

Summary of Technical Papers BigFintechs & Sustainability: A necessary convergence

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

මිර් 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

The rapid rise of global digital finance players (BigFintechs) in which technology has come to play a key role in driving an upsurge in growth, scale and diversification into financial services has taken many by surprise. From China's Ant Group to India's Paytm, Amazon, Facebook and Google in the US, Mercado Libre in Latin America, ride-hailing services in Southeast Asia, mobile money in Africa and many more, BigFintechs' dominance and impacts on sustainable development are increasingly felt, both at home and internationally, and have only accelerated during the Covid-19 pandemic.

From charismatic antitrust actions to new data regulations, the world has advanced a series of measures in response to the new challenges brought by BigFintechs. Yet, we have not come up with a broader and more systematic consideration of the impacts of BigFintechs beyond financial regulatory and data governance considerations, for example across social, economic, and environmental domains, particularly in developing economies. As a result, there has not been a clear strategy as to how those impacts can be enhanced if positive or mitigated if negative, and how developing countries might benefit from BigFintechs in their pursuit of the UN Sustainable Development Goals (SDGs).

Understanding the SDG impacts of BigFintechs is challenging, firstly due to the fragmentation in our lenses of analysis: BigFintechs are often approached in terms of component parts (i.e., their financial services offerings, core business operations, and extended ecosystems), rather than holistically, preventing a more dynamic view of impacts across their ecosystems and related implications 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 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).

Aiaze Mitha leads the Dialogue on Global Digital Finance Governance.





for the full spectrum of SDGs. Their technology-driven, global, complex, cross-sector business models with embedded finance make the task at hand more difficult, an issue further exacerbated by the inability of current reporting and monitoring standards to capture these impacts across their extended ecosystems and value chains, many of which operate in developing economies. Secondly, current regulatory processes from financial regulation to data governance, telecom and internet regulation and competition regulation, are only addressing a narrow, although important, aspect of BigFintech impacts.

Collectively, these can limit some of the risks and mitigate the market and data advantages of BigFintechs, relevant to issues such as access, fair competition, price discrimination and privacy, but do not address the underlying SDG issues, particularly outside of home market. Potential issues in developing economies range from tax base erosion through to crowding out of local SMEs, worsening working conditions for digital workers, negative environmental impacts, widening inequalities, impacts on macroeconomic and monetary policies, and many more. While the impacts of BigFintechs can also be positive, from financial inclusion to gender equality and new livelihood opportunities, the absence of reference to sustainability in current approaches and weak understanding of the SDG trade-offs can lead to the exclusion of environmental and social risks from systemic risk consideration, and limit developing countries' abilities to harness the opportunity and leapfrog towards sustainable development.

Against this backdrop of regulatory gaps and fragmentation, and with a rapidly developing SDG/ESG regulatory landscape, corporate governance could play a role in addressing some of the sustainability-related challenges raised by BigFintechs. Current practice shows new ways in which public interest decisions of BigFintechs, which are essentially about the SDGs, could be balanced with commercial interests, from external governance mechanisms to embedding sustainability considerations in statutory regulation and advancing direct Board oversight, to broadening the stakeholder base to include developing nation stakeholders into governance, to sector-specific self-regulatory models. These need to be further pursued and should be inclusive of developing nations' interests.

Greater international cooperation will play an important role at the nexus of BigFintechs, the SDGs and developing countries. In this context, such cooperation should seek to address five key principles: (1) ensure the foundational objectives of financial stability, financial integrity, consumer and investor protection, market integrity; (2) support core developmental objectives, seeking to balance potential risks of BigFintechs with the potential for enhancing SDG outcomes; (3) advance responsibility of BigFintechs themselves, with incentives and frameworks to encourage the pursuit of beneficial SDG outcomes; (4) develop appropriate oversight and enforcement; and (5) instill a commitment to sustainable development within BigFintechs and promote operationalization of that commitment.

This approach provides a first step towards establishing the foundational financial regulations and creating reflexive and context-sensitive regulatory policies. Furthermore, it will guide regulators in considering how their decisions affect broader economic and social indicators, and implementing regulatory policies that facilitate or, at the very least, do not negatively affect the attainment of SDGs.

