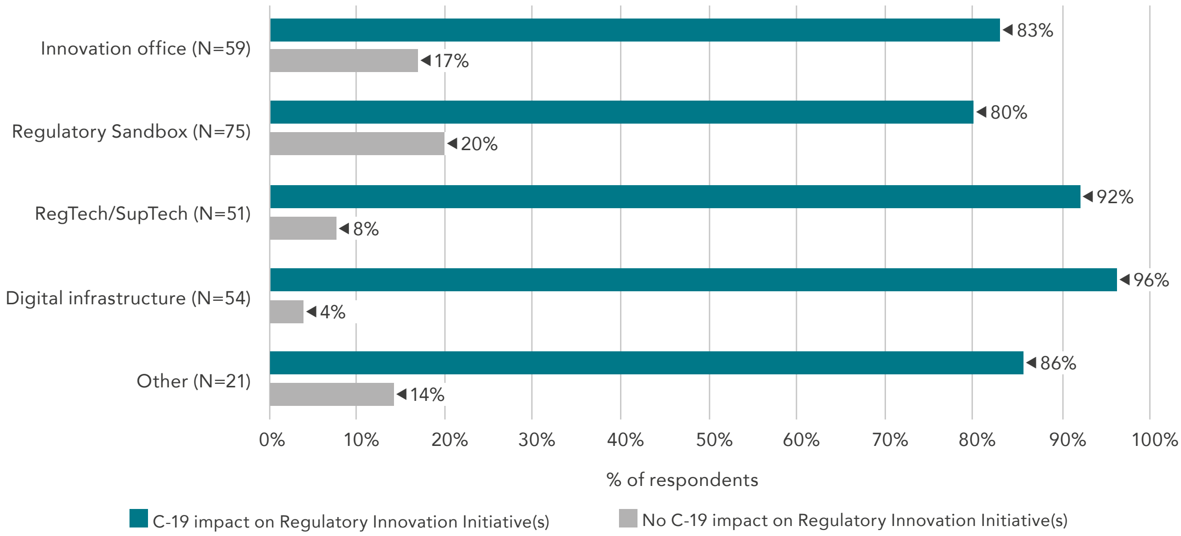
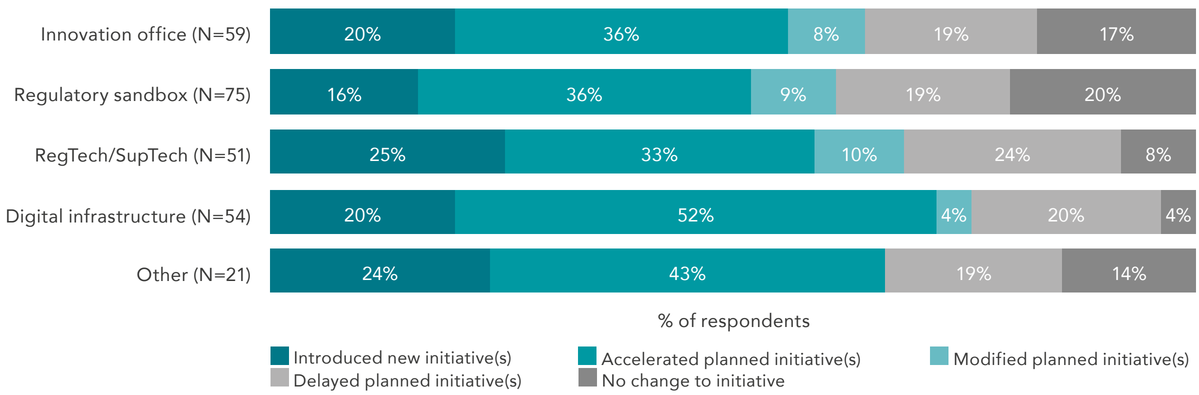


Figure 5.2 below illustrates the specific impact of Covid-19 on various regulatory innovation initiatives in more detail. It is significant that no respondents reported the cancellation of a regulatory innovation initiative due to Covid-19. In fact, regulators typically cited that they have either introduced a new regulatory innovation initiative or have accelerated the implementation of existing regulatory innovation initiatives in light of Covid-19.

Figure 5.2: The impact of Covid-19 on regulatory innovation initiatives - disaggregated



The most frequently cited response across each regulatory innovation initiative is the acceleration of a given initiative, with innovation offices and regulatory sandboxes both accelerated by 36% of respondents, RegTech/SupTech initiatives by 33% and digital infrastructure initiatives by 52%.

The second most common response is the introduction of a new regulatory innovation initiative in light of Covid-19. For example, one in four responses regarding RegTech/SupTech cited the introduction of an initiative during Covid-19. This may be an indication of the importance of RegTech/SupTech solutions in providing support to a range of core regulatory activities at a time of crisis. For instance, a number of regulators reported that they have launched new RegTech/SupTech initiatives to help improve regulatory co-ordination between regulatory authorities and FinTech firms at both local and cross-border levels.

Covid-19 has also delayed regulatory innovation initiatives, with typically one in five respondents on each initiative citing a delay. These delays are often attributed to resource constraints and the reprioritization of regulatory objectives in light of Covid-19.

Figure 5.3 below provides illustrative examples of Covid-19 related developments with respect to regulatory innovation initiatives.

Figure 5.3 Examples of Covid-19 specific Regulatory Innovation Initiatives

REGULATORY INNOVATION	COVID-19 SPECIFIC INITIATIVES AND EXAMPLES
Innovation office	Launch of bespoke support services to support business models responding to Covid-19.
	Holding remote meetings with firms.
	Providing further clarifications on Covid-19 related innovations, products and services such as e-wallets, eKYC, financial literacy campaigns, and other Covid-19 related regulatory measures.
	Hosting virtual 'TechSprints' and hackathons.
Regulatory sandbox	Soliciting applications from FinTech providers which can support the response to Covid-19.
	Accelerating plans to develop digital sandboxes.
	Digital onboarding and licensing.
RegTech/SupTech initiative	Digital regulatory reporting programmes accelerated.
	Chatbots piloted to field queries from supervised firms.
	New data collection methods to quickly collect new, relevant data from firms in order to identify where to focus efforts.
	Funding enhanced cybersecurity surveillance capabilities.
	Developing systems to enable 'real-time' client money reconciliation and auditing.
Digital infrastructure	Developing a digital collateral registry for SMEs to support access to funding.
	Facilitating an innovative virtual workspace.
	Developing a centralized digital identity scheme.

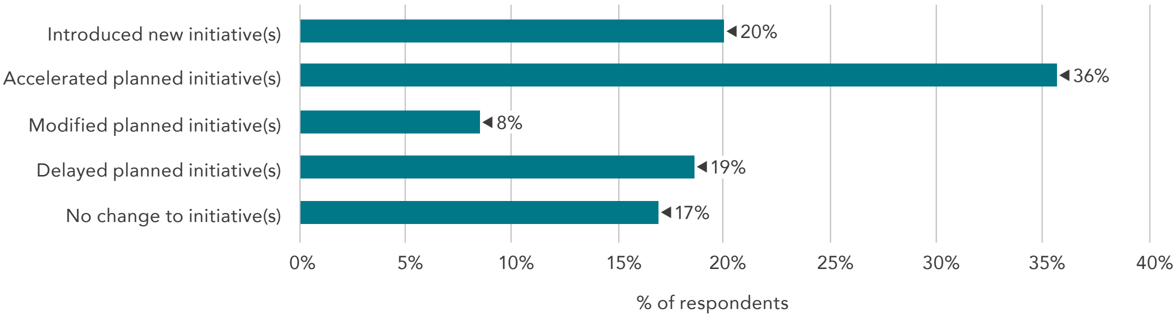
5.1.1 The impact of Covid-19 on innovation offices

An innovation office is a dedicated function within a regulator which engages with and provides regulatory clarification to innovative financial services providers. This can help to reduce regulatory uncertainty through providing a channel for innovators to engage with regulators to better understand regulatory frameworks and their requirements.

Figure 5.4 below illustrates that Covid-19 has unevenly impacted the development of innovation offices by regulators. Just over a third of respondents (36%) have accelerated the development of their planned or existing innovation offices in light of Covid-19. This acceleration is greatest in the Sub-Saharan African region, followed by MENA and Latin America and the Caribbean regions. 20% of respondents have introduced a new innovation office. While a number of these were in development prior to Covid-19, regulators also shared that innovation offices have been an important means for engaging with, monitoring and understanding the FinTech sector and its development during the crisis period. Innovation offices have equally been used to inform policy formulation and contribute to the development of RegTech/SupTech initiatives. One regulator in the MENA region explained that:

"Covid-19 has shifted our focus towards FinTech/DFS and we are currently in the design stages and discussions for creating an innovation office."

Figure 5.4: The impact of Covid-19 on innovation offices (N=59)



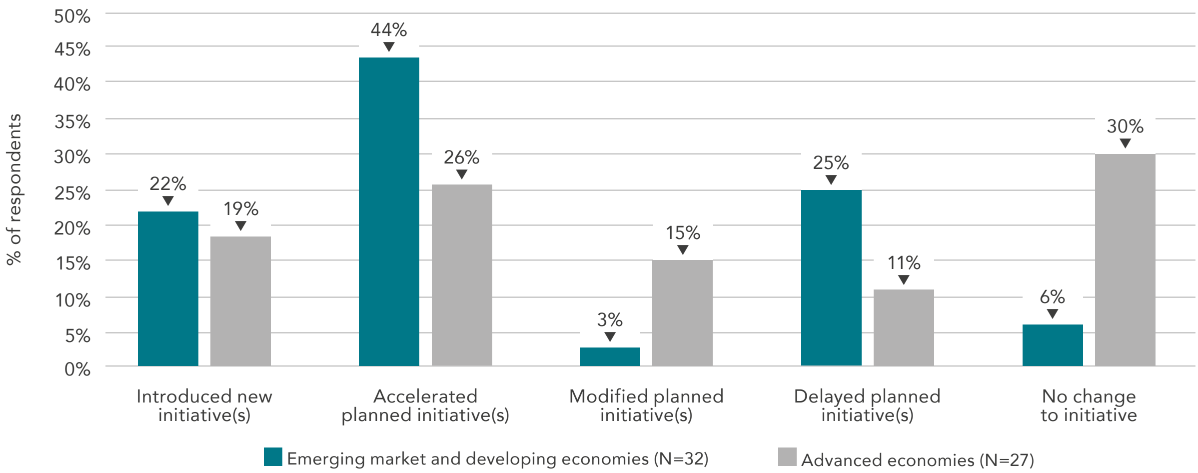
Innovation office initiatives have nonetheless had to adapt to circumstances where physical interactions are inherently limited. In this regard, Covid-19 has forced innovation offices to "go digital", with regulators facilitating virtual and digital access to their innovation office functions both to ensure ongoing engagement with the sector and to collaborate and coordinate with other regulators domestically and internationally. For instance, one regulator in Sub-Saharan Africa reported that while they are in the design stage of their innovation office, they have been conducting webinars with the FinTech sector to ensure regular dialogue and engagement with the market and to consult on their plans for the innovation office virtually.

