



Technical Paper 3.1

Policymakers, BigFintechs and the United Nations Sustainable Development Goals

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The findings of the Dialogue on Global Digital Finance Governance are packaged into three thematic areas:

Theme 1

BigFintechs and their impacts on sustainable development

- Technical Paper 1.1 BigFintechs and their impacts on sustainable development
- Technical Paper 1.1B BigFintechs and their impacts on macroeconomic policies
- Technical Paper 1.2 Digital currencies and CBDC impacts on least developed countries

Theme 2

Corporate governance innovations

- Technical Paper 2.1 BigFintechs and the UN SDGs: the role of corporate governance innovations

Theme 3

BigFintechs and international governance, policymaking and the SDGs

- Technical Paper 3.1 Policymakers, BigFintechs and the United Nations Sustainable Development Goals
- Technical Paper 3.2 BigFintechs and international governance, policymaking and the UN Sustainable Development Goals: the SDGs in the international governance of finance
- Technical Paper 3.3 A principles-based approach to the governance of BigFintechs

Executive Summary

This technical paper examines existing regulatory frameworks relating to BigFintechs (BFTs) and their positive and negative impacts on the United Nations Sustainable Development Goals (the SDGs), with a particular focus on regulatory initiatives in relation to or originating from developing countries. The paper begins by highlighting the significant potential of BFTs in contributing to the SDGs through financial inclusion and provision of financial services. However, BFTs also create unique risks to the financial system as a result of platform economics and tendencies toward market concentration and dominance, misuse of data and gaps in existing regulatory standards. In response to these risks and opportunities, domestic and international policymakers have developed a range of regulatory approaches to digital technology, finance and sustainable development. Most of these regulatory processes and approaches are not specifically focused on BFTs or the SDGs; they also do not specifically address issues from a developing country perspective. Further, while regulators and policymakers are now focusing on digitization and sustainability-related risks, so far there appears to be little synergy between the governance of BFTs and the pursuit of the SDGs.

To better understand the scope and limitations of existing regulatory approaches, this paper considers two aspects. First, the paper examines regulations relating to economic activities, structures and impact of BFTs, with a focus on financial, data, competition and Internet/telecoms regulations. The existing regulatory processes address some of the challenges brought by BFTs, including risks to financial stability (i.e. systemic risk considerations), market dominance and concentration, data protection

The Dialogue on Global Digital Finance Governance was established by the UN Secretary General's Task Force on Digital Financing of the SDGs. During its investigations, the Task Force recognized that digitalization is not only reshaping the world of finance; it is also driving the emergence of a new generation of global, dominant digital finance platforms (BigFintechs) with increasing cross-border spillover effects on many areas of sustainable development across the world, particularly in developing economies.

The potential impacts of these platforms are both positive and negative, and one of the main challenges in addressing them is that existing policy approaches to BigFintechs have mostly focused on narrow, although important, financial stability, consumer protection and market integrity issues, and some aspects of data, Internet and competition regulation, but have remained largely disconnected from the broader SDG/ESG debate. Another issue is that the governing arrangements of such platforms have seldom involved developing economies, where their impacts are often strongest, and the potential for transformation is greatest.

The Dialogue was established to explore the nexus of BigFintechs and sustainable development. Its goal is to catalyse governance innovations that take greater account of the SDG impacts of BigFintechs and are more inclusive of the voices of developing nations. To this end, the Dialogue has produced a series of Technical Papers that bring new, complementary perspectives on these issues. The papers have been drafted by commanding experts in the field and have been peer-reviewed by leading institutions and academics.

The following paper is [Technical Paper 3.1](#) under Theme 3.

The Dialogue on Global Digital Finance Governance is hosted by the Swiss and Kenyan Governments and stewarded jointly by the United Nations Development Programme (UNDP) and United Nations Capital Development Fund (UNCDF).

and Internet/telecommunications licensing. At the same time, existing regulatory responses to BFTs are not consistent across jurisdictions, leading to problems with extraterritoriality of domestic laws and regulatory fragmentation. Further, regulators often have limited technical expertise and experience in dealing with BFTs and are grappling with providing effective answers to risks generated by BFTs.

Second, the paper examines regulatory initiatives relating to the SDGs. To date, most sustainability-related initiatives have been developed in the context of environmental, social and governance frameworks (ESG) rather than the SDGs. Our review concludes that an array of domestic and international policies has emerged to address sustainability-related risks, rather than to support sustainable development in a holistic manner. The proliferation of such different standards, however, creates regulatory uncertainty and a lack of clear standards for ESG/SDG governance. While several jurisdictions such as the EU have attempted to standardize ESG/SDG governance, there is still no coherent approach to ESG/SDG reporting and supervision. In addition, the majority of existing ESG/SDG governance standards are voluntary or insensitive to the impact of technology.

Based on the analysis of the BFT and SDG processes and regulatory approaches, we highlight the gaps that need to be addressed by relevant stakeholders. First, regulators should promote greater consistency among international and national regulatory standards. This point is particularly relevant in the context of developing countries that may struggle to comply with varying international standards and approaches. Second, considering the broad scope of BFT business models, regulatory bodies should promote greater synergy and cooperation in their work. Third, regulators in developed countries should pay greater attention to the interests and needs of developing countries to support their pursuit of sustainable development. Fourth, regulators should adopt balanced and proportional regulatory approaches for fintech companies and services to address new risks created by BFTs. Specific ways to address such gaps are discussed in Technical Papers 3.2 and 3.3.



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Introduction

This paper examines existing policy approaches relating to digital finance platforms—BigFintechs (BFTs)—in terms of their impact on the United Nations Sustainable Development Goals (SDGs), both positive and negative, with a particular focus on identifying BFT-related regulatory initiatives relating to and/or emanating from developing countries. Given the unique risks and opportunities that BFTs present in the context of achieving the SDGs, our findings suggest that policymakers and regulators around the world are concerned with a range of issues relating to both the activities of BFTs and the general pursuit of the SDGs. However, most of their policies are not specifically focused on BFTs, related directly to the SDGs, or being developed with developing countries in focus. Further, while regulators and policymakers are trying to adapt to digitization and sustainability-related risks, there appears to be little synergy between the governance of BFTs and the pursuit of the SDGs.

To better understand the scope and limitations of the existing regulatory approaches, this paper considers two main regulatory areas. First, the paper examines regulatory frameworks related to the economic activities, structures and impacts of BFTs. In this context, we focus on the four most relevant regulatory processes: financial regulation (particularly relating to systemic risk considerations); competition/antitrust policy and regulation; telecommunications/Internet regulation; and data policy and regulation. Each of these existing processes addresses certain aspects of BFTs; each is also starting to consider questions relating to BFTs specifically, but these is generally at a very early stage.

We can see that regulators are taking steps to mitigate potential risks to the integrity of financial markets by adopting new measures or repurposing existing regulatory approaches to govern BFTs. While the existing frameworks to governing BFTs are not always robust or sensitive to the impact of technology, progress has been made to adapt to the digital transformation that BFTs drive in financial and other markets.

Second, we examine regulatory activities related to the pursuit of the SDGs. To date, most focus has been in the context of Environmental, Social and Governance frameworks (ESG), rather than specifically directed towards the SDGs. Our review concludes that an array of new national and international policy solutions is emerging to address sustainability-related risks as opposed to supporting sustainable development more broadly. However, the majority of these existing regulatory strategies are voluntary, fragmented across different jurisdictions, or insensitive to the impacts of technology. The second paper in this series considers the lessons from a number of specific contexts in greater detail.

After examining these areas of regulatory activity, we conclude by briefly outlining the main gaps in the existing regulatory frameworks and suggesting possible ways forward. First, we argue that relevant stakeholders should promote great consistency and standardization among international, regional and national regulatory standards. Second, we argue that regulatory bodies from different domains should develop greater synergy when regulating complex business models that operate within more than one regulatory domain (e.g. data and competition regulation). Third, as national, regional and international regulation can have unintended consequences, we argue that greater attention should be given to the interests and needs of developing countries. Fourth, we argue that regulators should revise their existing regulatory frameworks to address specific risks and harness opportunities created by technology. These areas will be considered in greater detail in the third paper in this series.

BFTs and their relevance to the United Nations SDGs

This section provides a brief overview of BFTs and the United Nations SDGs.

BigFintechs

The development of technology has significantly influenced the structure of modern economies. Prominent among such developments is the rise of BFTs. **BFTs can be defined as a “broader group of firms in which technology has come to play a key role in driving an upsurge in growth, scale and diversification into financial services with cross-border implications”¹**

BFTs originate from multiple commercial domains, including e-commerce, social media, telecommunications, technology, communications and other companies that provide financial/non-financial and regulated services.² In addition to tech and other non-financial companies venturing into financial services, BFTs also include governmental or other forms of financial infrastructure (e.g. SWIFT, DTCC) and incumbent financial institutions that are increasingly reshaping their operations on the basis of data and technology. The paper also considers BigTech companies that provide data and infrastructure services to financial institutions. By broadening the definition of BFTs, this paper not only explores apparent cases of the BFTs’ influence on the SDGs (e.g. access to payment platforms and other financial services), but also less apparent impacts (e.g. biases in algorithms, data privacy issues, and impacts to the rule of law).

1 Mitha A, Arner D, ‘BigFintechs, A New Paradigm’, May 2021, p. 2.

2 Foster K, et al., ‘BigTech Firms in Finance in Emerging Market and Developing Economies’, Technical Paper 3.1; Financial Stability Board, 2020, p. 2.

Following the above definitions, **BFTs can include companies originating and/or operating in a range of areas, including but not limited to: payment platforms; e-commerce platforms and services; social media platforms; data and cloud services; mature Fintech platforms; Internet and information technology; hardware; telecommunications and other communications (TechFins); and a range of incumbent financial services businesses operating in platform models.**³

These companies have significantly expanded their footprint in financial services in recent years, often contributing to financial inclusion, but also raising new policy issues around financial stability, competition and data privacy.⁴ In credit markets, for instance, it was estimated that these firms lent nearly US\$600 billion in 2019 at the global level, and that they were particularly important lenders in China and several emerging markets.⁵

BigFintech (BFT) category	Examples of companies active in this category
<p>Payment platforms <i>regional mobile money providers and global payment platforms</i> *Alternative/cryptocurrencies and CBDCs, bank cash on ledger</p>	<p><i>Ant/Alipay, Apple, Fidelity, Facebook, Google Pay, JPM Coin, MTN, Paytm, Central Banks (e.g. People's Bank of China), Safaricom, Tencent (WeChatPay)</i></p>
<p>e-commerce/marketplace platforms <i>online platforms or marketplaces, connecting sellers with buyers (products or services) B2B, B2C, C2C</i></p>	<p><i>Amazon, Alibaba, eBay, Fiverr, Jio, Jumia, Reliance, Upwork</i></p>
<p>Social media platforms <i>venturing into payments and social commerce</i></p>	<p><i>Facebook/Diem, Tencent/WeChat</i></p>
<p>Data and cloud services <i>providing data and infrastructure services to financial players</i></p>	<p><i>Amazon Web Services, Alibaba Cloud Services, Google Cloud, Ethereum, Microsoft Azure Next Gen DLT</i></p>
<p>TechFin platforms <i>originating from tech players venturing into financial services and digital livelihoods.</i></p>	<p><i>Airbnb, Amazon, Apple, Binance, Grab, Mechanical Turk, Uber</i></p>
<p>Incumbents/mature 'Fintechs' <i>Digitalizing global banks and financial actors, in retail or wholesale</i></p>	<p><i>Blackrock, JP Morgan, Mastercard, SaxoBank, Swift, Visa</i></p>

3 Supra, note 2, p. 2.

4 See Frost J, et al.. 'BigTech and the changing structure of financial intermediation', Economic Policy, 34(100): 761–99, 2019; BIS, 'Big tech in finance: opportunities and risks', BIS Annual Economic Report, Ch. III, June 2019.

5 Cornelli G, et al. 'Fintech and big tech credit: a new database', BIS Working Papers, 887, 2020.



United Nations Sustainable Development Goals

The SDGs are a global initiative launched in 2015 by the United Nations through the United Nations General Assembly Resolution, “Transforming our world: the 2030 Agenda for Sustainable Development”⁶ The SDGs initiative consists of 17 goals and 169 targets aimed at eradicating extreme poverty and inequality, improving socio-economic standards of living, protecting the environment, strengthening global and national institutions, promoting cooperation and achieving other ends. Approaches to SDG governance are examined as the second element of this paper.

In the context of sustainable development, the SDGs are not the only metrics that are used to evaluate the environmental and socio-economic impact of businesses. Economic, social and corporate governance (ESG) frameworks are another kind of sustainability metric frequently used in the private sector.⁷ The main difference between the SDGs and ESG is the sectors in which the different standards are currently used. The SDGs are more frequently adopted in the public sector discourse and used by international organizations and governments to measure the pursuit of sustainable development.⁸ ESG, on the other hand, is more commonly used in the private sector by companies and regulators to measure the environmental and social impact of business activities. However, there are an increasing range of initiatives aiming to align or merge these contrasting efforts.