Lastly, it will inform more consistent and flexible development of international and domestic regulatory policies, and more sustainability-aligned corporate action. This is a defining moment for developing countries and the world. How issues of BigFintech governance are addressed today can and will affect our collective attainment of the SDGs. In advancing global responses, it bears to recognize that the most affected, positively and negatively, are not always in the countries where BigFintechs originate, and that solutions should be inclusive, considerate of SDG trade-offs, particularly in developing contexts, and empower all stakeholders to play their part.

We need collective wisdom more than ever. Going forward, the Dialogue will focus on building capacity around its findings in developing economies, whose role is essential. Together with willing partners, it will facilitate a working group of LDCs to explore sustainability-aligned governing arrangements of BigFintechs, and design a set of guiding principles which will be shared more broadly as a public good. The Dialogue will also investigate corporate governance solutions which can drive greater consideration of key SDG impacts and developing country interests by BigFintechs. Lastly, the Dialogue will engage with key governance institutions in disseminating and facilitating deeper engagement with its findings.

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The Rise of BigFintechs

Over the last decade, digitalization has disrupted finance across developed and emerging markets. From the digitalization of global wholesale markets to the explosion of Fintech startups and platforms, through to digital finance developments in developing countries with China, India, and Kenya leading, and the increasing interaction between Big Tech and finance, digitalization has impacted every aspect of finance starting with access, availability and affordability. For example, mobile money platforms built on the back of GSM connectivity have turned mobile devices into transactional interfaces and are now used by over 1 billion people¹. In Kenya, M-Pesa transactions amounted to nearly half of the country's GDP in 2018² while EcoCash transacted in value the equivalent of 90% of Zimbabwe's GDP in 2019. Digitalization has further unbundled and automated existing financial processes. In the US, one estimate suggests that 90% of equity-futures trades and 80% of cash-equity trades are now executed by computers without any human input³. Along the way, digitalization has driven a fundamental shift in how companies are harnessing technologies such as big data, artificial intelligence, blockchain and cloud computing to innovate financial products, create new markets and build competitive advantage.

Simultaneously, digitalization has driven the emergence of a new generation of global digital finance players (BigFintechs) in which technology has come to play a key role in driving an upsurge in growth, scale and diversification into financial services, from China's Ant Group to India's Paytm, Amazon in the US, Mercado Libre in Latin America, ride-hailing services in Southeast Asia and mobile money platforms in Africa⁴.

Such BigFintechs are originating from social media, e-commerce and technology companies diversifying into the provision of regulated financial services; others are evolving from non-tech industries, existing financial institutions, or large data, telecoms and infrastructure providers to the financial sector, native FinTech companies, TechFin platforms and incumbent financial institutions seeking to transform into tech companies. Some will originate in the form of digital currencies, with varied goals and approaches. The mechanics however are the same: merging finance and technology to drive network effects. In today's world, any company operating across a large retail user base could literally harness technology to improve user experience and from there get into financial services and eventually morph into a BigFintech.

BigFintech (BFT) Category	Examples of Organizations Active in this Category	
Payment platforms	Ant Group / Alipay, Apple, Fnality, Facebook Novi, Google Pay, JPM Coin, MTN, Paytm, Central Banks (eg People's Bank of China), Safaricom, Tencent (WeChatPay)	
Regional mobile money providers and global payment platforms		
Alternative / Crypto currencies and Central Bank Digital Currencies, bank cash on ledger		
e-Commerce / Marketplace platforms	Amazon, Alibaba, eBay, Fiverr, Jio, Jumia, Reliance, Upwork	
Online platforms or marketplaces, connecting sellers with buyers (products or services)		
Social Media platforms	Facebook Novi / Diem, Tencent / WeChat	
Venturing into payments & social commerce		
Data and cloud services	Amazon Web Services, Alibaba Cloud Services, Azure, Google	
Providing data and infrastructure services to financial players	Cloud, Ethereum, Microsoft,Next Gen DLI	
TechFin platforms	Airbnb, Amazon, Apple, Binance, Grab, Mechanical Turk, Uber	
Originating from tech players venturing into financial services and digital livelihoods.		
Cryptocurrency Exchanges		
Incumbents / Mature "FinTechs"	Blackrock, JP Morgan, Mastercard, SaxoBank, Swift, Visa	
Digitalizing global banks and financial actors, in retail or wholesale		