While no regulator cited the cancellation of an innovation office in light of Covid-19, 19% of respondents recorded a delay. The instances of delays to innovation offices is greatest in Sub-Saharan Africa, followed by Europe and Central Asia, and East Asia Pacific. Among the regulators who recorded a delay, resource constraints and internal prioritization were cited as key factors to the delay.

As illustrated by Figure 5.5 below, the acceleration of innovation office initiatives appears to be greatest among regulators in emerging market and developing economies (44% of respondents compared to 26% in advanced economies). 30% of respondents in advanced economies cited no change to their planned or existing innovation office. For example, one regulator in an advanced economy in Europe and Central Asia advised that:

"Our authorizations and innovation division has operated as normal during Covid-19 and have had no issues in processing applications."

Figure 5.5: The impact of Covid-19 on innovation offices - Emerging market and developing economies versus Advanced economies (N=59)

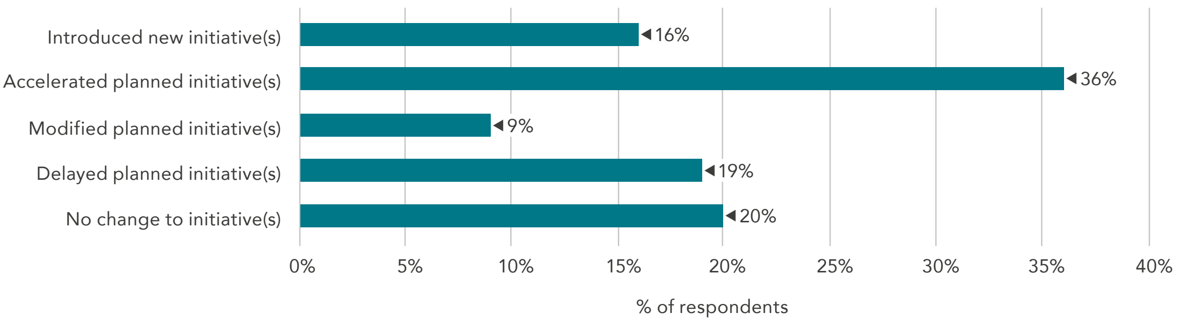


5.1.2 The impact of Covid-19 on regulatory sandboxes

Regulatory sandboxes are formal regulatory programmes that allow market participants to test new financial services or models with live customers, subject to certain safeguards and oversight. At the aggregate level, Covid-19 appears to have acted as a catalyst for regulatory sandbox initiatives.

Figure 5.6 illustrates that 36% of respondents have accelerated their regulatory sandbox initiative, while 16% have introduced a new regulatory sandbox initiative. In the context of Covid-19, regulators see the potential for regulatory sandboxes to help promote new and innovative financial products and services in their jurisdiction, particularly those which promote financial inclusion.

Figure 5.6: The impact of Covid-19 on regulatory sandboxes (N=75)



Covid-19 has prompted regulators to actively adapt their regulatory sandbox initiatives to fit the current circumstances and to provide more 'real-time' support to FinTechs. Among a variety of approaches shared, regulators have notably opted to create Covid-19 specific regulatory sandbox cohorts, while others have added new features to help fast track applications and channel resources within their regulatory sandboxes.

One regulator in the MENA region reported that they are now requiring firms to obtain the relevant license(s) before entering the sandbox to help fast track applications and focus their resources. Another shared that operating a centralized coordinated regulatory sandbox programme across the various domestic regulators has helped minimize coordination issues posed by Covid-19.

Covid-19 is also affecting the exploration of digital regulatory sandboxes. The general concept is that a digital sandbox permits innovative firms to test and develop proofs of concept in an entirely digital testing environment and support innovative firms, tackling challenges caused by the Covid-19 crisis.

CASE STUDY – DIGITALIZING SANDBOXES

This Study has shown Covid-19 to be a catalyst for regulatory sandbox initiatives, finding 36% of respondents accelerating planned sandbox programmes, and 16% introducing new sandboxes.

Some regulators have developed or accelerated plans to establish so-called 'digital sandboxes.' While a regulatory sandbox typically provides support to enable live market testing, digital sandboxes typically seek to provide synthetic financial data, APIs and /or other assets (such as digital platforms) to help firms develop proofs of concept, and create an environment where firms can work with regulators to observe and/or validate potential solutions.[52]

Some regulators have accelerated or adapted their digital sandbox to help meet current challenges. The UK's Financial Conduct Authority, for example, has expedited plans, to support innovative firms looking to tackle challenges relating to specific challenges exacerbated by Covid-19, such as helping detect fraud and scams. Following a 'Data Sprint' with the industry to help develop the data sets for firms to use, it opened for applications to its digital sandbox pilot, in collaboration with the City of London Corporation, in October 2020.[53]

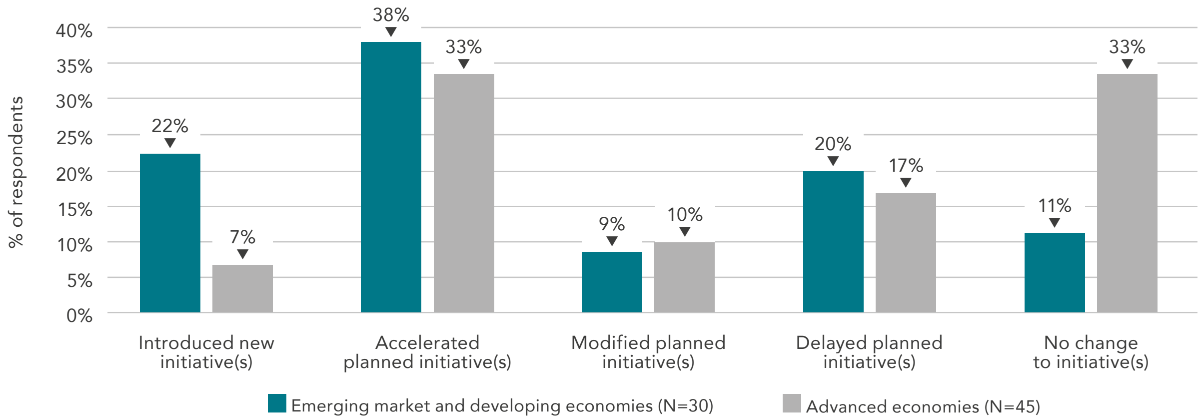
Other regulators have sought to expand their digital sandbox. The Monetary Authority of Singapore, in collaboration with the ASEAN Financial Innovation Network and others, launched their 'digital sandbox', API Exchange (APIX), in 2018, in 2018, enabling financial institutions and FinTechs to collaborate with digital solutions through APIs. In response to the pandemic, APIX has provided all Singapore-based FinTechs six months free access to APIX.[54]

Digital sandboxes may provide a useful test-bed to validate solutions using data, and could assist the development of products that help regulators mitigate risks identified in this study, such as transaction monitoring solutions to minimise fraud, and solutions for more reliable and quicker 'know your customer' verification. Initial questions regulators may want to consider include identifying specific use cases in their jurisdiction this initiative may support, the feasibility of creating data sets that would be of practical benefit to firms, and identifying ways of collaborating with the industry to share learnings and solutions.

However, 19% of the respondents to the question have experienced delays in their regulatory sandbox initiatives as a result of Covid-19. For those in the design stage, this is notably as a result of unfavorable lockdown conditions, resource constraints and difficulties in ensuring face-to-face interactions between consumers and participants. Among those regulators already operating a regulatory sandbox, some have experienced limited applications for participation in the sandbox, and/or sandbox testing periods being delayed or extended (for example due to difficulty in sourcing partners).

As Figure 5.7 demonstrates, regulatory sandboxes in emerging market and developing economies are more likely to have been introduced (22% of respondents) or accelerated (38% of respondents) than those in advanced economies (7% and 33% respectively) in light of Covid-19.

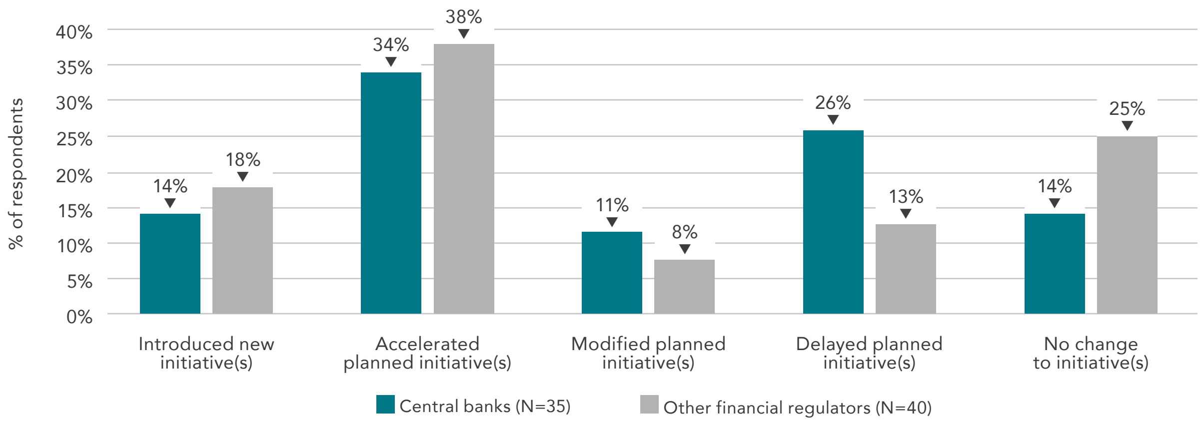
Figure 5.7: The impact of Covid-19 on regulatory sandboxes - Emerging market and developing economies versus Advanced economies (N=75)



Analysis of the data by regulator typology, set out in Figure 5.8 below, illustrates that central bank sandbox initiatives are twice as likely to be delayed compared to other financial regulators (26% vs 13%). By way of example, one central bank in an emerging market and developing economy in Sub-Saharan Africa revealed that:

"Things have slowed down in (our) Sandbox and (during Covid-19) it is difficult to continue interactions with consumers and participants."