As will be illustrated in the coming sections, many of the existing sustainability-related regulations were developed under the umbrella of ESG rather than the SDGs. Moreover, there are no clear guidelines on how SDGs initiatives and metrics correlate to ESG.⁹ As a result, it is unclear how ESG projects contribute to the SDGs empirically. Considering that significant regulatory developments have also taken place in the ESG field, we have developed a conversion table between the SDGs and ESG metrics. The table helps us to analyse how ESG initiatives affect the SDGs. In turn, the conversion between the SDGs and ESG will present a broader picture of all SDGs-related regulatory activities even if some do not directly pursue SDGs.

6 The UNGA, ‘Transforming our world: the 2030 Agenda for Sustainable Development’, A/RES/70/1, 2015.

7 Huber BM, ‘UN Sustainable Development Goals—The Leading ESG Framework for Large Companies’, Harvard Law School Forum on Corporate Governance, 2018.

8 See, for example, ‘Understanding the SDGs in Sustainable Investing’, Berenberg, 2018, p. 14; Gregory N, Hornberger K, ‘The Difference Between ESG and Impact Investing and Why It Matters’, the IFC, 2020.

9 The World Economic Forum’s ‘Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation’ tries to remedy this by exploring a correlation between the elements of ESG and SDGs. But there are still no clear conversion standards for the two frameworks. See the World Economic Forum, ‘Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation’, White Paper, 2020, p. 32.

SDG to ESG conversion table¹⁰

ESG element	Applicable SDG(s)
Environment	<p>Goal 6: Clean Water and Sanitation (<i>Shared ESG Element</i>¹¹)</p> <p>Goal 7: Affordable and Clean Energy (<i>Shared ESG Element</i>)</p> <p>Goal 11: Sustainable Cities and Communities (<i>Shared ESG Element</i>)</p> <p>Goal 12: Responsible Consumption and Production</p> <p>Goal 13: Climate Action</p> <p>Goal 14: Life Below Water</p> <p>Goal 15: Life on Land</p>
Social	<p>Goal 1: No Poverty (<i>Shared ESG Element</i>)</p> <p>Goal 2: Zero Hunger</p> <p>Goal 3: Good Health and Well-Being</p> <p>Goal 4: Quality Education</p> <p>Goal 5: Gender Equality (<i>Shared ESG Element</i>)</p> <p>Goal 6: Clean Water and Sanitation (<i>Shared ESG Element</i>)</p> <p>Goal 7: Affordable and Clean Energy (<i>Shared ESG Element</i>)</p> <p>Goal 8: Decent Work and Economic Growth (<i>Shared ESG Element</i>)</p> <p>Goal 9: Industry, Innovation, and Infrastructure (<i>Shared ESG Element</i>)</p> <p>Goal 10: Reduced Inequalities (<i>Shared ESG Element</i>)</p> <p>Goal 11: Sustainable Cities and Communities (<i>Shared ESG Element</i>)</p> <p>Goal 16: Peace, Justice and Strong Institutions (<i>Shared ESG Element</i>)</p>
Governance	<p>Goal 1: No Poverty (<i>Shared ESG Element</i>)</p> <p>Goal 5: Gender Equality (<i>Shared ESG Element</i>)</p> <p>Goal 8: Decent Work and Economic Growth (<i>Shared ESG Element</i>)</p> <p>Goal 9: Industry, Innovation, and Infrastructure (<i>Shared ESG Element</i>)</p> <p>Goal 10: Reduced Inequalities (<i>Shared ESG Element</i>)</p> <p>Goal 16: Peace, Justice and Strong Institutions (<i>Shared ESG Element</i>)</p> <p>Goal 17: Partnerships</p>
Economic SDGs (highlighting SDG/overlap with ESG)	<p>SDG 1: No Poverty</p> <p>SDG 2: Zero Hunger</p> <p>SDG 5: Gender Equality</p> <p>SDG 6: Clean Water and Sanitation</p> <p>SDG 8: Decent Work and Economic Growth</p> <p>SDG 9: Industry, Innovation, and Infrastructure</p> <p>SDG 17: Partnerships</p>

¹⁰ The content of each particular ESG element is based on the World Bank Sovereign ESG Data Framework, available at: <<https://datatopics.worldbank.org/esg/framework.html>>. To match SDGs to ESGs, the authors analysed the content of each SDG as outlined in the 'Transforming Our World: the 2030 Agenda for Sustainable Development' and matched it to the content of ESGs as envisaged in the abovementioned World Bank report. For the content of SDGs in the table, refer to UNGA, 'Transforming Our World: the 2030 Agenda for Sustainable Development', A/RES/70/1, 2015.

¹¹ Shared ESG element means that an SDG in question falls within the scope of more than one ESG element.

BFTs are important in the context of the SDGs primarily because they have the potential to drive greater financial inclusion through lower costs of financial products, improved risk management and other means.¹² Conversely, BFTs may exacerbate financial and other risks such as financial volatility, cybercrime, and data security and privacy violations. As such, regulatory frameworks play an essential role in reducing the risks and optimizing the benefits associated with the emergence of BFTs in financial markets. The remainder of this technical paper will highlight the existing regulatory strategies adopted in the context of BFTs/SDGs and consider issues relating to possible ways forward.

Governing BFTs: financial, competition/antitrust, Internet/telecommunications and data frameworks

This section examines a range of existing national, regional and international regulatory processes relating to BFTs. After examining the relevant regulatory frameworks, we analyse how the existing regulatory approaches fit within the framework of the SDGs.

BFT activity is typically regulated either under existing frameworks applicable to financial service providers or under new regulations designed specifically for technology-based companies and/or activities. When we consider existing approaches that are relevant to BFTs, four major policy and regulatory areas have the clearest relevance: **financial regulation, competition and antitrust regulation, telecommunications/Internet regulation and data protection regulation**, in addition to processes directly addressing ESG/SDGs.¹³ Each of these four areas is broad and includes various requirements relating to establishment, consumer protection, disclosure and reporting, and other regulations.¹⁴ The core of this paper is thus a summary of these major approaches, with their potential application and relevance to BFTs.

Financial regulation

The first area of regulatory activity relevant to BFTs is **financial regulation**. Over an extended period (over 150 years), financial regulation has evolved to address issues of financial stability, market functioning and efficiency, financial integrity, consumer and investor protection, and fairness. This scope is premised on the underlying view that finance is essential for sustainable development, and thus that its regulation enhances the public good, both from the standpoint of preventing crises while supporting the provision of finance.¹⁵ To achieve these goals, financial regulators have developed a range of requirements and restrictions on the providers of financial services and market participants. Regulation has generally arisen in response to societal harms that legislators do not want to see repeated—namely financial crises, bank failures, fraud and money-laundering, abuse of consumers and unfair outcomes. Regulators are representatives of society who are “paid to worry” and mitigate these risks.¹⁶

At the international level, an international cooperative approach has evolved in response to major financial crises to set agreed international standards relating to financial regulation. Broad policy directions are set by the Group of 20 (G20), with technical support and development via the Financial Stability Board (FSB) working with a range of international organizations including the International Monetary Fund (IMF), the Bank of International Settlement (BIS), the International Organization of Securities Commissions (IOSCO), the Financial Action Task Force (FATF) and others.¹⁷ In recent years, international efforts have focused on addressing weaknesses identified as a result of the 2008 financial crisis and more recently the challenges of balancing benefits and risks arising through digitization and datafication of finance in the context of fintech.

International financial regulation usually takes the form of soft law where international actors, including regulators, for example, develop voluntary regulatory standards that

12 UNEP, 'Fintech and Sustainable Development – Assessing the Implications', Summary, 2016, p. 3.

13 See, for example, Bank for International Settlements, 'Big Tech in Finance: Opportunities and Risks', BIS Annual Economic Report 2019, p. 71. It is worth mentioning that tax law is another relevant area applicable to BFTs. Tax law is particularly relevant in the context of sustainable development where inconsistent compliance with tax obligations can negatively affect developing economies. See, for example, ECOSOC, 'Corporate Tax Reform Must Focus on Developing Countries' Needs, Combating Inequality, Speakers Tell Special Meeting of Economic and Social Council', ECOSOC/6978, 2019.

14 Ibid, p. 68.

15 Ehrentraud J, et al., 'Policy Responses to FinTech: A Cross-Country Overview', FSI Insights on Policy Implementation No. 23, 2020, p. 1.

16 Thanks to Jon Frost for this. See Buckley R, Arner D, From Crisis to Crisis (Kluwer 2012) for detailed discussion.

17 See, for example, the FSB's Members of the Steering Committee, available at: <www.fsb.org/about/organisation-and-governance/members-of-the-steering-committee/>.

are then implemented by individual jurisdictions into their respective legal systems.¹⁸ A prominent example is the Basel Capital Accords, developed by the Basel Committee on Banking Supervision of the BIS, which sets standards regarding capital and liquidity risks to improve the resilience of the banking sector.¹⁹ Another prominent example is the Recommendations of the Financial Action Taskforce (FATF) on money-laundering and terrorist financing. Similar voluntary standards can be found in other areas of financial regulation such as securities (e.g. IOSCO Objectives and Principles of Securities Regulation), financial market infrastructures (e.g. CPMI-IOSCO Principles for Financial Market Infrastructures), insurance (e.g. IAIS Insurance Core Principles and ComFrame), investment (e.g. IOPS Principles of Private Pension Supervision) and others.²⁰

At the national level, regulators take a range of approaches to implementing international financial regulatory standards into their national legal systems, depending on the nature of the financial activities in question.²¹ Implementation is monitored closely by the G20 and FSB for their members and by the IMF, World Bank and individual standard setters more broadly.²²

At the heart of these systems are three major regulatory objectives: financial stability, consumer and investor protection, and market integrity, all seeking to support wider development while balancing risks inherent in finance.²³

At the core of financial regulation, particularly since the Global Financial Crisis of 2008, is financial stability. Financial stability can be seen both negatively (the absence of a financial crisis) and positively (a financial system that is resilient to shocks and supports wider sustainable development). Financial stability regulation takes a wide range of forms, particularly focusing on macroprudential and microprudential regulation.

18 The process of adoption normally includes high-level meetings and consultations among regulators and central banks. See, for example, 'The Basel Process – overview', available at: <https://www.bis.org/about/basel_process.htm>. Moreover, regional organizations often have jurisdiction to adopt directives and regulations with the latter being strictly enforceable and the former being open to state interpretation.

19 Basel Committee on Banking Supervision, 'Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems', Bank for International Settlements, 2010, p. 1. The Basel Committee on Banking Supervision (BCBS) is the primary global standard setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters. Its 45 members comprise central banks and bank supervisors from 28 jurisdictions.

20 See the review of international financial standards in the context of sustainable development in Heaps TAA, Guyatt D, 'A Review of International Financial Standards as They Relate to Sustainable Development', United Nations Environment Programme, 2017, pp. 5–6.

21 See, for example, developing countries and their commitments to Basel regulations in Beck T, Jones E, Knaack P, 'Basel standards and developing countries: A difficult relationship', CERP, 2018, available at: <<https://voxeu.org/article/basel-standards-and-developing-countries>>.

22 See, for example, Buckley R, Arner D, From Crisis to Crisis: The Global Financial System and Regulatory Failure (Kluwer 2012).

23 See Arner D, Financial Stability, Economic Growth and the Role of Law (Cambridge 2007).

Macroprudential regulation involves seeking to prevent crises from happening before they actually occur and tends to focus on interconnections across the financial system that could bring risks through interconnection or interdependency. Microprudential regulation focuses on the safety and soundness of individual financial institutions. Financial institutions are prone to risks of contagious losses of confidence that can result in panic (i.e. a 'bank run') and potentially the collapse not only of that individual financial institution but also of others by a contagion across the wider financial system and to the economy and society more generally. This is broadly acknowledged as 'systemic risk'. Systemic risks are tackled by both macroprudential and microprudential regulation. International financial regulation has tended to focus on related issues, including through the identification of systemic risks and systemically important financial institutions (SIFIs), as well as related regulatory and supervisory approaches, including capital, liquidity and leverage requirements, enhanced supervision and disclosure, crisis contingency planning and failure resolution mechanisms. Such approaches extend beyond traditional financial institutions to a range of financial market infrastructure providers (FMIs) as well, such as payment and settlement systems.