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1 'Global Mobile Payment Users 2019', 24 Oct 2019, emarketer. https:// www.emarketer.com/content/global-mobile-payment-users-2019

- 2 'Half of Kenya's GDP Moved through Mobile Phones in 2018: The Power of Mobile Money Transaction in Kenya', Soko Directory, 25 January 2019, https:// sokodirectory.com/2019/01/half-of-kenyas-gdp-moved-through-mobile-phones-in-2018/
- 3 The Economist, "The Stockmarket is Now Run by Computers, Algorithms and Passive Managers", 5 October 2019. https://www.economist.com/briefing/2019/10/05/the-stockmarket-is-now-run-by-computers-algorithms-and-passivemanagers

BigFintech, A New Paradigm

It is widely recognized that BigFintech developments have contributed to improving our lives, from supporting remote payments to allowing millions in lockdown to buy household essentials online during the Covid-19 pandemic, to channeling trillions of dollars of stimulus packages in cash transfers, and in many more ways. For example, M-Pesa, which now has 42 million active customers across seven countries in Africa, has enabled low-cost transactions during the pandemic, empowered women with their savings, unlocked access to credit for both individuals and small businesses and facilitated pay-as-you-go models that are enabling millions not only to access clean energy but to also become green asset owners. Similarly, e-commerce platforms have played a key role in providing much needed financing to thirdparty resellers on their platforms, particularly during the pandemic.

But it is equally true that the emergence of BigFintechs is challenging established regulatory frameworks and structures in multiple ways: they often originate from non-financial industries, merge technology and finance, their reach is cross-border and cross-sector, and their effects, positive and negative, are both complex to address and accelerating. Indeed, BigFintech growth has only accelerated during the pandemic. For example, Amazon published a record profit in the first three months of 2021, up 220% compared to the same period in 2020⁵. Similarly, Facebook's and Google's revenues have surged during the pandemic⁶, raising economic concerns and amplifying already existing antitrust ones.

A Tale of Unstoppable Growth and Rising Concerns

As the world shifts towards digital, BigFintechs command a privileged market position through their unique ability to harness large numbers of users, unparalleled access to data and sophisticated technology-driven approaches to building financial ecosystems, fending off competitive pressures while absorbing economic rent⁷. For example in China, Alipay and WeChatPay accumulated more than 1.7 billion users in 2019, gaining unparalleled insights into the transactions and financial needs of virtually every person in China. WeChat, China's popular messaging app, has a user base of more than 1 billion people⁸, a solid base to further expand its online marketplace. Facebook's Novi will be able to harness Facebook's 2.7 billion users and identity mechanisms in advancing its payments platform⁹. Google has launched its own debit card, potentially amassing colossal amounts of additional data on consumer behavior and preferences, paving the way for its expansion into banking¹⁰.

And where competition exists, it becomes the target of acquisitions, as evidenced by the GAFAM's (Google, Apple, Facebook, Amazon, Microsoft) massive talent grab in the Artificial Intelligence (AI) industry in 2019.¹¹ Beyond acquisitions of AI firms, BigFintech (and Big Tech more generally) have adopted active, and by some judgements, aggressive acquisition strategies domestically but also globally, which can be argued to have had adverse effects on both competition and entrepreneurship in emerging markets¹². BigFintechs have become a driving force behind technology concentration, with the GAFAM alone having collectively made 770 acquisitions¹³.

Inevitably, market concentration leads to more data concentration, which in turn fuels data monetization practices that can put consumers at risk, reinforce market dominance and challenge existing price-based competition frameworks. Notably, the process by which data is harvested by BigFintechs and more broadly corporate AI applications has been and continues to be of interest to both regulators and civil society stakeholders. While AI applications for advancing new types of informationbased, collateral-free financing are showing promising prospects, concerns have also been raised around AI's failings, notably the implicit gender, race and other biases.