Figure 5.8: The impact of Covid-19 on regulatory sandboxes - Central banks versus Other financial regulators (N=75)



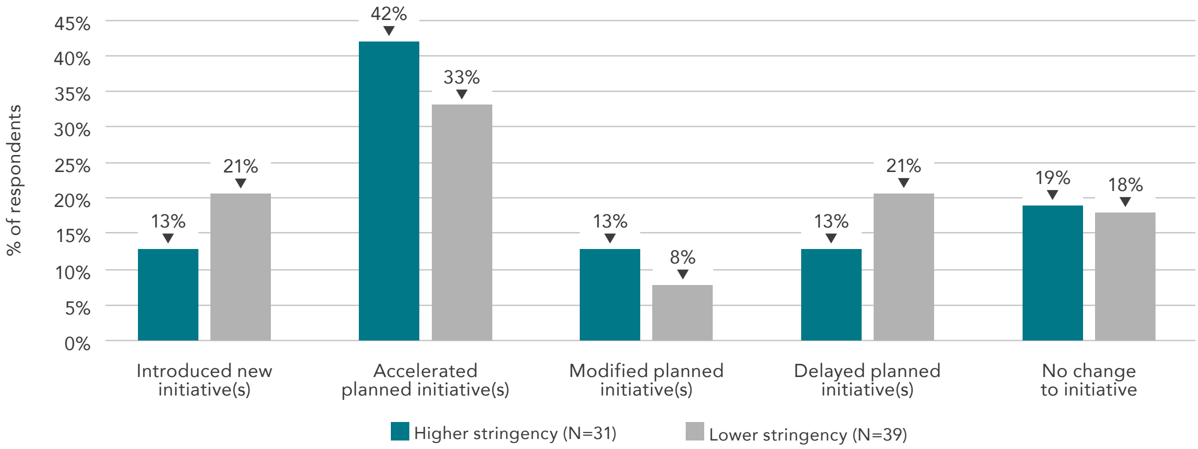
An examination of the data by the degree of stringency of containment and closure measures taken in the jurisdiction demonstrates that regulatory sandboxes are more likely to have been accelerated by regulators in higher stringency jurisdictions (42%) compared to those (33%) in lower stringency jurisdictions, as set out in Figure 5.9 below. One regulator in a higher stringency jurisdiction in Sub-Saharan Africa revealed that:

"Our sandbox is already operational but, we have to modify our strategies to create a new pipeline for sandbox testing (in light of Covid-19)."

Contrastingly, lower stringency countries are more likely (21%) to have introduced new sandbox initiatives compared to higher stringency jurisdictions (13%). For instance, one regulator in a lower stringency region in the MENA region advised that they are:

"…launching our regulatory sandbox in the next couple of weeks which was a direct impact of Covid-19."

Figure 5.9: The impact of Covid-19 on regulatory sandboxes - Higher versus Lower stringency jurisdictions (N=70)

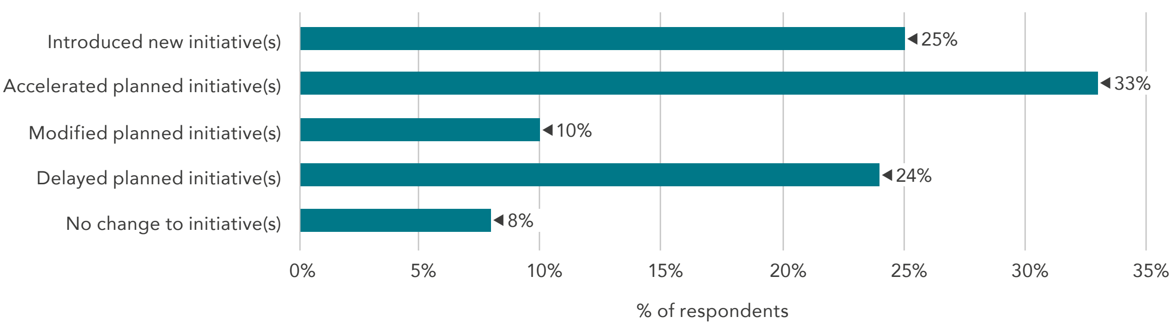


5.1.3 The impact of Covid-19 on RegTech/SupTech initiatives

The terms "RegTech" and "SupTech" are subject to a number of definitions by both financial regulators and the wider financial industry.[55] For the purposes of this study, where respondents were financial regulators, this term is used to refer to the use of technology *by regulators*. SupTech refers to the use of innovative technologies by regulators to tackle regulatory or supervisory challenges. It is a subset of RegTech, which includes any use of technology to match structured and unstructured data to information taxonomies or decision rules that are meaningful to both regulators and regulated entities, in order to automate compliance or oversight processes. The two terms are used interchangeably for this study given their varying usage by regulators, and the potential for commonly adopted definitions, standards and protocols.

Covid-19 is recognized as having had a major impact on regulatory and supervisory activities, most notably onsite inspections and other core supervisory activities. Unsurprisingly, regulators are actively looking to introduce RegTech/SupTech solutions to face these challenges. As such, as shown in Figure 5.10 below, 33% of respondents have accelerated a RegTech/SupTech initiative and 25% of respondents have introduced a new RegTech/SupTech initiative. As an illustrative example, one regulator in the Europe and Central Asia region has introduced an online submission portal and is applying Natural Language Processing (NLP) techniques to automatically read documents submitted by supervised firms in light of Covid-19.

Figure 5.10: The impact of Covid-19 on RegTech/SupTech initiatives (N=51)



It is evident that Covid-19 has also forced regulators to consider the regulatory obligations that they place on regulated firms, including FinTech providers, and whether they could or should be more proportionate and less 'burdensome'. This has also been driven by limited regulatory and supervisory resources at a time of crisis, particularly where staff may be ill or unable to conduct activities in a remote working environment.

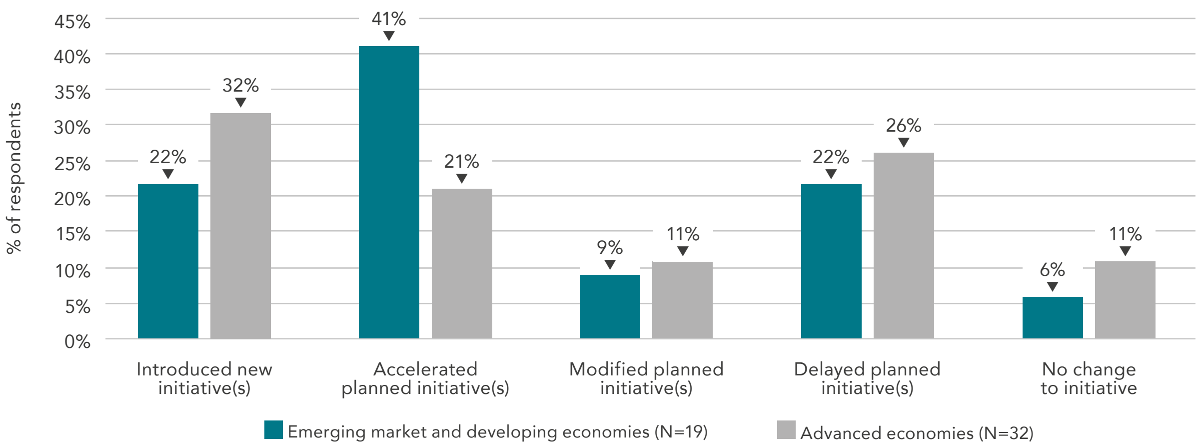
Regulators clearly see RegTech/SupTech initiatives as offering potential solutions to reduce unnecessary burdens and streamline processes. Examples mentioned by respondents included the use of social media monitoring to gauge consumer vulnerability during the period of crisis, such as through gathering evidence of frauds and scams, and customer complaints.

Regulators are also adopting more agile data collection methods to quickly collect new, relevant data from firms in order to identify where to focus efforts and which markets and portfolios need specific engagement and action. For example, external data sources have been used by regulators to improve the understanding of the impact of Covid-19 on firm financial standing. For instance, a regulator in an advanced economy in Europe and Central Asia revealed that:

"We are using more agile data collection methods to quickly collect new, relevant data from firms in order to identify where to focus our efforts and which markets and portfolios need specific engagement and action. We have also brought in new external data sources to improve (our) understanding of the impact of Covid-19 on firm finances."

One difference in the impact of Covid-19 on RegTech/SupTech initiatives between advanced economies and emerging market and developing economies is that 41% of respondents in EMDEs have accelerated a RegTech/SupTech initiative. The comparable figure for advanced economies is roughly half this (21%). This may suggest not only the high perceived potential for RegTech/SupTech initiatives in EMDEs, but also that advanced economies are more likely to have had a pre-existing RegTech/SupTech initiative prior to Covid-19. This is illustrated in Figure 5.11 below.

Figure 5.11: The impact of Covid-19 on RegTech/SupTech initiatives - Emerging market and developing economies versus Advanced economies (N=51)



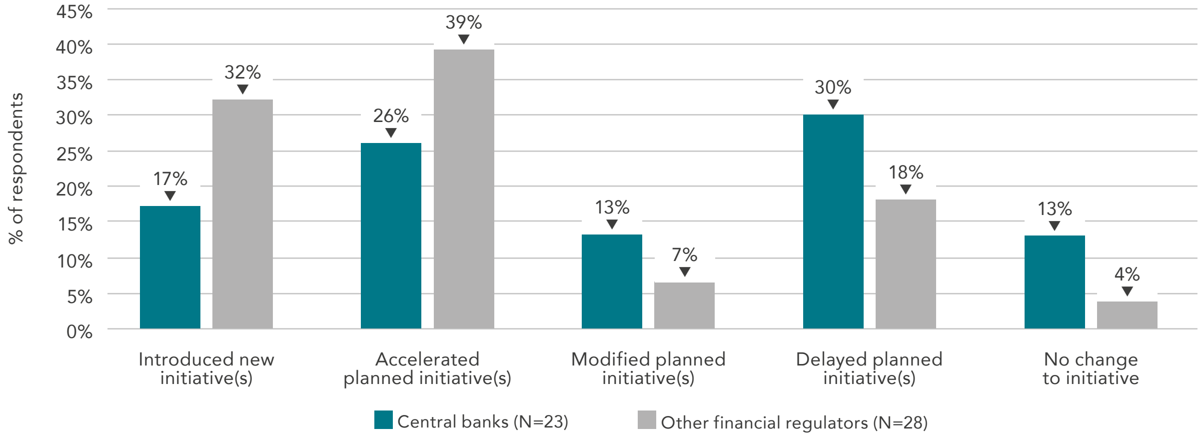
Financial regulators are more likely to have accelerated (39% vs 26%) and introduced (32% vs 17%) RegTech/SupTech initiatives than central banks in light of Covid-19, as illustrated by Figure 5.12 below. On the other hand, 30% of central bank respondents have delayed their RegTech/SupTech initiatives versus 18% of other financial regulators. For instance, a central bank in an emerging market and developing economy in Sub-Saharan Africa revealed that:

"RegTech appetite is dependent on resources to deliver it, however it is a priority".