As a second objective, consumer protection seeks to protect consumers from overreach by financial institutions, both out of fairness and to drive wider confidence in the financial system and to reduce financial crime. This is typically addressed by a combination of disclosure and behavioural requirements, enforced through public agencies via criminal and/or civil penalties (e.g. warnings, financial licence suspensions, bans on products).²⁴

The third objective—market integrity—focuses on preventing the criminal and terrorist use of the financial system, fraud and market manipulation. It focuses on a range of financial crimes (in particular fraud), but also money-laundering, terrorist financing and market abuse. As a general matter, financial regulation imposes licensing requirements such that private companies and institutions need to obtain special licences from relevant regulators to provide financial services. For example, companies that wish to provide banking services need to obtain a banking licence and comply with a range of related regulatory standards.²⁵ In the context of BFTs, most jurisdictions apply the existing regulatory standards to govern the activities of BFTs in the financial sector.²⁶ Hence, if BFTs

24 See, for example, ESMA, 'ESMA Renews Binary Options Prohibition For a Further Three Months From 2 April 2019', available at: <www.esma.europa.eu/press-news/esma-news/esma-renews-binary-options-prohibition-further-three-months-2-april-2019>.

25 Omarova ST, 'Technology v Technocracy: Fintech as a Regulatory Challenge', Journal of Financial Regulation, vol. 6, 2020, p. 112.

26 Supra, note 15, Ehrentraud J et al., 'Policy Responses to FinTech: A Cross-Country Overview', p. 11; Crisanto JC, Ehrentraud J, Fabian M, 'Big techs in finance: regulatory approaches and policy options', FSI Briefs, 2021.

or other companies want to engage in regulated activities that require a licence, they can often do so by applying for general (i.e. non-tech specific) financial licences.²⁷

Imposing licensing requirements on BFTs or tech firms presents two obstacles. First, BFTs often do not apply for banking or other licences to limit regulatory compliance costs. To avoid regulatory burdens, BFTs provide certain financial services through existing financial institutions without the need to apply for their own licences (e.g. BFTs' branded credit cards).²⁸ However, this means that BFTs can potentially affect financial markets while remaining beyond regulatory supervision (i.e. BFTs bring new risks while remaining unregulated). Second, it is not always apparent whether the financial activities of BFTs fall within the scope of relevant licensing or other financial regulations.²⁹ This is further exacerbated by the combination, on the part of BFTs, of digital technologies and business model innovations that raise challenges around which regulations might apply and how they might apply, for example in the case of money balances held in wallets or P2P lending, which might not fit under traditional approaches to deposits and lending activities. Similarly, certain financial products based on blockchain technology (e.g. digital tokens) may fall under securities regulations. However, it is not always apparent whether these new digital products fall under the existing rules.³⁰

The risk is one highlighted by the term 'regulatory arbitrage', structuring to avoid regulation while transferring risk outside of the regulated sector.³¹ Prevention of regulatory arbitrage has emerged as a major financial regulatory objective since 2008. This includes a focus on non-bank financial institutions and the risks they may raise.

To improve the licensing process and enhance competition, some regulators have amended their regulatory frameworks to govern the activities of BFTs. For example, the Office of the Comptroller of the Currency (OCC) in the United States (US) approved the adoption of special national bank charters for Fintech companies.³² The charters would contain a similar regulatory framework as that applicable to banks but with several relaxations, such as exemptions from deposits requirements and state money-transmitter laws.³³ Meanwhile, other requirements

that apply to banks in the US would extend to the special bank charters for Fintech companies (BFTs included).³⁴ Similar developments can be found in other jurisdictions, such as Australia and the United Kingdom (UK), where regulators allow Fintech companies to provide limited financial services without fully complying with all regulatory standards.³⁵ Moreover, in jurisdictions such as Hong Kong and Singapore, regulators have adopted technology-specific regulatory frameworks, such as digital bank licences that govern the activities of companies that wish to engage in digital banking.³⁶ Similarly, Mexico introduced the Financial Technology Law that imposes licensing, AML and other requirements on crowdfunding, electronic payment and virtual asset management companies that provide their services through digital channels.³⁷

Reacting to the emergence of regulatory arbitrage and non-bank finance in the context of BFTs, most recently, China has determined to put in place a unified regulatory regime for any firm engaging in financial services-related business, without distinction between a technological platform standpoint or otherwise.

Besides licensing, other financial regulatory requirements may be applicable to BFTs, such as KYC/AML obligations and securities regulations.³⁸ These regulations are likewise designed to secure the stability of the financial sector, deter criminal activities and protect consumers. The goals of these financial regulations remain relevant in the context of SDGs where such regulations help to preserve the integrity of global financial markets, contributing to economic stability in both developing and developed countries.

In addition to addressing financial stability, consumer protection and market integrity, regulators can also contribute to innovation and competition in financial services to support sustainable development.³⁹ In an effort to take into account positive opportunities that may be available through digital financial transformation and new entrants, regulators in different countries have adopted 'regulatory sandboxes' and 'innovation hubs'.⁴⁰ Regulatory sandboxes include a wide range of programmes run by financial regulators to conduct controlled testing of innovative financial products or services on the market and thus to examine their

27 Ibid.

28 The Financial Stability Board, 'BigTech in Finance: Market Developments and Potential Financial Stability Implications', 2019, p. 14.

29 Supra, note 15, Ehrentraud J, et al., 'Policy Responses to FinTech: A Cross-Country Overview', p. 29.

30 See, for example, Schwinger RA, 'Changing Securities Laws and Regulations for the Digital Token Age', New York Law Journal, 2019, p. 1.

31 One potential way to address this problem is the adoption of a functional approach to regulation, see Merton RC, 'A Functional Perspective of Financial Intermediation', Financial Management, vol. 24(2), 1995, p. 24.

32 See the Office of the Comptroller of the Currency, 'OCC Begins Accepting National Bank Charter Applications From Financial Technology Companies', News Release 2018-74, 2018.

33 Omarova ST, 'Technology v Technocracy: Fintech as a Regulatory Challenge', p. 113; Office of the Comptroller of the Currency, 'Policy Statement on Financial Technology Companies' Eligibility to Apply for National Bank Charters', DC20219, 2018, p. 3.

34 Omarova ST, Technology v Technocracy: Fintech as a Regulatory Challenge, p. 113.

35 Ibid, p. 111.

36 Supra, note 15, BIS, 'Policy Responses to FinTech: A Cross-Country Overview', p. 12; Hong Kong Monetary Authority, 'Revised Guideline on Authorization of Virtual Banks', available at: <www.hkma.gov.hk/media/eng/doc/key-information/press-release/2018/20180530e3a2.pdf>.

37 Lovells H, 'Mexico's Fintech Law initiative: What You Need to Know', Debt Capital Markets – Global Insights, 2017, p. 34.

38 Supra, note 13, p. 68; Ehrentraud J, Ocampo D, Vega C, 'Regulating fintech platform financing: digital banks and fintech platforms', FSI Insights No 27, August 2020.

39 See Kirakul S, Yong J, Zamil R, 'Multiple mandates', FSI Insights on policy implementation, 2021.

40 Buckley R, et al., 'Building FinTech Ecosystems: Regulatory Sandboxes, Innovation Hubs and Beyond', Washington University Journal of Law and Policy, vol. 61, 2020.

impact.⁴¹ In particular, regulatory sandboxes allow Fintech companies and financial firms to offer their products to customers while benefiting from a waiver of or a reduction in applicable regulations.⁴² Regulatory sandboxes usually pursue several aims such as fostering innovation and competitiveness in financial services, testing the effects of new products and technologies on financial markets and measuring the effects of regulatory burdens.⁴³ Moreover, as will be discussed below, regulatory sandboxes are becoming increasingly more popular as a way to support sustainability in financial services.⁴⁴ Multiple developed and developing countries such as Singapore, Canada, Denmark, Sierra Leone, Thailand, Malaysia, Indonesia and others have adopted regulatory sandboxes to foster financial innovation.⁴⁵ One of the first regulatory sandboxes in the field of Fintech was adopted by the UK's Financial Conduct Authority (FCA) in 2016.⁴⁶ The FCA's sandboxes allow companies to test their financial products in a controlled environment and reduce the regulatory burden for a period of three to six months. The sandbox agreements can grant companies restricted authorization to conduct regulated financial activities and waive certain otherwise applicable regulations. These measures allow companies to innovate by reducing complex and costly regulatory burdens.⁴⁷ The UK became a model for other jurisdictions in which regulators adopted a similar sandbox structure with time-limited regulatory waivers and special regulatory regimes. The exact content of waivers varies depending on the jurisdiction in question and the priorities of regulators.⁴⁸

Importantly, many developing countries follow the regulatory sandbox strategy to foster financial inclusion and financial innovation.⁴⁹ In the context of developing economies, the existence of regulatory sandboxes can help both major companies and fast-growing start-ups to test new financial products without the need to comply

with a broad set of regulations.⁵⁰ This can be particularly valuable for financial inclusion through digital technology where more companies can provide their services while enjoying a lower regulatory burden. Meanwhile, a lack of regulatory requirements during the sandbox period creates certain risks as sandbox companies may adopt lower cybersecurity, KYC and other standards.⁵¹ In this context, national regulators must strike a balance between financial innovation and risk management.

One can thus say that financial regulation tries to balance risks with potential opportunities in the context of technology. Over the past five years, much of the focus has been on reducing barriers to new entrants.⁵² However, more recently, traditional concerns relating to financial stability, consumer protection and market integrity have begun to arise in relation to BFTs in an increasing range of jurisdictions,⁵³ with the highest profile examples being Facebook's proposal for Diem (ex Libra)⁵⁴ and, most recently, Ant in China.⁵⁵

In particular, there are growing concerns that BFTs may achieve systemic importance ("too big to fail") as providers of financial services or as vendors to financial institutions.⁵⁶ As a result, international standard setters are investigating related issues,⁵⁷ while Chinese policymakers have designated Ant a systemically important financial institution under new financial holding company legislation and are in the process of applying related regulatory requirements to make sure that it is treated in the same way as large incumbent financial institutions.⁵⁸ Some argue that addressing the concerns from BFTs will require an entity-based approach.⁵⁹

41 Omarova ST, 'Technology v Technocracy: Fintech as a Regulatory Challenge', p. 110; Baker McKenzie, 'Finsight: Regulatory Sandboxes', available at: <<https://financialinstitutions.bakermckenzie.com/2018/10/31/finsight-regulatory-sandboxes/>>.

42 Omarova ST, 'Technology v Technocracy: Fintech as a Regulatory Challenge', p. 111.

43 Cornelli G, et al., 'Inside the regulatory sandbox: effects on fintech funding', BIS Working Paper 901, 2020. Further, regulatory sandboxes can pursue additional goals such as empowerment of women, see, for example, FCA's TechSprint initiatives, available at: <<https://www.fca.org.uk/events/techsprints/amf-financial-crime-international-techsprint>>.

44 See, for example, Higgins P, Male T, 'White Paper: Sandboxing Nature; How Regulatory Sandboxes Could Help Restore Species, Enhance Water Quality and Build Better Habitats Faster', The Environmental Policy Innovation Center, 2019, pp. 9–10.

45 Goo JJ, Heo JY, 'The Impact of the Regulatory Sandbox on the Fintech Industry, with a Discussion on the Relation between Regulatory Sandboxes and Open Innovation', *Journal of Open Innovation*, 2020, p. 4.

46 Ibid, p. 5.

47 Omarova ST, 'Technology v Technocracy: Fintech as a Regulatory Challenge', p. 111.

48 Goo JJ, Heo JY, 'The Impact of the Regulatory Sandbox on the Fintech Industry, with a Discussion on the Relation between Regulatory Sandboxes and Open Innovation', pp. 5–6; See also Wechsler M, Perlman L, Gurung N, 'The State of Regulatory Sandboxes in Developing Countries', 2018, available at SSRN: <<https://ssrn.com/abstract=3285938>> or <<http://dx.doi.org/10.2139/ssrn.3285938>>. For example, some countries can adopt more permissive and flexible sandboxes, such as the difference between Germany and the UK.

49 Wechsler M, Perlman L, Gurung N, 'The State of Regulatory Sandboxes in Developing Countries', pp. 16–23.

50 Goo JJ, Heo JY, 'The Impact of the Regulatory Sandbox on the Fintech Industry, with a Discussion on the Relation between Regulatory Sandboxes and Open Innovation', p. 4.

51 Ibid.

52 Zetzsche D, et al., 'Regulating a Revolution: From FinTech and Regulatory Sandboxes to RegTech and Smart Regulation', *Fordham Journal of Corporate and Financial Law* vol. 23 (1), 2018.

53 Zetzsche D, et al., 'From FinTech to TechFin: The Regulatory Challenges of Data-Driven Finance', *NYU Journal of Law and Business* 393 (2018).

54 Zetzsche D, Buckley R, Arner D, 'Regulating Libra: The Transformative Potential of Facebook's Cryptocurrency and Possible Regulatory Responses', *Oxford Journal of Legal Studies*, vol. 41(1), 2021.

55 Zetzsche D et al., 'Digital Finance Platforms: Toward a New Regulatory Paradigm', *University of Pennsylvania Journal of Business Law*, vol. 23(1), 2020.