Unsurprisingly, data concentration and individual privacy are the issues that have attracted the most attention in recent months. BigFintechs have indeed undergone much scrutiny from regulators, both in China and in the US, but also in the EU, India and other markets, and their outsized market power and the colossal amounts of data that they command have triggered strong regulatory responses. From the EU's new "Digital Services Act Package" that fosters competitiveness among digital services providers and protects digital consumer rights, to the UK's new code of conduct to govern dominant tech platforms¹⁴, to the US Department of Justice's filing of an antitrust lawsuit against Google on internet search and advertising markets, to the US Federal Trade Commission's recent antitrust action against Facebook and China's move

⁵ https://www.nytimes.com/2021/04/29/technology/amazons-profitstriple.html

⁶ https://www.reuters.com/technology/facebook-quarterly-revenue-beatsexpectations-2021-04-28/

https://www.ft.com/content/17460a66-1592-11e8-9e9c-25c814761640
 CNBC. 2019. "Everything you need to know about WeChat – China's billion-user messaging app" https://www.cnbc.com/2019/02/04/what-is-wechat-china-biggest-messaging-app.html

⁹ https://www.washingtonpost.com/business/2019/07/12/why-governments-around-world-are-afraid-libra-facebooks-cryptocurrency/

 ¹⁰ Financial Times, 'Google in Talks to Move into Banking', 13 November

 2019, https://www.ft.com/content/7c4eb71c-0610-11ea-a984-fbbacad9e7dd

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 https://venturebeat.com/2019/12/23/how-the-big-5-bolstered-their-ai

through-acquisitions-in-2019/ 12 https://blogs.lse.ac.uk/usappblog/2020/11/07/us-and-chinese-tech-fir

¹² https://blogs.lse.ac.uk/usappblog/2020/11/07/us-and-chinese-tech-firmsincreasingly-play-a-game-of-pac-man/

¹³ https://www.cbinsights.com/research/tech-giants-billion-dollar-acquisitions-infographic/

¹⁴ https://www.gov.uk/government/news/new-competition-regime- fortech-giants-to-give-consumers-more-choice-and-control-over-their-data-and-ensurebusinesses-are-fairly-treated

on BigFintech platforms and e-commerce triggered by their systemic relevance, the attention is increasing on BigFintechs. It is noteworthy that while the critical role of data in financing decisions is well understood, the broader SDG impacts of data monopolies are seldom understood and remain largely unaddressed beyond traditional competition.

The rise of Ant Group in China and the issues that have unraveled since its aborted Initial Public Offering (IPO) at the end of 2020, and the new Information Technology Rules released by the Ministry of Electronics and Information Technology in India in early 2021¹⁵, raise other questions about regulation of BigFintechs in emerging markets and the considerations, beyond purely technical regulatory, that are at play and might affect the future of the industry. It also raises questions about the role of capital markets, which have benefitted immensely from listing of tech firms including BigFintech firms.

But these are not the only concerns. In question are BigFintechs' broader societal impacts, from tax base erosion in countries where economic value is extracted through tax arbitrage, an issue that has been championed by the Organization for Economic Co-operation and Development (OECD) with their proposal of a minimum global tax rate¹⁶, through to other concerns such as potential negative effects on quality of work, sustainable livelihoods, and freedom of choice through behavior influencing. Many of these issues are fundamentally linked to human rights and are hence directly or indirectly connected to the SDGs. Indeed, analysis by the Danish Institute of Human Rights shows that more than 90% of the SDG targets are intrinsically linked to specific provisions of international and regional human rights instruments and labor standards.¹⁷

To these societal concerns could be added environmental considerations. At a time when BigFintechs are announcing ambitious net zero commitments¹⁸, questions are asked about their broader ecosystems and supply chains¹⁹, many of which are operating across a range of economies with weaker policy frameworks.

In the United States and elsewhere, regulators are increasingly looking at anti-trust solutions. Yet, the re-organization of tech platforms without explicitly considering their conflicts of interest, leading for example to unfair competition or abusive exploitation of data, may not solve underlying concerns around BigFintechs' negative effects on attaining the SDGs.

- 16 https://www.oecd.org/going-digital/topics/tax/
- 17 3.2 Paper
- 18 https://www.bloomberg.com/news/articles/2021-04-07/tech-firms-aresetting-the-most-ambitious-net-zero-goals-green-insight

19 SDG impacts of BFTs

Addressing these issues and aligning BigFintechs with sustainable development outcomes will require enhanced international governance beyond traditional financial stability and consumer protection considerations to also address negative societal and sustainable development externalities. It will also require corporate governance innovations that address the challenges of BigFintechs, often exacerbated by the effects of digitalization.