Separately, a central bank in the Europe and Central Asia region advised that:

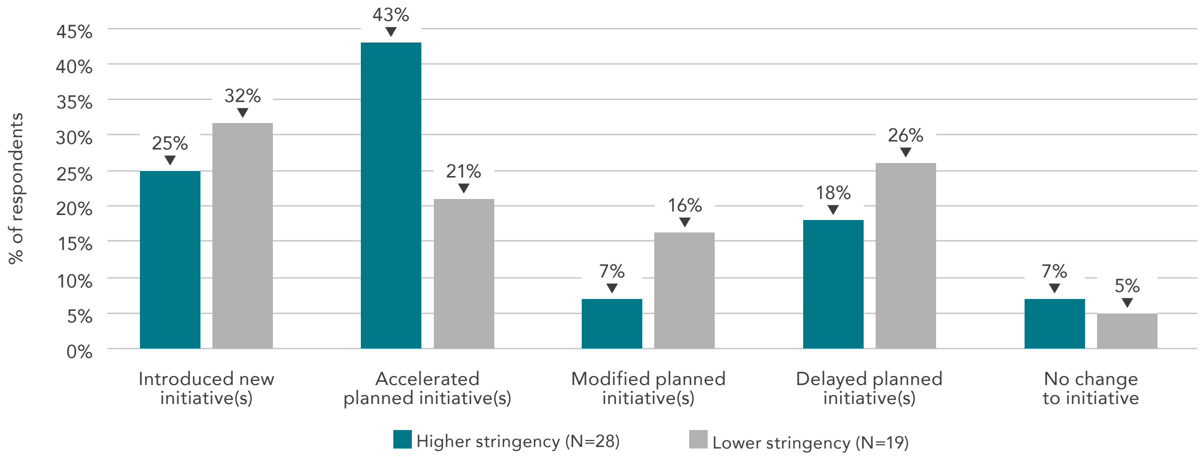
"We are working together with other domestic authorities on a joint licensing framework proposal, however due to Covid-19 pressures on government institutions and bureaucracy, this initiative has been delayed."

Figure 5.12: The impact of Covid-19 on RegTech/SupTech - Central banks versus Other financial regulators (N=51)



Additionally, an examination of the data by stringency of containment and closure measures undertaken in the jurisdiction highlights that respondents in higher stringency jurisdictions are more than twice as likely (43% vs 21%) to have accelerated RegTech/SupTech initiatives compared to lower stringency jurisdictions. This is illustrated in Figure 5.13 below.

Figure 5.13: The impact of Covid-19 on RegTech/SupTech initiatives - Higher versus Lower stringency jurisdictions (N=47)



5.1.4 The impact of Covid-19 on digital infrastructure initiatives

Digital infrastructure refers to the enabling digital structures, facilities, ecosystem and capabilities surrounding the provision of FinTech/DFS, but can be more widely applicable beyond financial services. For the purposes of this study, this might typically include infrastructure related to identity (e.g. digital identity initiatives), data analytics and sharing, credit information and/or payment systems. While these may be directly relevant for financial services, it is acknowledged that not all of these may be under the remit or jurisdiction of financial regulators. This is reflected in the lower number of responses to this question. The potential overlap with RegTech/SupTech initiatives is also recognized.

Covid-19 has broadly accelerated the digital infrastructure agenda, with 52% of respondents accelerating, and 20% introducing, digital infrastructure initiatives in light of Covid-19. This is illustrated in Figure 5.14 below.

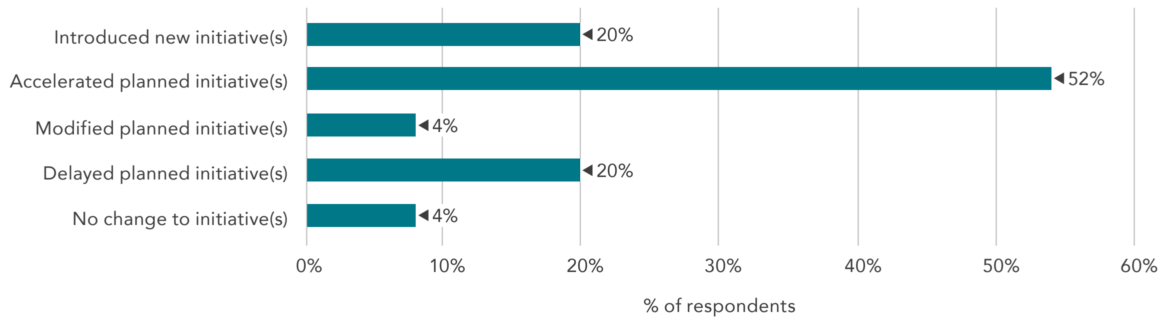
One regulator in the Europe and Central Asia advised that:

"Covid-19 has accelerated the need for a digital identity scheme"

Another regulator in the East Asia and Pacific stated that they have:

"Plans to set up cross-border interoperable QR payments infrastructure with (other) regulatory authorities."

Figure 5.14: The impact of Covid-19 on Digital infrastructure initiatives (N=54)



By way of further example, one regulator in the South Asia region has introduced digital infrastructure to enable interbank and mobile money operator payments, embedded with a system for associated analytics and reporting. Other initiatives include the development of digital collateral registries for SMEs to support access to financing. For instance, one regulator in the East Asia and Pacific region stated that:

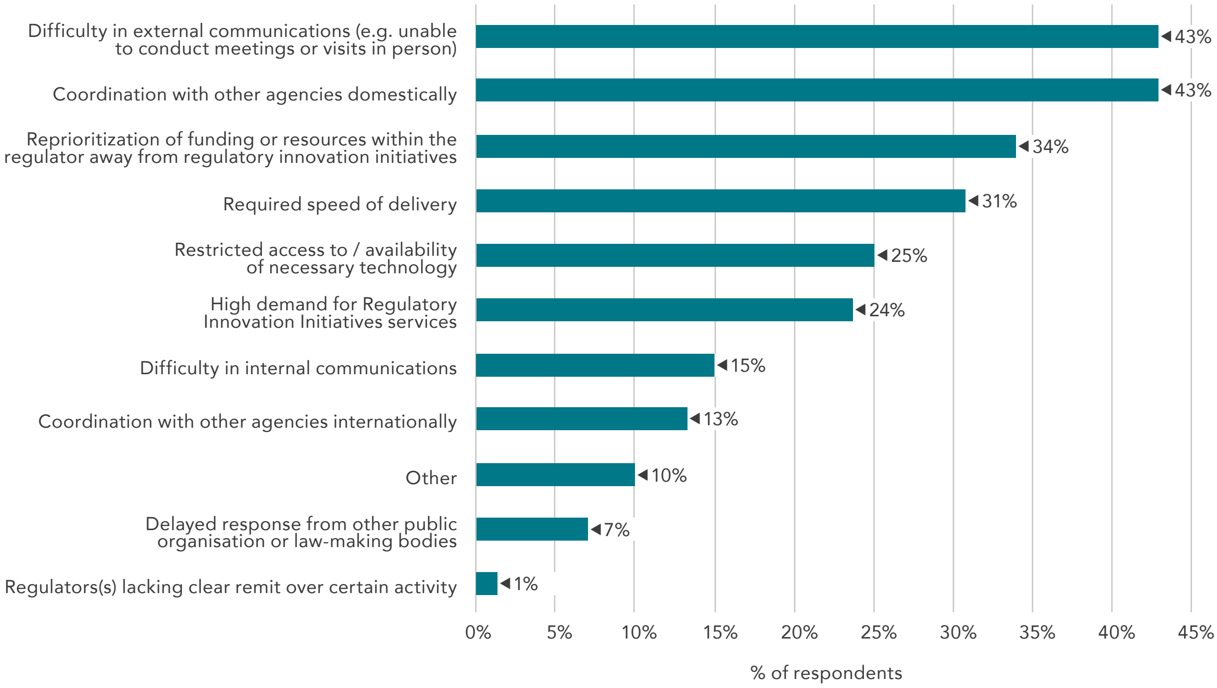
"The pandemic provided us with the opportunity to accelerate a number of digitalization initiatives."

There are noticeably few differences in the responses regarding digital infrastructure initiatives between regulators in advanced economies and emerging market and developing economies.

5.2 Covid-19 and the challenges for regulatory innovation initiatives

This study seeks to further understand the challenges that regulators have encountered with respect to regulatory innovation initiatives, considered as a whole. Figure 5.15 highlights the most commonly cited challenges.

Figure 5.15: Covid-19 and the challenges for regulatory innovation initiatives (N=68)



The two most important challenges regulators have faced are both centered on the theme of communication, with difficulty in external communications, and coordination with other agencies domestically both cited by 43% of respondents. It is clear that Covid-19 has caused regulators around the world considerable difficulties in external communication and inter-agency coordination. This is most acutely observed by respondents in Sub-Saharan Africa, followed by Europe and Central Asia and the MENA region.

Respondents highlighted that limited mobility, the lack of digital infrastructure and the introduction of homeworking have made communication and coordination on regulatory innovation initiatives a significant challenge. This has undoubtedly played a part in restricting inter-agency coordination, which is often a necessity in 'multi-peak' jurisdictions, where regulatory innovation initiatives will often involve many regulators and other authorities.

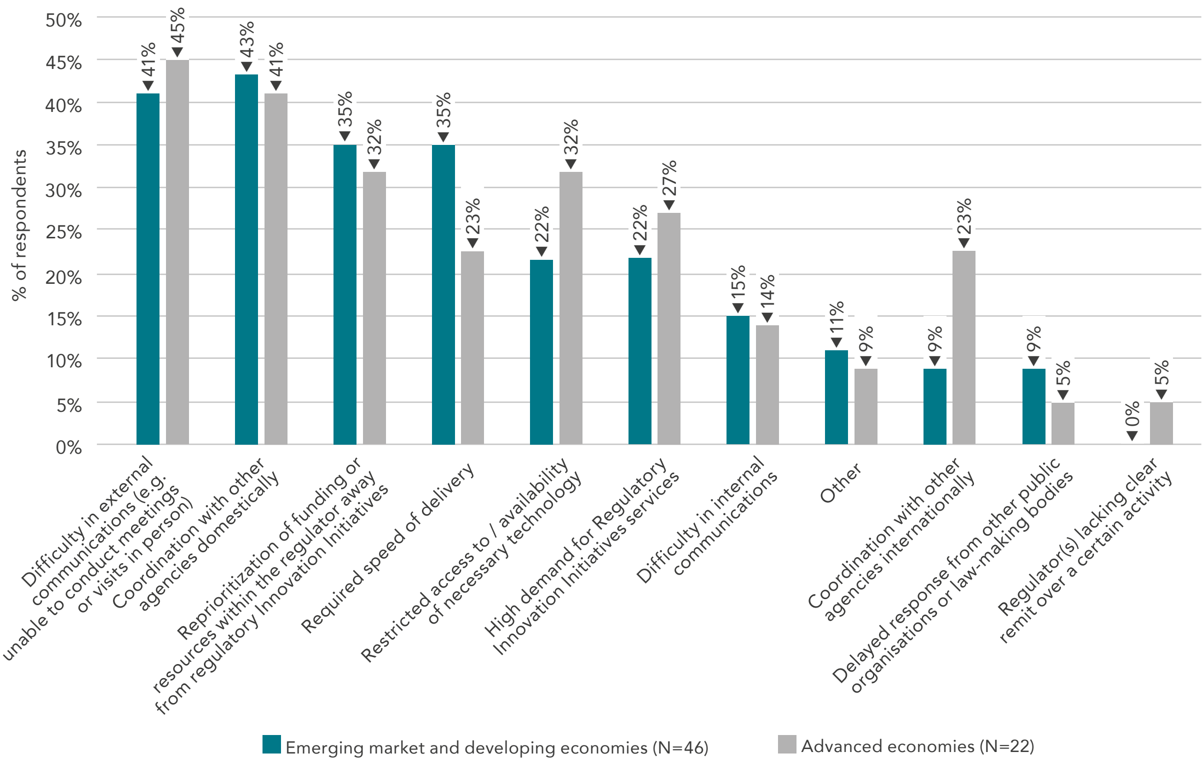
For instance, one regulator in the MENA region reported that they have faced significant challenges in collaborating with other regulators in designing and building new digital financial infrastructure. Another regulator stated that:

"…everything has to be discussed and approved by the parliament and government which makes it harder to manage our current innovation projects."