56 Frost J, 'The Economic Forces Driving Fintech Adoption Across Countries', in M. King and R. Nesbitt (eds.), *The Technological Revolution in Financial Services*, Toronto: University of Toronto Press; 2020.

57 FSB BigTech papers.

58 Among relevant regulatory initiatives is China's new online micro-lending law that governs products such as Ant Cash Now and WeChat Loan. The purpose of the law is to regulate banking-like service provided by China's tech giants. See 'China Issues Draft Rules to Regulate Online Micro-lending Business', Reuters, 2020, available at: <www.reuters.com/article/china-lending/update-1-china-issues-draft-rules-to-regulate-online-micro-lending-business-idUK-L1N2HP035?edition-redirect=uk>.

59 See Restoy F, 'Fintech regulation: how to achieve a level playing field', FSI Occasional paper, 2021. See also Carstens A, 'Public Policy for Big Techs in Finance', BIS, 2021.

Further, governments are increasingly investigating how they themselves may provide digital currency functions.⁶⁰ These digital currencies may themselves involve a role for the private sector, potentially including BFTs, and may explicitly target financial inclusion.⁶¹

Antitrust and competition regulation

The second area of regulatory activity relevant to BFTs is **antitrust and competition law**. The purpose of antitrust and competition law is to protect consumers and small businesses from abusive business practices caused by a concentration of market power in the hands of dominant firms.⁶² These laws help to maintain a competitive market environment by limiting predatory business practices such as market allocation, bid-rigging, price-fixing and others.⁶³ As such, antitrust and competition laws apply to various economic activities that can intentionally or unintentionally stifle competition (e.g. mergers and acquisitions that can lead to the monopolization of different markets). Similarly to financial regulation, competition laws and policies are developed nationally, regionally and internationally. At the international level, bodies such as the Organisation for Economic Co-operation and Development (OECD), the International Competition Network (ICN) and the United Nations Conference on Trade and Development (UNCTAD) develop voluntary recommendations, best practices and policy guidelines aimed at harmonization of competition laws across different jurisdictions.⁶⁴ In addition to multilateral cooperation, regulators from different jurisdictions can adopt bilateral Memoranda of Understanding (MoU) or collaboration agreements to harmonize the enforcement of competition laws.⁶⁵

At the national and regional levels, regulators have broad discretion in their approaches to competition policy and its goals. For example, major jurisdictions such as the US and the European Union (EU) often pursue different goals with their competition policies. In the US, competition law is primarily focused on the protection of consumer welfare and, in the EU, competition law is aimed at both protecting consumers and facilitating

market integration.⁶⁶ The difference in competition policy goals translates into different regulatory requirements across different jurisdiction, for example the EU has a much lower threshold for qualifying economic activities as anticompetitive than does the US.⁶⁷

Competition laws are becoming increasingly relevant in the context of BFTs. In particular, BFTs can have significant advantages in data collection and digital infrastructure control.⁶⁸ These advantages can lead to conflicts of interest and can allow BFTs to undermine market competition.⁶⁹ For example, BFTs can maintain digital monopolies by acquiring smaller competitors, thus solidifying their market position.⁷⁰ Moreover, BFTs can raise entry barriers into financial and other markets, use their data and dominant digital platforms to suppress competition and engage in other anticompetitive practices.⁷¹

These risks attract the attention of regulators in both developed and developing countries. The EU has released a new tool, 'The Digital Services Act Package', which consists of the 'Digital Markets Act' and the 'Digital Services Act'. The acts are designed to foster competitiveness among digital services providers and to enhance the protection of digital consumer rights by identifying 'gatekeepers' and imposing new obligations on digital service providers.⁷² Similar developments are happening in the US where the Subcommittee on Antitrust, Commercial, and Administrative Law recently released a report on the state of competition in the US digital markets.⁷³ The report concluded that major tech companies have significant market power that can undermine competition, thus warranting antitrust reforms.⁷⁴ Shortly after the report, the US Department of Justice filed an antitrust lawsuit against Google for maintaining a monopoly in Internet search and search advertising markets.⁷⁵

China has now initiated related processes, including new draft guidelines on e-commerce and Internet platforms antitrust issued by the State Administration for Market

60 Didenko A, et al., 'After Libra, the Digital Yuan and Covid-19: Central Bank-Linked Cryptocurrencies' (2020), available at: <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3622311>; Auer R, Cornelli G, Frost J, 'Rise of the central bank digital currencies: drivers, approaches and technologies', BIS Working Paper 880, 2020.

61 Boar C, Wehrli T, 'Ready, steady, go: Results of the third BIS survey on central bank digital currency', BIS Paper 118, 2021.

62 Wright JD, Ginsburg DH, 'The Goals of Antitrust: Welfare Trumps Choice', *Fordham Law Review*, vol. 81, 2013, p. 2406.

63 See, for example, the US Department of Justice, 'Price Fixing, Bid Rigging, and Market Allocation Schemes: What They Are and What To Look For', *An Antitrust Primer*, p. 2.

64 See, for example, the OECD, 'Recommendation of the OECD Council on Competition Assessment', C(2009)130 - C/M(2009)21/PROV, 2019; the OECD 'International Co-Operation in Competition', available at: <www.oecd.org/competition/internationalco-operationandcompetition.htm>.

65 See the OECD, 'Inventory of Provisions in Inter-Agency Co-Operation Agreements', DAF/COMP/WP3(2016)1/REV2, 2016, p.3.

66 See the European Commission, 'Approach of the European Commission to Competition in the High Technology Sector', p. 4, available at: <https://ec.europa.eu/competition/information/digitisation_2018/contributions/epicenter.pdf>.

67 Ibid.; Coppola M, Nazzini R, 'The European and U.S. Approaches to Antitrust and Tech: Setting the Record Straight', *Competition Policy International*, 2020, p. 10, available at: <www.ftc.gov/system/files/attachments/key-speeches-presentations/europe-column-may-2020-full.pdf>.

68 Supra, note 13, p. 73.

69 Ibid.

70 See, for example, the acquisition of Instagram and WhatsApp by Facebook. See also The Subcommittee on Antitrust, Commercial and Administrative Law of the Committee on the Judiciary, 'Investigation of Competition in Digital Markets', Majority Staff Report and Recommendations, 2020, p. 11.

71 Supra, note 13, p. 67.

72 European Commission, 'The Digital Services Act Package', Policy Note, 2020.

73 Supra, note 70, 'Investigation of Competition in Digital Markets', p. 11.

74 Ibid, p. 20.

75 The US Department of Justice, 'Justice Department Sues Monopolist Google For Violating Antitrust Laws', available at: <www.justice.gov/opa/pr/justice-department-sues-monopolist-google-violating-antitrust-laws>.

Regulation. The guidelines pursue several aims including the protection of fair competition, a reduction in operator compliance costs and the improvement of anti-monopoly supervision in the Internet sector.⁷⁶ The regulations are likely to affect China's major companies, such as Tencent and Alibaba, by imposing more restrictions on the use of subsidies, discounts and other business practices that can affect competition.

Developing countries have also started to modernize their competition laws in response to the emergence of BigTechs and BFTs. India recently prohibited e-commerce platforms from selling products from affiliated companies to avoid potential conflicts of interest and concentration of market power.⁷⁷ Mexico introduced a Fintech law to foster competition and innovation through regulatory sandboxes and application programming-interface (APIs)-based open access to data.⁷⁸ These developments suggest that regulators around the world will continue to re-examine their existing competition laws to tackle the risks arising from BFTs.

Competition laws also remain relevant in the context of sustainable development, where they play an important role in limiting the negative impacts of BFTs. On the one hand, BFTs can facilitate financial inclusion and provide financial and other services at a lower cost, thus potentially contributing to economic growth and the reduction of poverty.⁷⁹ Yet, on the other hand, the concentration of market power in the hands of BFTs can undermine the resilience of incumbent business models in developing countries, thus leading to new risks for economic development.⁸⁰ Additionally, the dominant market position of multinational BFTs can undermine the innovation in and development of local enterprises. These challenges mean that regulators in developing economies will need to strengthen their competition policies to limit the potential negative impacts of BFTs on sustainable development.

Telecommunications and Internet regulation

Telecommunications and Internet regulation are also areas of high relevance. At the international level, the International Telecommunication Union (ITU) sets general principles regarding telecom services and the

interconnection and interoperability of telecom facilities.⁸¹ The main objectives of the ITU are the facilitation of global telecom interconnection and interoperability, the promotion of efficient and accessible telecom services, and the standardization of the general principles on the provision and operation of international telecoms.⁸² To achieve these goals, the ITU facilitates adoption of international treaties on telecom regulation such as the International Telecommunication Regulations (ITRs) and develops non-binding recommendations on telecom operations for national implementation by states. Besides the ITU, international organizations such as the United Nations Commission on International Trade Law (UNCITRAL) and the OECD develop policy recommendations and treaties on Internet governance and e-commerce.⁸³ Their initiatives are designed to ensure greater consistency across national and international telecoms laws and policies. In terms of the Internet, non-profit organizations play an important role. For example, the Internet Corporation for Assigned Names and Numbers (ICANN) is a non-profit corporation that works with Internet registries and registrars to promote greater competition on the Internet (e.g. accessible domains), to facilitate dispute resolution over domain ownership and to promote new top-level domains.⁸⁴ Unlike top-down governance models, the ICANN operates based on a community-driven consensus model to monitor how the Internet domain system functions and develops.⁸⁵ Similarly to domain regulation, other areas of the Internet are governed by organizations such as the American Registry for Internet Numbers (IP-address management), the Internet Governance Forum (promotion of stakeholder cooperation), and the Internet Engineering Task Force (a voluntary Internet protocol suite).⁸⁶

At the regional and national levels, telecoms regulators pursue diverse tasks such as consumer protection, interoperability of telecom services, fair competition among telecom service providers, data security and data privacy, and cybersecurity.⁸⁷ For example, the European Union adopted a range of directives on electronic communications networks and services to facilitate competition in the telecommunications sectors.⁸⁸ Similar regulatory developments are found

76 Xin L, 'China Drafts New Antitrust Guideline for Internet Companies', Pinsent Masons, Out-Law News, 2020; Antitrust Guidelines on the Platform Economy Field (Draft for Solicitation of Comments), 2020, available at: <www.samr.gov.cn/hd/zjdc/202011/t20201109_323234.html>.

77 Supra, note 13, p. 73.

78 OECD, 'Digital Disruption in Banking and its Impact on Competition', 2020, p. 27, available at: <www.oecd.org/daf/competition/digital-disruption-in-banking-and-its-impact-on-competition-2020.pdf>.

79 The Financial Stability Board, 'BigTech Firms in Finance in Emerging Market and Developing Economies', 2020, p. 16.

80 Ibid.

81 See, for example, the International Telecommunications Union, 'Final Acts of the World Conference on International Telecommunications (WCIT-12)', 2012.

82 Ibid, article 1.

83 See, for example, the UNICTRAL, 'United Nations Convention on the Use of Electronic Communications in International Contracts', 2005; OECD, 'The OECD Recommendation on Internet Policy Making Principles', 2014.

84 ICANN, 'What's the effect of ICANN's role and work on the Internet?', available at: <www.icann.org/resources/pages/effect-2012-02-25-en>.

85 ICANN, 'Beginner's Guide to Participating in ICANN', p. 2.

86 The Internet Governance Project, 'What is Internet Governance?', available at: <www.internetgovernance.org/what-is-internet-governance/#:~:text=Internet%20governance%20refers%20to%20the,UDP%2C%20DNS%20and%20BGP>.

87 OECD, 'The OECD Recommendation on Internet Policy Making Principles', p. 4.

88 See, for example, Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC.

in other regional and national jurisdictions.⁸⁹

BFTs' activities can sometimes fall within the scope of telecommunication laws. A number of telecommunication companies, such as mobile network operators (MNO), have ventured into the provision of digital financial services.⁹⁰ Developing countries, in particular, experienced the advent of MNOs that provide financial services to previously unbanked populations.⁹¹ One of the most prominent examples is M-Pesa, a mobile money transfer service originally launched in Kenya by Safaricom.⁹² The innovation of MNOs, such as Safaricom's M-Pesa, in the context of sustainable development is their ability to broaden the ecosystem of financial services available to neglected populations in rural areas through the creation of digital wallets for transactions, the offering of credit services, and the ability to deposit or withdraw cash through vast networks of physical agents.⁹³

While the financial services provided by MNOs are typically governed by financial, competition and data regulations, telecommunications authorities play a supporting role in the governance of financial products offered by telecommunication companies.⁹⁴ For example, telecommunication authorities licence the provision of telecommunication services and thus regulate the non-financial elements of MNOs' business models. Moreover, telecommunication authorities can supervise network security, assist in KYC via SIM or other authentication regulation, and monitor the service quality and fair competition in the telecommunication services, all of which are relevant for the underlying structure of digital finance.⁹⁵

The provision of financial services by MNOs raises questions about the role of telecommunication authorities in the governance of digital finance. It can be argued that financial and telecommunication regulators can develop greater synergy to utilize the potential of technology for financial inclusion more effectively. In particular, regulatory supervision of broadband standards and prices combined with accessible regulatory requirements for the provision of digital financial services by MNOs hold the potential to significantly contribute

to financial inclusion.⁹⁶ Hence, further attention should be given to the role of telecommunication authorities in the provision of digital financial services.