Since the number of multi-peak jurisdictions is typically higher in emerging market and developing economies (particularly in Sub-Saharan Africa), this may also explain why regulators in emerging market and developing economies are facing greater challenges in the required speed of delivery compared to those in advanced economies (35% vs 23%).

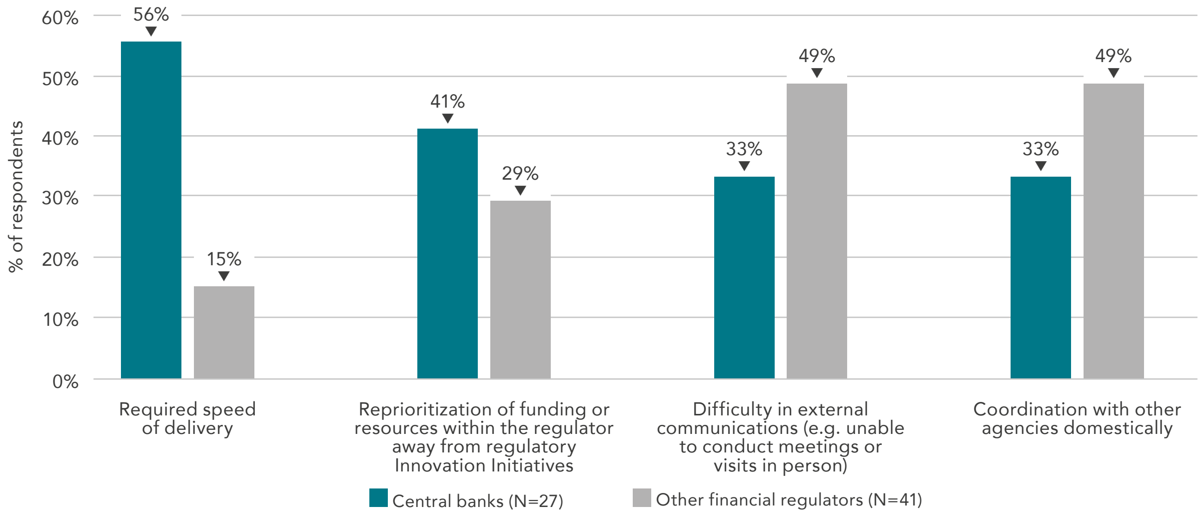
At the same time, regulators are facing the challenge of the reprioritization of funding or resources within the regulator, to the detriment of regulatory innovation initiatives. This is cited by approximately one in three regulators across both advanced economies and emerging market and developing economies, as set out in Figure 5.16 below. Specific examples and reasons reported for this include the reallocation of staff to focus on "core" regulatory objectives such as financial stability and (particularly in central banks) economic relief measures. Thus, fewer resources may be available to dedicate to regulatory innovation initiatives. However, many regulators expected that diverted resources would be redeployed following the period of crisis.

Figure 5.16: Covid-19 and the challenges for regulatory innovation initiatives - Emerging market and developing economies versus Advanced economies (N=68)



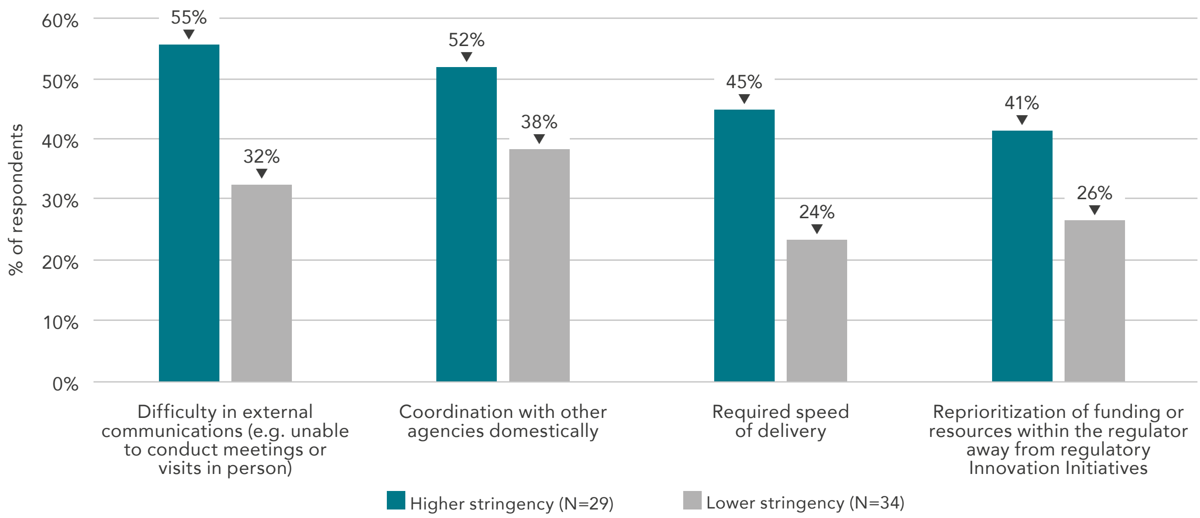
As Figure 5.17 illustrates, central banks are much more likely to have faced challenges with respect to speed of delivery (56% of respondents versus 15% of other financial regulators). This is most acutely observed by central banks in Sub-Saharan Africa. A second challenge of relative importance for central banks is the reprioritization of funding of resources within the regulator away from regulatory innovation initiatives, with 41% of respondents citing this, compared to 29% from other financial regulators. For other financial regulators, the most important challenges cited regarding regulatory innovation initiatives are centered on difficulties in communication and coordination.

Figure 5.17: Covid-19 and the challenges for regulatory innovation initiatives - Central banks versus Other financial regulatory (N=68)



Analysis of the data according to the stringency of closure and containment measures in the jurisdiction highlights that regulators in higher stringency jurisdictions are more likely to have faced challenges regarding coordination with other agencies domestically (52% vs 38%), difficulty in external communication (55% vs 32%), reprioritization of funding of resources within the regulator away from regulatory innovation initiatives (41% vs 26%) and difficulty in speed of delivery (45% vs 24%) as compared to lower stringency jurisdictions.

Figure 5.18: Covid-19 and the challenges for regulatory innovation initiatives – Higher versus Lower stringency jurisdictions (N=63)



6. Lessons learned and future considerations

6. Lessons learned and future considerations

This study has discussed the impact of Covid-19 on regulators' approaches and practices to FinTech. This includes regulators' awareness and perception of FinTech and DFS during Covid-19, the general and specific measures the regulators have undertaken by way of response, the challenges that they have faced, and the support and assistance they have identified.

The following chapter sets out seven lessons learned based on the empirical evidence gathered from this rapid assessment study, informed by the insights, learnings and outlooks shared by respondents. These lessons also take into account the findings from previous and ongoing initiatives and studies. This includes the IMF and World Bank's 'Bali FinTech Agenda' Policy Paper (2018)[56] on promoting the responsible development of FinTech, evidence-based regulatory innovation approaches and initiatives (UNSGSA and CCAF, 2019)[57], the wider work on the benefits and risks of DFS (World Bank, 2020)[58] and reports focusing on the financial services response to the pandemic more generally (IMF/World Bank, 2020).[59]

Lessons learned are grouped into those which may be feasible for regulators to consider in the short term, and those which may require strategic investment and development in the longer term.

6.1 Short term considerations

Experiment with nimble regulatory measures in response to the challenges created by the pandemic

The study findings demonstrate that a number of regulators, especially in emerging market and developing economies, have undertaken rapid and nimble measures with respect to specific FinTech activities, in response to the accelerated adoption of digital financial services.

Regulators felt they were generally well-resourced and able to operate in an agile manner in their immediate response to the pandemic, being able to mobilize and take measures more quickly in response to immediate challenges. Regulators also considered providing guidance and information to the industry on new measures and expectations in good time to be crucial, in light of the rapidly evolving pandemic.

This is particularly pertinent in the digital payments and remittances sector, where short term measures include waiving or removing transaction fees, increasing transaction limits, and encouraging or mandating interoperability between (different types of) providers. Regulators have been motivated to do so to facilitate the increased usage of digital payments and remittances at a time when the physical alternatives were not feasible or practical due to lockdown measures and health concerns.

This study has highlighted the potential risks to consumers of new and nascent digital technologies, products or services, and the need for these to be carefully managed with appropriate consumer protection frameworks in place. While many of the measures introduced have been focused on supporting the immediate needs of firms and providing appropriate regulatory forbearance, there are also opportunities for regulators to experiment with nimble measures to strengthen consumer protections and mitigate risks, particularly for those that may have a particularly high impact in emerging market and developing economies[60] due to the size and scope of their activity. As one regulator from the APAC region explained:

"On systemic risk, a targeted cyber-attack...or some other form of external threat on a major FinTech company has the potential to disable large parts of the economy without notice."

Whilst ensuring adequate consumer protection, regulators in emerging market and developing economies might want to consider emulating nimble and agile measures which applied to digital payments and remittances to other FinTech sectors, such as digital lending and capital raising. Examples might include making it easier in the short-term for governmental and institutional lenders to finance SMEs loans through digital lending platforms, temporarily allowing higher investment caps for experienced investors to invest in start-ups via equity-based crowdfunding, and streamlining processes to facilitate mini-bond issuance for renewable energy and off-grid energy projects.