Data protection and privacy regulation

Data protection and privacy regulation is the fourth area of regulatory activity relevant to BFTs.⁹⁷ The purpose of data regulation is the protection of personally identifiable information from unlawful or unethical use.⁹⁸ To protect personal data, relevant regulations can, among other things, impose restrictions on the collection and processing of personal information, require firms to comply with data security standards and confine data collection to specific purposes.⁹⁹

Contrary to competition and financial regulations that aim to govern economic activities, data privacy laws often originate from human rights law and the right to privacy.¹⁰⁰ As a result, the scope of privacy law was traditionally confined to the protection of individuals and their private life from public and private interference.¹⁰¹ However, the use of data in financial and other markets pushed regulators to consider the economic implications of data privacy and widen their regulatory approaches.

In particular, recent cases involving the unethical collection and use of data by BigTech companies pushed regulators around the world to re-examine their existing data protection policies.¹⁰² One of the most notable developments in this area is the EU's General Data Protection Regulation (GDPR), which imposes data privacy protection obligations on companies that hold, collect or process the data of natural persons within the EU.¹⁰³ Among various other obligations, the GDPR requires companies to process data in a "lawful and transparent manner" and solely for specific purposes.¹⁰⁴ Moreover, companies must ensure that the collected data are sufficiently secure and that the scope of data collection is limited to only what is absolutely necessary to conduct

96 Ibid, p. 15.

97 Supra, note 13, p. 69.

98 See, for example, the European Parliament and the Council of European Union, General Data Protection Regulation, Regulation (EU) 2016/679, 2016, art. 5.

99 Ibid.

100 For example, the international right to privacy is enshrined in Article 12 of the Universal Declaration of Human Rights (UDHR) and Article 17 of the International Covenant of Civil and Political Rights (ICCPR). Regionally, the right is enshrined in, for example, Article 8 of the European Convention on Human Rights (ECHR) and Article 11 of the American Convention on Human Rights. See, generally, Diggelmann O, Cleis M, N, 'How the Right to Privacy Became a Human Right', *Human Rights Law Review*, vol. 14(3), 2014, p. 441.

101 See, for example, the European Convention on Human Rights and the relevant case law.

102 Privacy International, 'Cambridge Analytica, GDPR - 1 Year On - a Lot of Words and Some Action', 2019.

103 Supra, note 98. It should be noted that one of the principal architects of the GDPR, Axel Voss, recently called for an overhaul of the data protection regime to better account for the post-pandemic world. See Espinosa J, 'EU must overhaul flagship data protection laws, says a 'father' of policy', *Financial Times*, 3 March 2021.

104 GDPR, art. 5.

89 See, generally, Whaley H, 'Research Guide: International Internet Law', available at: <http://library.law.columbia.edu/guides/International_Internet_Law#Agreements>.

90 Perlman L, 'Role of the Telecommunications Regulator in Digital Financial Services', p. 8, available at: <www.citicolumbia.org/wp-content/uploads/2018/11/Role-of-telco-regulator-in-DFS-for-publication.pdf>.

91 Ibid, p. 12

92 See Vodafone, 'What is M-Pesa?', available at: <www.vodafone.com/what-we-do/services/m-pesa>.

93 See, generally, Van Hove L, Dubus A, 'M-PESA and Financial Inclusion in Kenya: Of Paying Comes Saving?', *Sustainability*, vol. 11, 2019, p. 2.

94 Supra, note 90, 'Role of the Telecommunications Regulator in Digital Financial Services', p. 15; See, for example, China's recent e-commerce law that imposes business registration, IP and data liability, and other obligations on both telecom and non-telecom companies that provide e-commerce services. See 'China Passes New E-commerce Law - a 'Safe Harbour' with Chinese Characteristics', *Deacons, Intellectual Property*, 2018.

95 Ibid, p. 46.

business activities (i.e. “data minimization” principle).¹⁰⁵

The GDPR also contains strict sanctions and companies can be fined for up to 4 per cent of their revenue for data privacy and security violations.¹⁰⁶

While the GDPR is arguably one of the most robust data privacy regulations in the world, other countries and international organizations have adopted or are planning to adopt their own data privacy regulations. Notably, a very large portion of jurisdictions that have adopted related legislation have followed the EU Data Protection Directive, the predecessor of GDPR. Among notable developments, China has recently released a draft of its new Personal Information Protection Law which resembles the GDPR and outlines the rules regarding collection, transfer and use of personal data that takes place in China or relates to China’s residents.¹⁰⁷ Combined with previous data privacy regulations and new antitrust guidelines, China is likely to continue its push for stronger data and data monopoly governance in the financial sector.¹⁰⁸ Similarly, other major economies, including the US, are considering the adoption of new data security legislation.

Looking forward, the EU has launched a new Digital Strategy and a new Digital Finance Strategy, both of which come together in announcing that the EU will reinforce efforts related to digital finance through the extension of ‘Open Banking’ to ‘Open Finance’, giving individuals and businesses full control of their financial information.

In addition, organizations such as the African Union (AU) have adopted regional data privacy policies through conventions such as the African Union Convention on Cyber Security and Personal Data.¹⁰⁹ The purpose of the convention is to harmonize data privacy legislation among the different AU member states and to enhance the governance of e-commerce, cybersecurity and data protection. Moreover, developing countries such as Uganda, Nigeria, Kyrgyzstan, Uzbekistan and others are actively passing national data privacy laws.¹¹⁰ The national data regulations usually pursue diverse aims such as ethical and limited use of private data, customer protection, and data security in the provision of financial and other services.¹¹¹

In the context of sustainable development, data privacy regulations can mitigate the risks associated with the broad adoption of technology by BFTs and other companies. The ability of BFTs to collect and analyse private data on a large scale combined with their control of major digital platforms can undermine fair competition and decrease market contestability.¹¹² For example, unregulated BFTs can have unfair data advantages over traditional financial institutions. The unfair advantages arise from the BFTs’ ability to track consumer habits and transactions online, and sometimes offline, in a way that enables them to offer better tailored offers and access to financial services, such as credit or insurance.

This can cause volatility in financial markets as a result of the inability of incumbent financial institutions to compete with the BFTs and their data advantages.¹¹³ Moreover, BFTs’ unchecked data monopoly can lead to price and client discrimination in financial services.¹¹⁴ The problem of data and market power concentration is particularly relevant for developing economies in which major companies can undermine local competition and innovation. In this context, data privacy laws can help to address the risks of data monopolies by limiting the rights of private companies regarding the collection and use of data.

In addition to addressing economic and financial risks, data privacy regulations can help to maintain the integrity of and trust in public institutions. The recent scandals with Facebook and Cambridge Analytica show that unchecked data collection and analysis can lead to the spread of misinformation and the manipulation of public opinion with significant negative repercussions.¹¹⁵ Accordingly, the integrity of public institutions can be intentionally or unintentionally undermined by the unchecked use of private data.¹¹⁶ To mitigate these risks, data privacy regulations can play an important role in limiting the data advantages of BFTs.

105 Ibid.

106 Ibid, art. 83; Lomas N, ‘French Court Slaps Down Google’s Appeal Against \$57m GDPR Fine’, Tech Crunch, 2020.

107 Zhang G, Yin K, ‘A Look at China’s Draft of Personal Information Protection Law’, the International Association of Privacy Professionals (IAPP), 2020, available at: <<https://iapp.org/news/a/a-look-at-chinas-draft-of-personal-data-protection-law/>>.

108 Ibid; supra, note 76.

109 African Union Convention on Cyber Security and Personal Data Protection, 2014; Organization of American States, ‘Data Protection’, available at: <www.oas.org/dil/data_protection_oas_work.htm>.

110 Swift M, ‘Eager to Share in Global Digital Economy, Developing Nations Embrace Data Protection Laws’, MLex Market Insights, 2019.

111 Deloitte, ‘Data Privacy As a Strategic Priority’, p. 4, available at: <www2.deloitte.com/content/dam/Deloitte/us/Documents/risk/us-data-privacy-as-a-strategic-priority.pdf>.

112 Supra, note 13, p. 73.

113 Ibid.

114 Ibid, p. 67. For example, BFTs can use private data to detect clients who are willing to pay higher premiums for financial services.

115 Kornbluh K, ‘Could Europe’s New Data Protection Regulation Curb Online Disinformation?’, Council of Foreign Relations, 2018.

116 Ibid.



Looking at the data regulations from a different angle, the overregulation of data privacy can also negatively impact sustainable development in developing countries. Differences in national and international data privacy regulations can lead to regulatory fragmentation where developing economies may find it difficult to fully comply with extraterritorial regulatory burdens.¹¹⁷ A lack of capacity to fully comply with overseas data privacy regulations can limit the ability of developing economies to effectively engage with developed countries. For example, the GDPR must be applied by companies that operate outside of the EU but have EU customers, thus leading to a higher regulatory burden that is often difficult to meet by businesses in developing economies.¹¹⁸ If other jurisdictions adopt similar extraterritorial regulations, discrepancies among different regulatory standards can negatively affect developing economies that may struggle to comply effectively with a broad range of extraterritorial data privacy or other obligations.¹¹⁹ It is important to note that regulatory fragmentation is relevant not only in the context of data privacy but also in other areas of regulatory activities. Subsequent parts of the paper will discuss regulatory fragmentation and its effects in more detail.

Financial, data, and competition regulation in the context of the SDGs

Positive effects of regulation on the SDGs

Combined together, financial, competition/antitrust, telecommunications/Internet and data privacy/protection rules form the bulk of regulatory responses related to BFTs. While the purposes of these regulations are not directly tied to the SDGs, they are nonetheless relevant for sustainable development. For example, financial stability and fair competition are central to economic growth and financial inclusion, both of which are key for sustainable development. Thus, these areas of regulatory activity have a clear impact on sustainable development, albeit not one tied directly to the SDGs. The table below illustrates the potential synergy between existing regulatory frameworks and the SDGs.

117 See on data privacy laws fragmentation and incompatibility, Artz V, 'Navigating GDPR and data regulation in Asia', Refinitive, 2018.

118 See, for example, UNCTAD, 'Data Protection Regulations and International Data Flows: Implications for Trade and Development', 2016, p. xii.

119 Many jurisdictions adopt or follow the examples of regulations from other countries. Thus, many developing countries may adopt regulations similar to the GDPR to avoid regulatory fragmentation. For extraterritorial scope and fragmentation of regulations, see KPMG, 'Extra-territorial scope of the GDPR The Impact of the GDPR on Organisations in Asia' available at: <<https://assets.kpmg/content/dam/kpmg/sg/pdf/2018/04/impact-of-gdpr-in-asia.pdf>>.



Type of regulation	Affected SDGs	Regulatory impact
Financial regulation	SDG 1: No Poverty SDG 8: Decent Work and Economic Growth SDG 9: Industry, Innovation and Infrastructure SDG 10: Reduced Inequalities	By maintaining the integrity and stability of global and national financial systems and providing consumer protection, financial regulation contributes to sustainable economic growth and a gradual reduction in poverty. ¹²⁰ Moreover, financial regulation can contribute to financial product innovation (e.g. regulatory sandboxes) and green investing (e.g. green lending quotas) thus facilitating financial inclusion and funding for sustainable enterprises. ¹²¹
Antitrust/competition regulation	SDG 8: Decent Work and Economic Growth SDG 9: Industry, Innovation, and Infrastructure SDG 10: Reduced Inequalities	By restricting anticompetitive business practices and protecting consumers, competition laws help to maintain consistent economic growth and innovation. ¹²² Moreover, competition laws help to reduce inequalities by maintaining lower business entry barriers and supporting economic mobility. ¹²³ Competition laws also play an important role in protecting SMEs in developing countries from unfair competition. Protection of SMEs is likely to play an important role in ensuring sustainable economic development and access to decent work. ¹²⁴
Telecoms/Internet regulation	SDG 8: Decent Work and Economic Growth SDG 9: Industry, Innovation and Infrastructure SDG 10: Reduced Inequalities	Telecoms and Internet regulation underpins access to and provision of digital services that propel productivity, economic growth and industry innovations in developing countries ¹²⁵ (e.g. financial inclusion and digital payment platforms operated by MNOs)
Data regulation	SDG 8: Decent Work and Economic Growth SDG 10: Reduced Inequalities SDG 16: Peace Justice and Strong Institutions	Data privacy regulations help to maintain the integrity of public institutions and democratic processes. ¹²⁶ Moreover, data privacy laws can limit the concentration of data in the hands of major companies. The reduced data concentration helps to support a competitive market environment, thus potentially contributing to reduced inequalities and economic growth. ¹²⁷

120 Sinha A, 'Financial Sector Regulation and Implications for Growth', BIS Papers no. 62, 2011, p. 46.

121 See the WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', Report, 2015, p. 44; Volz U, 'Fostering Green Finance For Sustainable Development In Asia', Asian Development Bank Institute, 2018, p. 16.