These short term and rapid actions can also contribute to pre-emptive measures to tackle potential issues stemming from a prolonged pandemic, such as rising consumer credit defaults, or insolvencies among credit providers. The utilization of these nimble measures might also permit controlled or natural experiments which could be used as a test bed or evidence for more permanent measures or changes.[61] Finally, these nimble measures could help facilitate and provide a platform for regulators to develop longer-term plans to developing digital infrastructure, as discussed further below. For example, putting in place/modifying existing regulations to facilitate greater use of eKYC in the short term could provide opportunities for jurisdictions to build a national digital identity infrastructure over time.

Facilitate engagement between financial regulators and the industry

It is evident that during a global crisis such as Covid-19, regulators can engage with the private sector and the FinTech industry directly to source ideas, solutions and technical expertise. A number of regulators commented on the utility of their existing outreach programmes with the FinTech industry, or the need to strengthen industry engagement in order to cultivate trust, seek feedback, and provide guidance in an uncertain environment. Regulators highlighted the benefits of developing policies and programmes collaboratively with the industry to help strike a better balance between harnessing digitalization opportunities and mitigating risk. In jurisdictions where this approach was adopted, regulators commented on a higher degree of buy-in and compliance by the industry. As one regulator from Europe and Central Asia described:

"There is also an important convening role for us to play, helping to enable greater collaboration with the industry to solve complex industry-wide problems."

Regulators may wish to consider how best to facilitate this engagement, particularly if the public health crisis is prolonged. Outreach channels which regulators have found effective include working groups, industry advisory units, dedicated FinTech liaison officers, online webinars and digital workshops, and through FinTech industry associations.

The response to Covid-19 in other sectors may also provide lessons learned and policy inspiration for regulators seeking to manage the opportunities and challenges in financial services. One example of this comes from the healthcare sector, where there have been concerted efforts to 'crowd-in' private sector solutions, logistics and infrastructure, where the non-public sector might have more experience, skills, access and resources to deploy solutions more efficiently and effectively. Around the world, there are successful public-private partnerships in developing contact-tracing solutions, utilizing big data analytics, sourcing personal protective equipment, and the rapid operationalization of essential digital infrastructure.

Facilitate knowledge transfer among regulators at both the domestic and international level

This study's findings demonstrate the accelerated timelines under which regulators are making important decisions affecting regulation, supervision and regulatory innovation initiatives relating to FinTech. Given compressed decision-making timelines and processes, regulators require, more than ever, timely information and insights, together with policy learnings from other jurisdictions.

However, the provision of timely knowledge to inform accelerated regulatory and supervisory decision-making is made difficult given travel restrictions and, in the case of EMDEs, the challenges in delivering technical assistance programmes. Given the increased digitalization among financial regulators, there may be an opportunity to facilitate knowledge transfer virtually and via digital platforms, to enable rapid policy learning and coordinated regulatory actions to tackle pressing issues.[62] This would also complement the ongoing work of IOSCO, BIS and other standard-setting bodies.

Both this study and those previous (e.g. World Bank and CCAF, 2019[63]) have also identified the importance of regulatory benchmarking exercises in providing these insights through policy learning and transfer. It is evident that regulators would benefit from more effective regional and global regulatory benchmarking exercises, information exchange and peer learning initiatives. These might be facilitated by or through policy forums, multilateral development institutions and other knowledge networks. This is also reflected in the Bali Fintech Agenda (encouraging international cooperation and information sharing)[64] and learnings from other financial sectors' experience in dealing with pandemics.[65] As one regulator from North America commented:

"Our organization would most benefit from continued sharing of information among the international regulatory community. Discussions among the international community exploring what has and what has not worked in response to Covid-19 are especially beneficial."

Consider increased support for the development of regulatory innovation initiatives

This study illustrates that financial regulators have been making key decisions about their regulatory innovation initiatives in light of Covid-19. In particular, regulators have accelerated RegTech/SupTech initiatives to enable them to effectively supervise firms off-site/virtually during lockdown restrictions, and to collect salient and timely data in order to monitor markets and mitigate conduct risks and prudential issues arising in individual firms.

There are a number of other examples where RegTech/SupTech initiatives may be prioritized in order to address the challenges of Covid-19. One application might be supporting data collection to better, securely, and more efficiently monitor the health of firms during an economic crisis. This might provide more granular and timely data to monitor risks, and and help identify where to concentrate scarce resources for on-site inspections.

Another application might be providing a digital channel, such as a chatbot, to help communications between customers, firms and regulators to facilitate remote complaint handling. Finally, RegTech/SupTech applications might improve on-site supervision to overcome the constraints of physical distancing measures and/or minimize time spent at a firm's premises.[66]

In addition, there appears to be a general theme of the acceleration or initiation of initiatives to facilitate innovation in the marketplace, hastening the trends in developing innovation offices and sandboxes observed in prior research (World Bank and CCAF, 2019[67]). Over 50% of respondents cited an introduction or acceleration of their innovation office or regulatory sandbox. This is also reflected by regulators highlighting that FinTech has either increased in priority, or remained a high priority, for them. As one regulator from MENA commented:

"Covid-19 has accelerated the need to put innovation initiatives in place faster".

At the same time, regulators have identified resource and funding constraints as a key challenge in the development of their regulatory innovation initiatives, with 37% of respondents identifying funding or resourcing as a challenge with respect to their regulatory innovation agenda. Regulators also identified gaps in talent and the expertise required to undertake new strategic initiatives, especially in terms of RegTech/SupTech or digital infrastructure projects. This combination of factors strongly suggests an environment in which external support is, or will be, in high demand with respect to regulatory innovation initiatives. Technical assistance from domestic and/or international sources may therefore help inform the steps regulators are rapidly taking regarding the operationalization of these initiatives.

6.2 Longer term considerations

Strategically strengthen RegTech/SupTech capabilities

The rapid growth in certain FinTech sectors such as digital payments during Covid-19 may also exacerbate existing risks or induce newly emergent risks. Respondents are evidently concerned about specific risks in connection with FinTech, such as cybersecurity and fraud, and the potential threat to regulatory objectives such as consumer protection and financial stability. Identifying, assessing and mitigating the potential risks of FinTech are also central to the elements of the Bali Fintech Agenda.[68]

The need to develop solutions has become more urgent during the pandemic, with regulators needing to identify ways to conduct the supervision of firms remotely, and firms looking to automate reporting and compliance requirements.

Indeed, this study finds that RegTech/SupTech initiatives continue to be high on regulators' agenda during Covid-19, with 50% of respondents to the question on RegTech/SupTech identifying either the introduction or acceleration of an initiative in light of Covid-19. As one regulator from SSA explained:

"Reprioritization of focus and resources elsewhere is a big challenge, resulting in the proposed innovation office and regulatory sandbox moving down the agenda. In contrast RegTech is (moving) up the agenda."

While recognizing that some regulators already have similar tools in place, potential applications of RegTech/SupTech solutions, relevant in the context of Covid-19 and beyond, may include:

- Tools to monitor digital payments in (close to) real-time;
- Consumer protection tools such as electronic complaints handling and dispute resolution, which can in turn inform better institutional supervision[69];
- Market surveillance tools to monitor and track the development of FinTech and DFS more generally, proactively identifying the key sectors, products/services, and business models which regulators should be paying most attention to; and
- The digitalization of regulatory processes such as licensing applications, regulatory reporting and other regulator-industry engagements. These initiatives may have the advantage of mutually benefiting both the regulator and industry through lower compliance costs and access to more timely and comprehensive data. This, and the above points, are closely related to element five of the Bali Fintech Agenda concerning monitoring developments to deepen understanding of evolving financial systems.[70]

UNSGSA and CCAF (2019)[71] identified that executive sponsorship and support are critical to creating a more innovative environment for regulators to test new ideas and pilot regulatory innovation initiatives, particularly in capacity constrained economies.

Given the focus on technology and digital solutions during Covid-19, there may currently be an opportunity to forge internal consensus among relevant stakeholders and drive forward a strategic agenda to increase the long-term RegTech/SupTech capabilities.

Support the long-term transition to digital infrastructure

The Covid-19 crisis has forced many regulators to reconsider the foundational building blocks of their digital infrastructure. New initiatives have included digital identity and eKYC initiatives, centralized collateral registries and interoperable payment systems using QR codes. This has been underpinned by organizations recognizing and appreciating the importance of digital infrastructure in light of the pandemic. For example, the Financial Action Task Force (FATF) asserts that:

"The FATF calls on countries to explore using digital identity, as appropriate, to aid financial transactions while managing ML/TF risks during this crisis."[72]

There are opportunities to facilitate this. In many cases, and as we discuss above, the foundational steps towards a digital infrastructure can be enabled by nimble/short-term regulatory measures. Some regulators commented on their organizations' ability to expedite approval processes to deliver such projects, since the need for these was much more urgent in a remote-working environment.

In the long term, the development of digital infrastructure involves both capital intensive investments as well as the development of data repositories and digital ID that leverage IT infrastructure for the provision of digital financial services. The Bali Fintech Agenda underlines the importance of enabling new technologies and infrastructures to enhance financial service provision.[73]

Consider the wider implications of the digitalization of financial services, including competition, exclusion and financial literacy

The wider adoption of DFS is a trend that Covid-19 has accelerated which is unlikely to reverse once the current crisis abates.[74] Regulators will therefore benefit from considering the long-term regulatory implications and challenges of this digitalization. Based on the feedback gathered through this study, these are likely to include considerations around competition, financial and digital exclusion, financial literacy and data privacy. These are discussed briefly in turn below, and are also related to the Bali Fintech Agenda element concerning developing robust financial and data infrastructure to sustain FinTech benefits.[75]

During the Covid-19 crisis, governments and other institutions have typically turned to incumbent financial institutions and traditional financing channels to support government-to-person payments, the issuance of government backed loans, and other socio-economic relief efforts. This is largely because the primary policy objective was understandably that of a swift economic response, rather than an attempt to promote competition in the financial services market.

Nonetheless, there are measures that regulators *have* put in place which may support the FinTech sector and promote competition in the longer term. For example, a number of authorities have permitted the digital onboarding of customers, introduced or permitted eKYC processes, lifted transaction and value limits on digital payments, and generally undertaken measures designed to improve the adoption and usability of DFS. Reinforcing competition is also element three of the Bali Fintech Agenda.[76]

When considering the implications of a prolonged pandemic, some regulators commented that financially excluded and low-earning segments of populations could be more vulnerable to economic shocks. With the rise of digital payments, the risks of a digital divide and exclusion are also likely to increase, a theme explored in other studies.[77] Some regulators commented that the pandemic exposed new levels of vulnerability among groups such as migrant workers, and that measures which address their wellbeing would be further prioritized, particularly if containment and closure measures persist.