122 See OECD, 'Factsheet on How Competition Policy Affects Macro-Economic Outcomes', p. 17, available at: <www.oecd.org/daf/competition/2014-competition-factsheet-iv-en.pdf>.

123 Baker JB, Salpo SC, 'Antitrust, Competition Policy, and Inequality', The Georgetown Law Journal Online, vol. 104(1), 2015, p. 27.

124 For a discussion, see Asia-Pacific Economic Cooperation, 'SMEs, Competition Law and Economic Growth', Issue Paper no. 10, 2015, pp. 11–12; supra, note 20, 'A Review of International Financial Standards as They Relate to Sustainable Development', p. 10.

125 Inter-American Development Bank, 'The Impact of Digital Infrastructure on the Sustainable Development Goals', 2019, pp. 23–27.

126 Supra, note 115.

127 While there are benefits to both data proliferation and data protection, data concentration can produce negative economic effects, see Carrière-Swallow Y, Haksar V, 'The Economics and Implications of Data: An Integrated Perspective', the International Monetary Fund, no. 19/16, 2019, pp. 22–23.

Negative effects of regulation on the SDGs

Financial, data and competition regulation can also produce adverse effects on sustainable development. The adverse effects can be caused by the exclusion of SDG considerations from regulatory mandates and policies, extraterritorial effects of national regulations in developed countries on developing countries and trade-offs in the implementation of different SDGs.

Starting with a lack of regulatory focus on SDGs impacts, the discussed areas of regulatory activity pursue specific aims such as the integrity of financial markets, consumer protection, data privacy and others. Considering the narrow scope of these objectives, regulators do not always align their regulatory policies with the SDGs. This means that environmental and social indicators are often not mentioned or reflected in regulatory standards.¹²⁸

In turn, the absence of references to sustainability can lead to unintended consequences, such as exclusion of environmental and social risks from systemic risk considerations.¹²⁹ A lack of regulatory commitment to the SDGs can also lead to more specific consequences such as a reduction in green investments resulting from more stringent capital and liquidity requirements that can undermine the investment appetite for long-term risks associated with green investing.¹³⁰ Hence, while it is hard to measure the precise influence of regulation on the SDGs, a lack of SDG-related considerations in financial, competition and data regulation can negatively impact the pursuit of sustainable development through a narrow scope of regulatory objectives. Further, as regulators cannot amend their mandates unilaterally, this issue applies more broadly to political bodies that determine the mandates of regulators and thus can expand them to include SDG-related considerations.

In the meantime, it can be argued that regulators should maintain a narrow scope of regulatory objectives because of their technocratic nature. Considering the broad scope of the SDGs, it is not always possible to effectively incorporate broad socio-economic considerations into narrow financial or other regulations. For example, there is an ongoing debate whether regulators should incorporate environmental and social risks into their calculation of capital and liquidity requirements.¹³¹

However, it is not apparent whether environmentally or socially sustainable enterprises always have lower financial risks.¹³² Accordingly, broader incorporation of

socio-economic and environmental considerations into regulatory frameworks will require a substantive re-evaluation of existing regulatory goals and practices.

Going further, national regulations emanating from developed countries can negatively impact sustainable development through their extraterritoriality. Extraterritorial application of national regulations can increase compliance costs for businesses in both developing and developed countries. In turn, this can negatively impact the economic growth and business processes in developing countries that may struggle to cope with increasing regulatory burdens.¹³³ For example, AML laws, state sanctions, securities regulations and other norms are often applied by national authorities to both foreign and national financial institutions even if their financial activities are mainly conducted in other jurisdictions (e.g. the application of the GDPR to non-EU companies or the transnational effects of the OFAC sanctions).¹³⁴

The extraterritorial application of national regulations can lead to a reluctance of financial institutions to work with countries that cannot fully comply with the extraterritorial regulatory burdens. In turn, the extraterritoriality can impair financial and economic activities in developing countries thus harming their pursuit of economic development and SDGs. Moreover, in light of the power distribution in the global financial markets, major jurisdictions can impose their regulations on the majority of developing economies and a lack of compliance with such regulations can lead to a loss of access to developed markets and major financial streams, or a loss of assets located in foreign jurisdictions (e.g. asset freezes by the US).¹³⁵ This can perpetuate the vulnerable position of developing economies and impair their pursuit of economic development.

In response to this extraterritorial effect, both international/regional (e.g. the ICC, the FSB, the European Parliament) and national institutions (e.g. Sosa and Empagran cases on the extraterritoriality of the US law) promote multilateral cooperation for regulatory harmonization or impose legal limitations on the extraterritoriality of national laws.¹³⁶ For example, the US and the EU have cooperated to harmonize conflicting parts of their regulatory frameworks (e.g. special agreements on the US Legislation on 100 per

128 Supra, note 20, 'A Review of International Financial Standards as They Relate to Sustainable Development', p. 5.

129 Ibid, pp. 29, 58.

130 Ibid, p. 29.

131 See Institute of International Finance, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', 2020, p. 11.

132 Ibid.

133 Lehmann M, 'Legal Fragmentation, Extraterritoriality and Uncertainty in Global Financial Regulation', *Oxford Journal of Legal Studies*, vol. 37(2), 2016, p. 407; International Chamber of Commerce, 'Extraterritoriality and Business', Policy Statement, 2006, pp. 2–3.

134 Lehmann M, 'Legal Fragmentation, Extraterritoriality and Uncertainty in Global Financial Regulation', p. 407; The Financial Stability Board, 'FSB Report on Market Fragmentation', 2019, p. 4.

135 Jones E, Knaack P, 'The Future of Global Financial Regulation', the FSB Preliminary Draft, p. 11, available at: <www.fsb.org/wp-content/uploads/Jones_Knaack.pdf>.

136 Supra, note 133, 'Extraterritoriality and Business', p. 3; The European Parliament, 'The Extraterritorial Effects of Legislation and Policies in the EU and US', 2012, p. 18; Sosa v. Alvarez-Machain, 542 U.S. 692 (2004); F. Hoffmann-La Roche Ltd. v. Empagran S.A. (03-724) 542 U.S. 155 (2004).

cent Ocean Cargo Scanning).¹³⁷ However, bilateral and multilateral cooperation often excludes developing countries because of a lack of incentives to create special regulatory regimes with smaller economies.¹³⁸ This means that the extraterritoriality of national laws emanating from developed economies will remain relevant as a potential detriment to the pursuit of SDGs in developing economies.

The last gap between financial and other regulations and the SDGs is a potential lack of compatibility between different SDGs, that is SDG trade-offs. There is also a necessary balancing between financial regulatory, competition/antitrust, data protection and technology/communications regulations. SDG trade-offs mean that the pursuit of one SDG can negatively affect other SDGs.¹³⁹ To illustrate, extensive economic and infrastructure development can increase energy consumption and environmental pollution thus contributing to economic goals at the expense of environmental goals.¹⁴⁰ The compatibility issues may apply to regulatory initiatives where regulators can struggle to balance their pursuit of potentially incompatible SDGs. A recent Asian Development Bank Institute (ADBI) study confirmed that regulators will need to address potential SDG trade-offs in their pursuit of sustainable development. Looking at the regulations in the Indian electricity sector, ADBI concluded that regulatory involvement has improved economic and environmental indicators at the expense of social sector indicators.¹⁴¹ Similar compatibility issues may arise in the context of BFTs and financial, data, and competition regulations.

To summarize, while regulators pursue relevant public policy goals, their activities can be detrimental to the pursuit of sustainable development. The negative effect of regulations can be caused by a narrow focus of regulatory objectives, the extraterritoriality of national regulations or SDG trade-offs. The solutions to these problems will be discussed later in this paper as well as in subsequent Technical Papers, 3.2 and 3.3.

Sustainable development goals and BFTs: existing regulatory strategies

This section of the paper examines SDG-related regulatory initiatives and their impact on BFTs. Following the growing recognition of sustainability-related financial risks, national and international policymakers are increasingly more invested in governance through the lens of the SDGs and ESG. The BIS, the FSB and other international and regional organizations stress the importance of sustainability-related regulation, both social and environmental, for the effective functioning of the global financial system.¹⁴² In response, national and international policymakers are developing and adopting SDG/ESG regulations. As this section will show, many of the existing regulatory initiatives are voluntary and technology-neutral, thus their effectiveness is not always apparent. Expanding on the drawbacks of the existing SDG/ESG regulation, the section will argue that more can be done to manage sustainability-related risks both in the context of BFTs and traditional financial institutions.

The SDG/ESG governance in the financial sector is conducted on two levels: international/regional and national. At the international/regional level, international and regional institutions (e.g. EU, FSB, BIS) can adopt voluntary or compulsory guidelines for national regulators on sustainability-related matters.¹⁴³ At the national level, regulators can adopt international standards/recommendations on sustainability or develop their own standards.¹⁴⁴

Both national and international sustainability-related regulations can be subdivided into four main categories:¹⁴⁵

1. adoption of disclosure obligations for financial and other institutions
2. adoption of SDG/ESG risk management standards
3. adoption of incentives and support programmes for sustainability-friendly businesses (e.g. special quotas and relaxations for green lending)
4. adoption of sustainable finance taxonomies.

137 The EC, 'The Extraterritorial Effects of Legislation and Policies in the EU and US', p. 18.

138 Supra, note 135, 'The Future of Global Financial Regulation', p. 11.; see also on 'minilateralism', Coffee Jr. JC, 'Extraterritorial Financial Regulation: Why E.T. Can't Come Home', Cornell Law Review, vol. 99(6), 2014, p. 1300.

139 Mantlana KB, Maoela MA, 'Mapping The Interlinkages Between Sustainable Development Goal 9 and Other Sustainable Development Goals: A Preliminary Exploration', Business Strategy and Development, vol. 3(3), 2020, p. 345.

140 Ibid, p. 352.

141 Asian Development Bank Institute, 'Does Regulation Promote Sustainable Development Outcomes? Empirical Evidence from the Indian Electricity Sector', ADBI Working Paper Series, 2019, p. 13.

142 See, for example, the Task Force on Climate-related Financial Disclosures, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures', The Financial Stability Board, 2017, p. ii; Bolton P, et al., 'The Green Swan: Central Banking and Financial Stability in the Age of Climate Change', BIS, 2020.

143 The TCFD, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures'; The World Economic Forum, 'Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation', White Paper, 2020.

144 See, for example, WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', Report, 2015, pp. 56–57.

145 Portilla A, Gibbs S, Rismanchi K, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', Institute of International Finance, 2020, p. 7.

The first regulatory strategy is the adoption of compulsory or voluntary sustainability impact disclosures that are imposed on or adopted by private companies and financial institutions.¹⁴⁶ Such disclosures are related to governance, strategy, risk management and metrics used by companies in their commitments to sustainability goals.¹⁴⁷ The purpose of these disclosures is to inform relevant stakeholders about the sustainability-related governance in companies as well as to compel such companies to adopt sustainable business practices.¹⁴⁸

The second regulatory strategy is closely related to sustainability disclosures and takes the form of SDG/ESG risk management standards. Risk management regulations are diverse and can include compulsory/voluntary requirements to conduct due diligence checks and incorporate ESG risk assessment standards into business practices.¹⁴⁹

The third regulatory strategy is the adoption of incentives to support green businesses and investments. These incentives can take various forms including preferential capital requirements for green investment firms, tax reductions and investment quotas.¹⁵⁰ Similarly to other regulatory strategies, the purpose of these incentives is to limit the flow of financial resources into unsustainable enterprises and to redirect the flow into green investing.

The last and increasingly more popular strategy is the adoption of green taxonomies. The purpose of green taxonomies is to identify financial activities and investments that comply with sustainability standards.¹⁵¹ These taxonomies can help investors, banks and other relevant parties to identify and drive more capital into sustainable business projects.

The application of the SDG/ESG initiatives to BFTs can face several issues related to BFTs' business structures and practices. For example, while BFTs can report on sustainability impacts of their core operations, they often do not have sufficient control over their extended supply chains. This can lead to the use of conflict minerals or violations of labour rights in the supply chains of BFTs.¹⁵²

146 Ibid.; see, for example, TCFD, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures'; WEF, 'Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation'.

147 WEF, 'Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation', pp. 8–10.

148 IIF, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', p. 14.

149 Ibid.; see, for example, TCFD, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures', p. 12.

150 IIF, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', p. 7; WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', Report, 2015, p. 17.