A small number of respondents from jurisdictions with aging or significant elderly populations emphasized consideration for the needs of the elderly, as societies move away from cash and towards digital payments. As one regulator in Europe and Central Asia explained:

"the demographic of our jurisdiction relies on cash payments rather than digital transactions."

Some regulators commented on the financial literacy gaps exposed by the Covid-19 pandemic, particularly in instances when social distancing measures made digital payments increasingly prominent and a lack of uptake or usage of these solutions may result in financial exclusion. Financial literacy was also highlighted in regard to consumer protection concerns, with regulators particularly concerned that limited transparency and predatory practices, combined with economic hardships and increased usage could lead to consumer detriment in DFS sectors. Despite this observation, very few new financial literacy initiatives were shared by respondents.

A final related challenge of the increased digitalization of the financial sector is related to data privacy and protection concerns. The increased cybersecurity risks identified by respondents are an early but important insight into some of the challenges which regulators may face in the rapid uptake of FinTech and DFS solutions in light of Covid-19. Transparent public policies and clear governance frameworks will be required to help build trust in the sector.[78]

Annexes

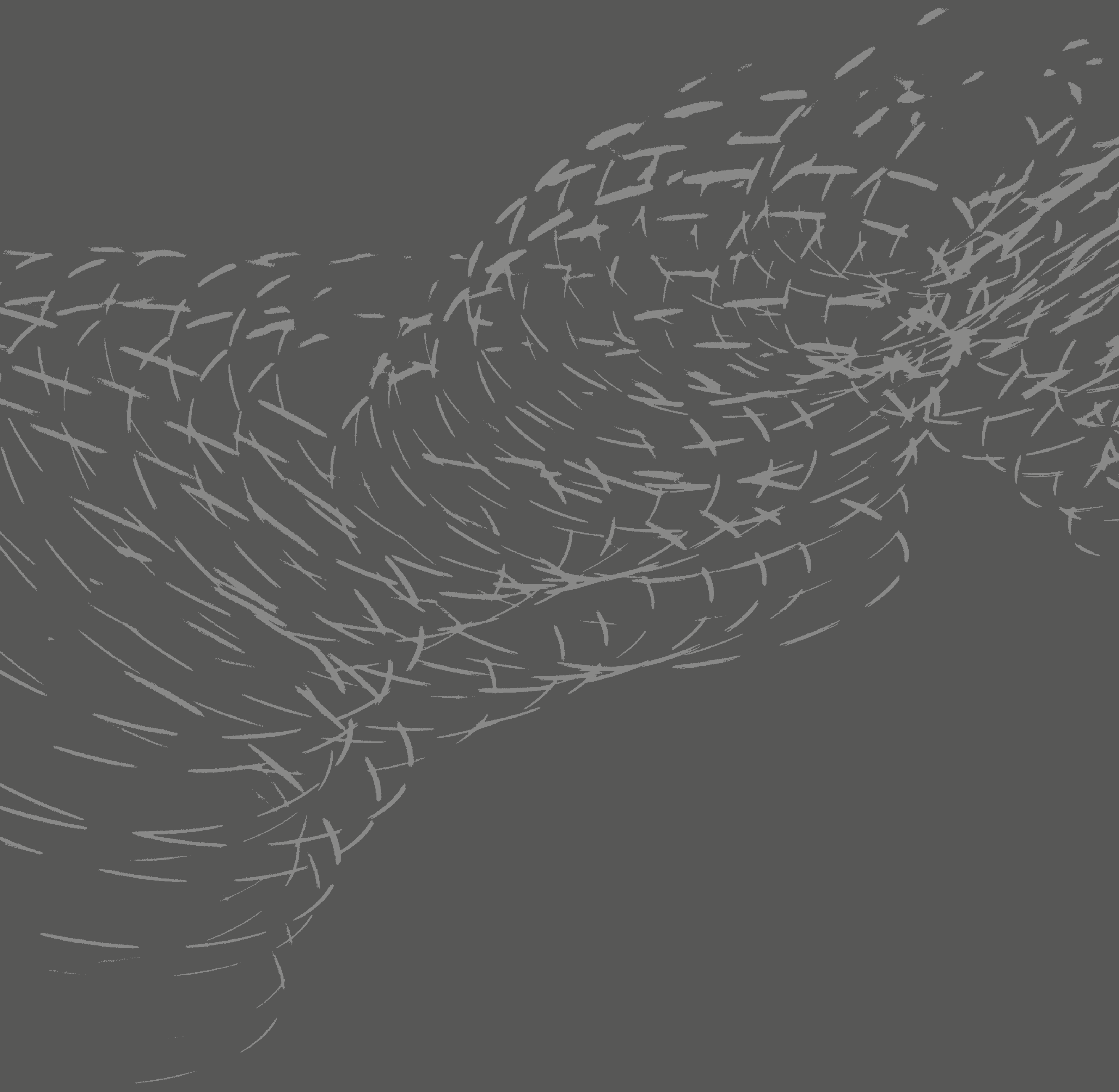
Annex 1: List of survey respondents by jurisdiction

JURISDICTION	NAME OF REGULATOR(S)
Abu Dhabi, United Arab Emirates	Abu Dhabi Global Market - Financial Services Regulatory Authority
Albania	Albanian Financial Supervisory Authority
Angola	National Bank of Angola
Angola	Comissão do Mercado de Capitais
Australia	Australian Securities and Investments Commission
Bahamas, The	Securities Commission of The Bahamas
Bahrain	Central Bank of Bahrain
Bermuda	Bermuda Monetary Authority
Bhutan	Royal Monetary Authority of Bhutan
Bosnia and Herzegovina	Ministry of Finance, Banking Agency, and Securities Commission of the Republic of Srpska
Brazil	Banco Central do Brazil
Burundi	Banque de La République du Burundi
Cabo Verde	Banco de Cabo Verde
Chile	Superintendencia de Bancos e Instituciones Financieras
Chile	Central Bank of Chile
China	National Internet Finance Association
China	Beijing FinTech Bureau
Colombia	Unidad de Regulacion Financiera (URF) (Ministry of Finance and Public Credit)
Czech Republic	The Czech National Bank
Democratic Republic of Congo	Banque Centrale du Congo
Denmark	Danish Financial Supervisory Authority
Djibouti	Banque Centrale de Djibouti
Dubai International Financial Centre	Dubai Financial Services Authority
Economic and Monetary Community of Central Africa (CEMAC)	Bank of Central African States (BEAC)
Economic and Monetary Community of Central Africa (CEMAC)	Central African Financial Market Supervisory Commission (COSUMAF)
Egypt, Arab Rep.	Financial Regulatory Authority
Estonia	Finantsinspektsioon
Eswatini	Central Bank of Eswatini
Fiji	Reserve Bank of Fiji
Georgia	National Bank of Georgia
Ghana	Bank of Ghana
Ghana	National Insurance Commission Ghana
Gibraltar	Gibraltar Financial Services Commission
Greece	Hellenic Capital Market Commission
Guernsey	Guernsey Financial Services Commission
Guinea	Banque Centrale de la République de Guinée
Guyana	Bank of Guyana
Honduras	Comisión Nacional de Bancos y Seguros
Hong Kong SAR, China	Hong Kong Monetary Authority
Hong Kong SAR, China	Securities and Futures Commission of Hong Kong
Hungary	Magyar Nemzeti Bank (Central Bank of Hungary)
India	Reserve Bank of India
India	Securities and Exchange Board of India
Indonesia	Bank Indonesia
Isle of Man	Isle of Man Financial Services Authority
Israel	Israeli Securities Authority
Israel	Bank of Israel
Japan	Financial Services Agency
Jersey	Jersey Financial Services Commission

JURISDICTION	NAME OF REGULATOR(S)
Jordan	Central Bank of Jordan
Jordan	Jordan Securities Commission
Kenya	Capital Markets Authority of Kenya
Kenya	Insurance Regulatory Authority
Kenya	Central Bank of Kenya
Lao PDR	Bank of the Lao PDR
Latvia	The Financial and Capital Market Commission
Liberia	Central Bank of Liberia
Lithuania	Bank of Lithuania
Malawi	Reserve Bank of Malawi
Malaysia	Securities Commission Malaysia
Marshall Islands	Banking Commission
Mauritania	The Central Bank of Mauritania
Mauritius	Financial Services Commission
Mexico	Comisión Nacional Bancaria y de Valores (CNBV)
Montenegro	Central Bank of Montenegro, and Capital Market Authority
Morocco	Autorité Marocaine du Marché des Capitaux (AMMC)
Morocco	Bank Al-Maghrib
Nepal	Securities Board of Nepal (SEBON)
Netherlands	Autoriteit Financiële Markten
New Zealand	Financial Markets Authority
Nicaragua	Superintendencia de Bancos y de Otras Instituciones Financieras
Nigeria	Central Bank of Nigeria
Nigeria	Securities and Exchange Commission
North Macedonia	Securities and Exchange Commission of the Republic of North Macedonia
Organisation of Eastern Caribbean States	Eastern Caribbean Central Bank
Pakistan	State Bank of Pakistan
Pakistan	Securities & Exchange Commission of Pakistan
Paraguay	Comisión Nacional de Valores
Peru	Superintendencia del Mercado de Valores (Peru)
Philippines	Bangko Sentral ng Pilipinas (BSP)
Philippines	Securities and Exchange Commission
Portugal	Portuguese Securities Market Commission (CMVM)
Romania	Financial Supervisory Authority
Russian Federation	Central Bank of the Russian Federation
Rwanda	Capital Market Authority
Samoa	Central Bank of Samoa
Saudi Arabia	Capital Market Authority
Serbia	Securities Commission of Serbia
Sierra Leone	Bank of Sierra Leone
Singapore	Monetary Authority of Singapore
South Africa	South African Reserve Bank
South Africa	Financial Sector Conduct Authority
Spain	Comisión Nacional del Mercado de Valores
Sri Lanka	Central Bank of Sri Lanka
Sri Lanka	Insurance Regulatory Commission of Sri Lanka
Taiwan, China	Financial Supervisory Commission
Tanzania	Bank of Tanzania
Tanzania	Capital Market and Securities Authority
Thailand	Bank of Thailand
Thailand	The Securities and Exchange Commission
Trinidad and Tobago	Trinidad and Tobago Securities Exchange Commission
Tunisia	Central Bank of Tunisia
Tunisia	Conseil du Marché Financier
Turkey	Capital Markets Board of Turkey
Uganda	Bank of Uganda
Uganda	Capital Markets Authority of Uganda
United Arab Emirates	Securities and Commodities Authority

JURISDICTION	NAME OF REGULATOR(S)
United Kingdom	Financial Conduct Authority
United States	Federal Reserve Board
United States	Commodity Futures Trading Commission
United States	Financial Industry Regulatory Authority
United States	Wyoming Division of Banking
West African Monetary Union (WAMU)	Banque des Etats de l'Afrique de l'Ouest / Central Bank of West African States (BCEAO)
West Bank and Gaza	Palestine Capital Market Authority
Zambia	Bank of Zambia
Zambia	Securities and Exchange Commission Zambia
Zimbabwe	Reserve Bank of Zimbabwe
Zimbabwe	Securities and Exchange Commission of Zimbabwe

Endnotes



Endnotes

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2 This is likely to be a broadly positive development, as highlighted in Pazarbasioglu et al (2020) 'Digital Financial Services.' World Bank Group, April http://pubdocs.worldbank.org/en/230281588169110691/Digital-Financial-Services.pdf

3 Suri, T., & Jack, W. (2016) 'The Long-run Poverty and Gender Impacts of Mobile Money.' Science, (2016) 354(6317); 1288-1292

4 Sahay et al (2020) 'The Promise of FinTech: Financial Inclusion in the Post Covid-19 Era.' International Monetary Fund. https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2020/06/29/The-Promise-of-Fintech-Financial-Inclusion-in-the-Post-COVID-19-Era-48623

5 The term "financial regulators" or "regulators" is used throughout this report to encompass any and all authorities with jurisdiction over any area of financial services. This includes central banks, securities regulators, and other agencies with financial supervisory responsibility who participated in the study.