151 The World Bank Group, 'Developing a National Green Taxonomy: A World Bank Guide', 2020, p. 9.

152 See, for example, a conflict minerals lawsuit against BFTs, International Rights Advocates, 'Cobalt DRC Case', 2019, available at: <www.iradvocates.org/sites/iradvocates.org/files/12.16.19%20FINAL%20Cobalt%20Complaint.pdf>.

In some cases, BFTs can be unaware of such practices or unwilling to change their established supply chains. Another issue is the socio-economic impacts of BFTs. While BFTs tend to have a limited or even positive impact on environmental indicators, their business practices can negatively affect consumer protection, data privacy, competition and the rule of law.¹⁵³ As will be discussed below, the majority of the existing SDG/ESG regulatory frameworks take a technology-neutral approach that overlooks the technology-specific socio-economic impacts of BFTs.

The next two subsections will analyse how SDG/ESG regulatory strategies are structured, developed and implemented in international and national contexts. The next subsections will also further examine the gaps in the existing SDG/ESG regulatory strategies.

International SDG/ESG regulatory and policy responses

This subsection highlights selected international sustainability frameworks and some of their drawbacks.¹⁵⁴

The landscape of SDG and ESG regulation has developed rapidly over the last few decades. International organizations, private sector partnerships and national regulators have adopted numerous SDG/ESG reporting standards, encouraging companies to report on their sustainability impacts. The United Nations Global Compact, the Equator Principles, the United Nations Principles for Responsible Investment, the ICMA Green Bond Principles, the UNDP's SDG Impact Standards and other frameworks emerged to facilitate sustainability reporting and risk management.¹⁵⁵ Moreover, international regulatory cooperation platforms, such as the IFC's Sustainable Banking Network, facilitate knowledge-sharing and capacity-building among financial regulators in their pursuit of sustainability regulation.¹⁵⁶

However, the rapid proliferation of sustainability standards led to regulatory fragmentation and inconsistencies among international SDG/ESG initiatives. As there are overlapping sustainability standards, it is difficult to navigate the landscape of sustainability regulation and to identify which frameworks companies are using for their ESG/SDG reporting and risk management. In an attempt to remedy the fragmentation issues, two major

153 GSMA, 'The Enablement Effect', 2019, p. 9.

154 This is further discussed in Technical Paper 3.2.

155 See the Equator Principles, 2020, available at: <<https://equator-principles.com/wp-content/uploads/2020/05/The-Equator-Principles-July-2020-v2.pdf>>; The UN Global Compact Principles, available at: <www.unglobalcompact.org/what-is-gc/mission/principles>; SDG Impact Standards, 2020, available at: <<https://sdgimpact.undp.org/practice-standards.html>>.

156 See the IFC SBN, 'Global Progress Report of the Sustainable Banking Network', p. 1, available at: <www.ifc.org/wps/wcm/connect/227d98d4-13ae-4742-ae94-fb248b84f0be/SBN%2BGlobal%2BProgress%2BReport_1010.pdf?MOD=AJPERES&CVID=mUhlWWVP>.

sustainability frameworks have been developed: the FSB's 'Recommendations of the Task Force on Climate-related Financial Disclosures' (TCFD) and the World Economic Forum's (WEF) 'Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation'.¹⁵⁷

The FSB's TCFD recommendations outline the key elements of effective climate-related governance and encourage companies to include climate-related disclosures in their annual financial filing.¹⁵⁸ According to the recommendations, climate-related disclosures should consist of four primary elements including governance, strategy, risk management, and metrics and targets. The governance element should address a company's oversight of climate-related risks.¹⁵⁹ The strategy element should outline whether a company has identified climate-related risks and included them in its financial planning and strategy. The risk management element should outline a company's process of identifying and addressing climate-related risks. Lastly, the metrics and targets element should describe the greenhouse gas emissions and other targets that a company has included in its climate-related strategy.¹⁶⁰

Despite the voluntary nature of the document, the TCFD recommendations are endorsed by a considerable proportion of global financial and non-financial firms.¹⁶¹ Moreover, at national and international levels, regulators and policymakers are actively encouraging companies to adhere to the recommendations.¹⁶² However, the TCFD recommendations have three drawbacks. First, the recommendations are broad. Second, other organizations are currently working on more specific climate reporting guidelines. Third, the recommendations are confined to climate-related matters without considering social or economic sustainability.¹⁶³

In an attempt to go beyond the scope of climate reporting, the World Economic Forum (WEF) issued common sustainability metrics and a reporting framework that covers a broader range of industry-agnostic ESG

indicators.¹⁶⁴ The WEF framework consists of multiple standards and metrics organized under four pillars including governance, planet, people and prosperity.¹⁶⁵ Some of the WEF's metrics are already reported by companies under other reporting standards (e.g. the TCFD recommendations). However, the goal of the WEF framework is to facilitate the development of a single, coherent and widely accepted ESG reporting standard.

Accordingly, the WEF framework aspires to act as a stepping stone towards a globally accepted and encompassing ESG standard. Moreover, the WEF framework features other important developments such as guidelines on ESG to SDG conversion. The conversion helps to maintain greater consistency among already fragmented sustainability indicators.

The specific metrics under the four pillars are diverse and aim to cover a broad range of ESG indicators. The principles engendered within the governance pillar require companies to report on internal governance relevant to ESG indicators such as governing purpose (i.e. a company's socio-economic or environmental purpose); governance body composition (e.g. a company's management and board composition); stakeholder engagement and ethical behaviour (e.g. anti-corruption training and practices); and risk and opportunity oversight (e.g. most relevant ESG risks for the company).¹⁶⁶ The planet pillar covers environment-related reporting and includes greenhouse emission disclosures, the implementation of the TCFD recommendations, land use and ecological sensitivity assessments, and other indicators.¹⁶⁷ The people pillar covers socio-economic indicators such as diversity and inclusion, pay equality, and health and safety at work.¹⁶⁸ Lastly, the prosperity pillar requires companies to report on broader economic indicators such as employment and wealth generation, innovation, total taxes paid and other ESG-related economic indicators.¹⁶⁹

Broadly speaking, both the WEF framework and the TCFD recommendations are still limited by their voluntary nature. Hence, they cannot fully resolve the inconsistencies in sustainability-related reporting and regulation as private companies can pick reporting standards at their own discretion. Moreover, while both frameworks are widely discussed or adopted by private companies, there is still no formally binding or universally accepted international ESG reporting standard.¹⁷⁰

157 The TCFD, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures'; The WEF 'Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation'.

158 The TCFD, 'Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures', p. 11.

159 Ibid.

160 Ibid.

161 IIF, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', p. 14.

162 The TCFD, 'More than 1,000 Global Organizations Declare Support for the Task Force on Climate-related Financial Disclosures and its Recommendations', Press Release, 2020.

163 IIF, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', pp. 14–15; The Climate Disclosure Standards Board, 'The CDSB Framework for Reporting Environmental and Climate Change Information', 2019, p. 11; UNEP Finance Initiative, 'Changing Course: A Comprehensive Investor Guide to Scenario-Based Methods for Climate Risk Assessment, In Response to the TCFD', 2019.

164 WEF 'Measuring Stakeholder Capitalism Towards Common Metrics and Consistent Reporting of Sustainable Value Creation', p. 6.

165 Ibid.

166 Ibid., p. 8.

167 Ibid., p. 9.

168 Ibid., pp. 9–10.

169 Ibid., p. 10.

170 The OECD, 'Framework for SDG Aligned Finance', 2020, p. 13, available at: <www.oecd.org/development/financing-sustainable-development/Framework-for-SDG-Aligned-Finance-OECD-UNDP.pdf>.

At the regional level, the EU is seeking to tackle the fragmentation of reporting standards by adopting the EU taxonomy of sustainable economic activities regulation. Importantly, as a regulation, it is directly effective on member states without the necessity of national implementation, distinguishing it from the other major EU legislative instrument, the directive. The EU taxonomy regulation outlines criteria for environmentally sustainable, enabling and transition economic activities.¹⁷¹ At the core of the taxonomy regulation are criteria for sustainable economic activities that can help market participants to identify whether a financial product contributes to environmental sustainability. To market a financial product as sustainable, financial market participants will need to assess whether an investment complies with the sustainability criteria, which include:

- substantial contribution to the environmental objectives outlined in the taxonomy
- compliance with the 'do no significant harm' principle outlined in the taxonomy
- compliance with the minimum safeguards outlined in the taxonomy
- compliance with the technical screening criteria.¹⁷²

If the four criteria are met, financial market participants can classify a financial product as environmentally sustainable. If such criteria are not met, financial market participants will need to make a statement that a relevant financial product does not take into account the EU taxonomy regulation.¹⁷³ Alternatively, financial products can be classified under the categories of enabling or transition activities that have a different set of requirements under the taxonomy.

The taxonomy is a part of the broader EU initiative consisting of multiple sustainability regulations such as the EU Green Bond Standards, the Climate Benchmark Regulation, the Shareholder Rights Directive and others.¹⁷⁴ The EU taxonomy is most closely related to two initiatives, the 'Non-Financial Reporting Directive' (NFRD) and the 'Sustainable Finance Disclosure Regulation' (SFDR).

The NFRD requires large public-interest companies with more than 500 employees to disclose their impact on social and environmental indicators.¹⁷⁵ The

directive applies to financial sector participants such as banks, insurance companies and other financial services providers.¹⁷⁶ Under the directive, companies can disclose information on environmental protection, social responsibility, human rights and other matters. Moreover, the directive gives companies broad discretion in what they choose to disclose such that companies are free to choose their own reporting standards (e.g. the United Nations Global Compact, OECD Guidelines for Multinational Enterprises or other standards).¹⁷⁷

Under the SFDR, investment firms are required to disclose their impact on sustainability matters at the entity and financial product levels.¹⁷⁸ Such disclosures should contain information on whether financial market participants and financial advisers considered sustainability factors in their investment decisions and how their considerations are reflected at the financial product level.¹⁷⁹

The taxonomy regulation is closely intertwined with both the NFRD and the SFRD. For example, financial market participants can classify the sustainability of their investments based on the data available from the NFRD reports.¹⁸⁰ Hence, non-financial reporting is likely to play an important role in the facilitation of sustainability assessments by financial firms. Moreover, the taxonomy regulation also introduces new disclosures for corporate subjects under the NFRD and outlines how sustainable investments can be disclosed under the SFRD.¹⁸¹ In essence, the taxonomy is a part of the broader EU effort to streamline and standardize sustainability reporting.

The taxonomy regulation is an important precedent for the standardization of sustainability reporting. Contrary to voluntary reporting standards that dominate international SDG/ESG policymaking, the taxonomy regulation provides a formal legal framework of standards to identify sustainable economic activities. Hence, the taxonomy regulation is likely to become a 'gold standard' that other national and international policymakers can follow in their attempts to standardize sustainability policies in the same way that the GDPR provides the major model for data protection and privacy regulation.¹⁸² Looking forward, the new EU Digital Finance Strategy 2020 includes a commitment to intertwine digital finance and sustainability going forward.

171 Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, art. 5.

172 Ibid., art. 3.

173 Ibid., art. 7.

174 See the European Commission, 'Sustainable Finance', available at: <<https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/>>; see also Ingman BC, 'The EU Taxonomy Regulation: An Overview', FactSet, 2020.

175 See Directive 2014/95/EU of the European Parliament and of the Council of 22 October 2014 amending Directive 2013/34/EU as regards disclosure of non-financial and diversity information by certain large undertakings and groups, art. 19a.

176 Ibid.

177 Ibid., art. 2; See also the European Commission, 'Non-Financial Reporting', available at: <https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/non-financial-reporting_en>.

178 Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector, art. 4, 7.

179 Ibid.

180 Supra note 174, Ingman BC, 'The EU Taxonomy Regulation: An Overview'.

181 The Taxonomy Regulation, (EU) 2020/852, art. 8.

182 Supra note 174, Ingman, 'The EU Taxonomy Regulation: An Overview'.

National SDG/ESG regulatory responses

At the national level, central banks and other regulators have adopted both compulsory and voluntary measures to tackle sustainability-related risks. These regulatory developments are fairly new, and they come as a response to a growing recognition of environmental risks by international organizations.¹⁸³ Sustainability regulations are varied across jurisdictions with differences in regulatory scope, requirements and objectives.¹⁸⁴ This subsection highlights some of the main national initiatives and their implications.

National sustainability regulations fall within the above-mentioned categories of SDG/ESG risk management and disclosure requirements, and SDG/ESG investment incentives. Starting with the risk management standards, Belgium, France, Sweden, the UK and other countries have all adopted disclosure requirements for climate-related financial risks.¹⁸⁵ These requirements can be subdivided into compulsory obligations, such as mandatory disclosure of climate-related risks by listed firms in France, and voluntary obligations, such as the promotion of the TCFD reporting by Swedish, Belgian, UK and other governments.¹⁸⁶

Furthermore, several jurisdictions have developed environmental and social risk management policies for financial institutions. Viet Nam, Bangladesh, Brazil, Nepal, Pakistan and other developing countries encourage or require banks to adopt sustainability-related risk management strategies.¹⁸⁷ These strategies should be adopted by banks to identify, evaluate and manage sustainability risks in their activities.¹⁸⁸ The content of risk management frameworks varies by jurisdiction with some authorities adopting broad international standards (e.g. the TCFD recommendations) and some developing robust national risk management guidelines (e.g. Bangladesh Bank).¹⁸⁹

A notable difference between sustainability-related policies in developed and developing countries is the tendency of developed countries to adopt voluntary

requirements and rely on a market-driven approach.¹⁹⁰ Contrary to this, developing economies more frequently adopt compulsory SDG/ESG requirements for banks and financial institutions.¹⁹¹ One reason for the adoption of compulsory sustainability regulations by developing countries is their greater exposure to environmental risks.¹⁹² As economic and social development can come at a significant environmental cost, developing countries are often less inclined to rely on market self-regulation.¹⁹³ Moreover, developing economies may be more inclined to utilize technological and other developments to facilitate their development. Thus, they are more likely to adopt specific and compulsory policies to stimulate selected sectors of their economies.¹⁹⁴

In addition to risk management and reporting standards, multiple jurisdictions have adopted or are planning to adopt incentives to stimulate the growth of the green economy. One of the most promising examples of this strategy is green lending and investment quotas.¹⁹⁵ Green lending quotas require banks to direct a certain percentage of their investments into sustainable enterprises.¹⁹⁶ This strategy was adopted by India and Bangladesh with their compulsory green lending quotas and priority sector quotas.

An alternative to lending quotas is investment 'blacklisting', that is compulsory restrictions on investments in unsustainable enterprises. The restriction strategy limits the flow of financial resources to specific sectors or companies that exceed carbon-emission targets or negatively affect other environmental or social indicators.¹⁹⁷ For example, China imposed restrictions on thermal power and metal processing investments to limit the environmental impact of heavily polluting industries.¹⁹⁸ Similarly, Brazil restricted investments in businesses that affect Amazon biome and sugarcane growth.¹⁹⁹

In addition to lending quotas, some regulators are adopting special capital and liquidity requirements for banks with green investment portfolios. For example, the Bank of Lebanon exempted banks from parts of the reserve requirements for green investment projects.²⁰⁰

183 See, for example, the TCFD, 'Task Force on Climate-related Financial Disclosures: Status Report', 2019 Status Report, p. ii.

184 See the WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', p. 6.

185 Park H, Kim JD, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', *Asian Journal of Sustainability and Social Responsibility*, 2020, p. 10; The TCFD, 'Task Force on Climate-related Financial Disclosures 2020 Status Report', p. 2.

186 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 12.

187 *Ibid.*, p. 10; The IFC SBN, 'The SBN Global Progress Report', p. viii.

188 See, for example, the TCFD, 'Task Force on Climate-related Financial Disclosures: Status Report', p. 2.

189 *ibid.*; Bangladesh Bank, 'Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh', 2017.

190 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 10.

191 *Ibid.*, pp. 11–12; The IFC SBN, 'The SBN Global Progress Report', p. viii; WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', p. 6.

192 See, for example, the OECD, 'Green Growth and Developing Countries', Consultation Paper, 2012, p. 22.

193 *Ibid.*

194 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 10.

195 *Ibid.*, p. 13; the WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', p. 35.

196 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 13.

197 The WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', p. 35.

198 *Ibid.*

199 *Ibid.*, p. 17.

200 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and



Taking this strategy a step further, some policymakers argue that international frameworks such as the Basel III Capital Accord should include special capital requirements for sustainable investments.²⁰¹ However, the majority of regulators are reluctant to ease capital requirements for green investments because of a lack of evidence that such investments produce lower risks.²⁰² As an alternative, central banks can increase capital requirements for investments in environmentally unsustainable sectors to provide an indirect incentive to support green lending.

Another promising strategy to support green investing is the adoption of concessionary loans and tax breaks. Concessional loans have lower than average interest rates and they can be provided to green financial institutions or businesses.²⁰³ Such loans are often administered by central banks or national development banks with a mandate to stimulate the flow of financial resources into the green economy.²⁰⁴ Moreover, concessional loans often target specific sectors like renewable energy and sustainable infrastructure.²⁰⁵ In addition to the provision of concessional loans, international organizations such as the WWF suggest that states can adopt tax cuts for green investors to further stimulate the green economy.²⁰⁶

As to the broader implication of these national policies, three gaps need to be highlighted. First, the majority of the existing processes are not specifically designed to govern technology. Hence, the majority of regulations reviewed in this section do not target BFTs, even though there are exceptions to this, such as national projects to support digital infrastructure. Considering that BFTs can facilitate financial inclusion, economic development and the provision of public services, a lack of tech-sensitive policies can undermine the potential contribution of technology to sustainable development. This conclusion is also highly relevant in the context of tech-related risks such as automation and cybercrime that are not directly addressed in existing SDG/ESG policies.²⁰⁷ To address this regulatory gap, Technical Paper 3.3 will develop policy suggestions on the governance of BFTs in the context of the SDGs.

The second matter of concern is the general prevalence of voluntary approaches to sustainability regulation. While developing countries have adopted a range of compulsory measures to facilitate sustainable development, the majority of the existing regulatory processes surrounding SDGs and ESG are still voluntary.²⁰⁸ The soft-law nature of sustainability regulations means that they cannot always hold relevant actors accountable. For example, companies can either opt-out from national sustainability reporting or disclose only positive aspects of their activities while not reporting the negative ones.²⁰⁹ In the absence of external audits, voluntary reporting can create a distorted picture of corporate contributions to sustainable development through reporting discrepancies. Such discrepancies can be both intentional, for example greenwashing of unsustainable economic activities, or unintentional, for example insufficient analysis of environmental impacts of investments. Moreover, reporting discrepancies make it difficult to effectively evaluate and compare sustainability data.

Hence, as will be argued below, greater attention should be given to the standardization and enforcement of sustainability regulations.

Finally, the last gap to be addressed is the inconclusive impact of sustainability regulations on sustainable development. As many of the reviewed policies are new, there are only a few studies available on their impact on sustainable development.²¹⁰ For example, it has been argued that green loans tend to perform better than non-green loans, hence, the promotion of green investment portfolios arguably can enhance the integrity of financial systems.²¹¹ However, there are not enough data to produce strong assessments of the impact of sustainability policies, and consistent data collection at the national and international levels is required. Moreover, it is important to highlight that national policies adopted by developing countries are unlikely to be effective if they are not supported by broader international cooperation. As was argued by the OECD, only a fraction of global financial assets end up contributing to sustainable development in developing countries.²¹² Hence, greater regulatory and economic cooperation between developed and developing countries is required to produce meaningful SDG impacts in developing regions.

Financial Institutions', p. 11.

201 See 'Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?', CISL & UNEP FI, 2014, p. 15.

202 IIF, 'Sustainable Finance Policy & Regulation: The Case for Greater International Alignment', p. 11. One alternative for central banks is to increase capital requirements for unsustainable industries to drive capital into green investments.

203 See OBI, 'Securing Climate Finance Through National Development Banks', Report, 2020, p. 23.

204 Ibid.; see, for example, CAF, 'JBIC of Japan Grants CAF a New Loan for USD 200 Million for Green Projects in Latin America', 2020, available at: <<https://www.caf.com/en/currently/news/2020/03/japans-jbic-to-offer-caf-new-usd-200-million-loan-for-green-projects-in-latin-america/>>.

205 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 10.

206 The WWF, 'Financial Market Regulation for Sustainable Development in the BRICS Countries', p. 17.

207 See, for example, brief mention of cybersecurity in the WEF's ESG metrics, the WEF, 'Measuring Stakeholder Capitalism', p. 22.

208 See the OECD, 'Framework for SDG Aligned Finance', p. 9.

209 Ibid., p. 31.

210 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 10; See, for example, Shashi S, Cerchione R, Bansal H, 'Measuring the impact of sustainability policy and practices in tourism and hospitality industry', Business Strategy and the Environment, vol. 29(3), 2020, p. 1109.

211 Park K, 'Transition Towards Green Banking: Role of Financial Regulators and Financial Institutions', p. 7.

212 OECD, 'Framework for SDG Aligned Finance', p. 7.

SDGs and BFTs: summary of policy lessons

As discussed throughout the paper, there are several gaps in the existing regulatory approaches to BFTs and their SDG impacts. This section briefly recaps the highlighted gaps and proposes potential policy solutions that will be further developed in the subsequent technical papers.

- **Promoting consistency and standardization among international and national regulatory standards:** as this Technical Paper and other reports stress, competition, data, financial, technology and sustainability regulations often lack consistency across different jurisdictions. At the national level, regulators can pursue different policy goals through different means leading to regulatory fragmentation, regulatory arbitrage and problems with extraterritoriality. A lack of regulatory coherence is potentially harmful to developing countries that can lack the capacity to meet fragmented regulatory standards. At the international level, SDG/ESG regulations remain piecemeal and inconsistent. These inconsistencies make it difficult to navigate the sustainability standards and their impacts. Moreover, this further complicates the already challenging issue of knowing which data to collect for reporting, their portability across reporting regimes and thus utility to regulators, analysts and investors alike.
- **As a solution, regulators should strive to develop better multilateral cooperation in the areas that lack collectively accepted regulatory standards** (e.g. data privacy laws²¹³ and sustainability policies). This work will require stronger collaboration between the public and private sectors to reach broad consensus on standards that are comprehensive, sound, adequate and universal. Alternatively, policymakers can incorporate sustainability considerations into the existing regulatory frameworks such as the Basel Capital Accords.²¹⁴
- **Improving synergy among different regulatory bodies:** another potential, albeit less apparent, gap is a lack of synergy among different regulatory bodies. Considering the broad scope of BFTs' business models, their activities can fall within the domain of multiple regulators. For example, data and competition regulations are closely intertwined around the potential abuse of data monopolies. Another example is telecommunication laws that govern the underlying infrastructure of digital financial services provides. In

this context, different regulatory domains are likely to overlap and greater attention should be given to the cooperation among different regulatory bodies.

- **Giving greater attention to the interests and needs of developing countries:** as was highlighted in this paper, developing countries often have a secondary role in the development of international regulatory standards. Because of a lack of substantive participation in international standard-setting bodies, such as the Basel Committee on Banking Supervision, and the extraterritoriality of a range of laws from major jurisdictions (in particular the US and the EU, but also now China and others), the interests of developing countries are often not reflected in dominant regulatory practices. This can perpetuate the vulnerable position of developing economies as they struggle to effectively adapt to the changing international regulatory landscapes. To mitigate this problem, international policymakers should promote the greater participation of developing countries in their standard-setting processes. The offer of participation should be matched with greater capacity-building initiatives. The global nature of many of the challenges discussed in this paper means that there cannot be any regulatory weak links. Otherwise, we continue to run the risk of ineffective regulation and regulatory arbitrage as a continued practice. Finally, national policymakers in major economies should give due considerations to the unintended impacts of their policies on developing economies.

Adopting balanced proportional regulatory approaches for Fintech companies and services: the last gap is a frequent lack of regulatory standards that harness specific opportunities and tackle risks created by technology. The majority of the reviewed regulatory frameworks impose the same regulatory requirements for both tech and non-tech companies. While there are a growing number of exceptions to this regulatory practice (e.g. online bank licences and regulatory sandboxes), the existing regulatory practices give insufficient consideration to risks and benefits arising from the adoption of technology. Hence, more can be done to optimize the benefits and reduce the risks of digitization. For example, investment incentives for digital infrastructure projects or special regulatory regimes for digital financial service providers are potential strategies to facilitate the pursuit of sustainable development through digital technology.

213 Some coordination is already taking place in the context of the Global Privacy Assembly. See the Global Privacy Assembly, 'Adopted Resolutions', available at: <<https://globalprivacyassembly.org/document-archive/adopted-resolutions/>>.

214 UNEPFI, 'Stability and Sustainability in Banking Reform: Are Environmental Risks Missing in Basel III?', p. 8.



Conclusion

This Technical Paper examined the main regulatory frameworks applicable to BFTs in the context of sustainable development. Our findings suggest that both traditional regulation (e.g. data, finance, technology and competition) and sustainability regulation can apply to BFTs. However, a number of gaps in the existing regulatory frameworks prevent them from effectively utilizing technology for sustainable development.

Technical Paper 3.2 will explore in greater detail a number of specific areas relating to the intersection of the SDGs with BFTs. Technical Paper 3.3 will seek to address the highlighted gaps by developing principle-based approaches to the sustainability-related governance of BFTs.

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