6 Divanbeigi, R., & Chen, R. (2019) 'Can Regulation Promote Financial Inclusion?' World Bank Blog, May https://blogs.worldbank.org/developmenttalk/can-regulation-promote-financial-inclusion

7 G20 Global Partnership for Financial Inclusion (GPFI 2020) 'High Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs'. ; G20 Global Partnership for Financial Inclusion (GPFI 2016) 'High Level Principles for Digital Financial Inclusion.' https://www.gpfi.org/sites/gpfi/files/documents/G20%20High%20Level%20Principles%20for%20Digital%20Financial%20Inclusion%20-%20Full%20version-.pdf

8 International Monetary Fund (2018), ' The Bali FinTech Agenda'. October https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/10/11/pp101118-bali-fintech-agenda

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10 Cambridge FinTech and Regulatory Innovation (CFTRI)

11 https://www.thegfin.com/members

12 This includes financial conduct authorities, capital markets and securities regulators, insurance authorities and other non-central bank financial regulators.

13 A central bank was defined as an authority which has at least one of: 1) a macro-prudential role of ensuring financial stability, 2) micro-prudential oversight over a specific sector (i.e. banking, insurance, security, capital markets, etc.) and/or, 3) conduct and consumer protection responsibility over a specific sector, set of sectors or financial institutions. This category also includes central banks which serve several countries, notably in the context of an economic and/or monetary union.

14 https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker

15 Ibid. The stringency index compiles data relative to the following: school closures, workplace closures, cancellation of public events, limits on private gatherings, public transportation closures, restrictions on internal movement and restrictions on international travel.

16 The classification of World Bank regions is available at: https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups

17 Ibid.

18 Note that responses for each FinTech product/service do not sum to 100% due to differing response rates.

19 For example, see Auer et al (2020) 'Inclusive Payments for the Post-Pandemic World.' European Money and Finance Forum (SUERF), September https://www.suerf.org/policynotes/16645/inclusive-payments-for-the-post-pandemic-world

20 See Methodology (Chapter 2).

21 World Bank and CCAF (2019) 'Regulating Alternative Finance: Results from a Global Regulator Survey.' https://jbs.cam.ac.uk/wp-content/uploads/2020/08/2019-11-ccaf-regulating-alternative-finance-report.pdf

22 Respondents were invited to name the risks unprompted, which are then represented in this Figure. The types of risks are therefore not mutually exclusive and, in some cases, overlap. In some cases, respondents may have aggregated risks under one or more categories.

23 https://www.mas.gov.sg/development/fintech

24 MAS, 'Covid-19 Support Package for FinTechs.' https://www.mas.gov.sg/development/fintech/covid-19-support-package-for-fintechs

25 MAS, 'MAS Launches $125 Million Package for Financial Institutions and FinTech Firms to Strengthen Long-Term Capabilities.' https://www.mas.gov.sg/news/media-releases/2020/mas-launches-package-for-fis-and-fintech-firms-to-strengthen-long-term-capabilities

26 This is in partnership with the in partnership with the Singapore FinTech Association (SFA) and financial group AMTD. https://singaporefintech.org/mas-sfa-amtd/

27 https://singaporefintech.org/mas-sfa-amtd/

28 Meghanaet al (2003) 'Small and Medium Enterprises across the Globe: A New Database.' World Bank, Policy Research Working Paper; No. 3127 https://openknowledge.worldbank.org/handle/10986/18131

29 The other category relates to measures in employment and talent.

30 CCAF, World Bank and World Economic Forum (forthcoming 2020): 'Global Covid-19 FinTech Market Rapid Assessment Survey.'

31 See GSMA (2020), ' Tracking Mobile Money Regulatory Responses to Covid-19.' https://www.gsma.com/mobilefordevelopment/programme/mobile-money/gsma-mobile-money-regulatory-response-to-covid-19-tracker-and-analysis/

32 These examples are drawn from publicly available sources and augment the empirical findings from this study.

33 CBK (2020) 'Emergency Measures to Facilitate Mobile Money Transactions.' March, https://www.centralbank.go.ke/uploads/press_releases/2125980791_Press%20Release%20-%20Emergency%20Measures%20to%20Facilitate%20Mobile%20Money%20Transactions.pdf; Exchange rates are as at 29 September 2020.

34 CBK (2020) 'Review of Emergency Measures to Facilitate Mobile Money Transactions.' June, https://www.centralbank.go.ke/uploads/press_releases/913082204_Press%20Release%20-%20Review%20of%20Emergency%20Measures%20-%20Mobile%20Money%20Transactions.pdf

35 Ibid; See also additional comments on regulatory measures and impact e.g., increase in mobile money transaction volume and values, CBK (2020) 'Presentation on the Status and Outlook of Kenya's Banking Sector.' May, https://www.centralbank.go.ke/uploads/presentations/1483113962_PRESENTATION%20ON%20KENYA'S%20BANKING%20SECTOR%20SITUATION%20AND%20OUTLOOK.pdf

36 GSMA (2020) 'Tracking Mobile Money Regulatory Response to Covid-19-Part 2.' September https://www.gsma.com/mobilefordevelopment/region/sub-saharan-africa-region/tracking-mobile-money-regulatory-responses-to-covid-19-part-2/#mobilemoney

37 For announcement extending/ formalising measures, see CBK (2020) 'Review of Emergency Measures to Facilitate Mobile Money Transactions.' June, https://www.centralbank.go.ke/uploads/press_releases/913082204_Press%20Release%20-%20Review%20of%20Emergency%20Measures%20-%20Mobile%20Money%20Transactions.pdf; For 16 March Announcement see -CBK (2020) 'Emergency Measures to Facilitate Mobile Money Transactions.' https://www.centralbank.go.ke/uploads/press_releases/2125980791_Press%20Release%20-%20Emergency%20Measures%20to%20Facilitate%20Mobile%20Money%20Transactions.pdf

38 GSMA (2020) 'Tracking Mobile Money Regulatory Response to Covid-19-Part 2.' September, https://www.gsma.com/mobilefordevelopment/region/sub-saharan-africa-region/tracking-mobile-money-regulatory-responses-to-covid-19-part-2/#mobilemoney

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40 Alliance for Financial Inclusion Blog (2020) 'Jordan Quick to Shield MSMEs amid Covid-19 Downturn.' https://www.afi-global.org/blog/2020/07/jordan-quick-shield-msmes-amid-covid-19-downturn

41 Central Bank of Jordan (2020) 'The Central Bank of Jordan Signs Two Grant Agreements that Aim to Enhance Financial Inclusion under the Mobile Money for Resilience (MM4R) Initiative sponsored by the Bill & Melinda Gates Foundation.' https://www.cbj.gov.jo/DetailsPage/CBJEN/NewsDetails.aspx?ID=298

42 Ibid.

43 Ibid.

44 Financial Stability Institute 'Covid-19: Boon and Bane for Digital Payment and Financial Inclusion.' https://www.bis.org/fsi/fsibriefs9.pdf

45 Central Bank of Jordan (2020) 'FinTech in Covid-19 and Beyond.' https://www.cbj.gov.jo/DetailsPage/CBJEN/NewsDetails.aspx?ID=291

46 World Bank and CCAF (2019) 'Regulating Alternative Finance: Results from a Global Regulator Survey.' https://jbs.cam.ac.uk/wp-content/uploads/2020/08/2019-11-ccaf-regulating-alternative-finance-report.pdf

47 Ibid.

48 Ibid.

49 See Chapter 2 for further detail on the measure of stringency.

50 World Bank and CCAF (2019) 'Regulating Alternative Finance: Results from a Global Regulator Survey.' https://jbs.cam.ac.uk/wp-content/uploads/2020/08/2019-11-ccaf-regulating-alternative-finance-report.pdf

51 Note that the sample size for the LAC region was small, preventing strong conclusions

52 For example, Abu Dhabi Global Market introduced their FinTech Digital Lab in 2019, which provides participants with various data assets to test and validate technical aspects of their innovation, and provides a collaborative platform to firms and others to identify and address challenges and to provide solutions.

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61 Further evidence in GSMA (2020) 'Tracking Mobile Money Regulatory Responses to Covid-19-Part 2.' https://www.gsma.com/mobilefordevelopment/region/sub-saharan-africa-region/tracking-mobile-money-regulatory-responses-to-covid-19-part-2/#mobilemoney

62 Complementing or supporting existing networks as appropriate, for example the CPMI-IOSCO Joint Working Group on Digital Innovations (JWGDI)

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65 For example, Narain et al (2020) 'Covid-19: The Regulatory and Supervisory Implications for the Banking Sector: A Joint International Monetary Fund- World Bank Staff Position Note.' IMF/World Bank, https://www.imf.org/en/Publications/Miscellaneous-Publication-Other/Issues/2020/05/20/COVID-19-The-Regulatory-and-Supervisory-Implications-for-the-Banking-Sector-49452

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72 Financial Action Task Force (2020) 'Statement by the FATF President: COVID-19 and Measures to Combat Illicit Financing. Paris, France. Available at: https://www.fatf-gafi.org/publications/fatfgeneral/documents/statement-covid-19.html

73 International Monetary Fund (2018) 'The Bali FinTech Agenda.' October https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/10/11/pp101118-bali-fintech-agenda

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75 International Monetary Fund (2018) 'The Bali FinTech Agenda.' October https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/10/11/pp101118-bali-fintech-agenda

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