Sustainability Challenges of Big Fintechs

The expansion of BigFintechs in developing economies has been facilitated by the increasing availability of mobile phones and internet connectivity, and relatively favorable regulatory terms against the promise of greater financial inclusion. In turn, it has given rise to new risks and vulnerabilities in these countries, including across a broad range of SDG outcomes (refer to Technical Paper 1.1).

As exemplified by M-Pesa, BigFintechs can significantly advance financial inclusion and SMEs' access to much needed capital. Ant Group, Amazon, M-Pesa and Facebook all offer SME-financing solutions in support of economic growth. For example, Ant Group's MyBank offers collateral-free SME lending under the "310 model" where it takes less than three minutes to apply for a loan, less than a second to approve and requires zero human intervention. So far, MyBank has reached over 20 million SMEs, sustaining them through the COVID-19 crisis²⁰, and is expanding its offering to supply chains and rural and female entrepreneurs. Amazon has provided over USD 3 billion in SME financing directly, and even more through third-party financial institutions including Goldman Sachs and ING.²¹

These are but a few examples of the ways in which BigFintechs are supporting sustainable growth, but systematic and unrestrained collection of personal data has given rise to new issues of consumer protection, data privacy and good data governance: extensive use of Al-based credit assessments with embedded biases can affect SME's ability to access credit, while accumulation of data by one provider can lead to higher switching costs and reduced choices. This is the case with e-commerce platforms, where SMEs access credit against the assets that they trade but are locked-in due to lack of interchangeability of these assets. Similarly, thousands of mobile money agents whose livelihoods solely depend

¹⁵ https://iapp.org/news/a/information-technology-rules-2021-suggest-bigchanges-for-big-tech-in-india/

²⁰ https://www.finextra.com/pressarticle/83097/mybank-unveils-five-year-

plan-to-reach-more-smes-across-china-via-supply-chain-finance

²¹ https://www.finextra.com/pressarticle/83097/mybank-unveils-five-yearplan-to-reach-more-smes-across-china-via-supply-chain-finance

on mobile money transaction volumes are subjected to commission decisions made by such platforms. The role of uncontrolled nano-lending practices resulting in the blacklisting of 2.7 million Kenyans in the national credit bureau has of course been widely debated²² while the rise of online gambling (USD 40 million in 2019) is raising new concerns.²³

But the effects of BigFintechs on sustainability go much deeper. One of the challenges to grasping the full impact of BigFintechs comes from the current emphasis on data governance, consumer protection and operational risk management, without proper consideration to their broader effects and related trade-offs, both directly and through their extended ecosystems. This fragmentation in dealing with BigFintech, which are often examined in terms of components parts (financial services and activities) rather than holistically,²⁴ prevents a more comprehensive view of all impacts across their evolving ecosystems and value chains, and their implications for the full spectrum of SDGs. This is complexified by the effects of digitalization, driving multi-geography and multisector businesses with embedded finance and extended supply chains.

This is further exacerbated by the fact that current reporting and monitoring standards are not fit for capturing these broader effects.

Current regulation and CSR self-reporting frameworks seem inadequately equipped for platform business model oversight, particularly complex multi-national businesses, as is evidenced by the many failed attempts by legislators to apply existing regulations to these platforms. For example, while e-commerce and digital marketplaces have improved social and environmental responsibility on core operations and products, they have been criticized for not applying environmental and social standards on their third-party vendors and suppliers which, in the case of Amazon, make up more than 50% of its marketplace.²⁵ In fact, most alarming is the emergence of a two-tiered approach where core brand operations and initiatives are the focus of positive impacts but where third-party user, marketplace and supplier impacts are not considered, negatively impacting the environment, employment conditions, human rights, gender issues and other inequalities particularly in Least Developed Economies (LDCs) where goods are manufactured.

The table below is extracted from Technical Paper 1.1 and summarizes findings on broader impacts of BigFintechs (BFTs).

Impact tier Examples of Positive and Negative Impacts	
	 Access to BigFintech's financial services and markets has a positive impact on poverty (SDG 1) and in reducing inequalities based on gender and other minorities (SDGs 5 and 10).
Tier 1 Impacts:	 BigFintech's financial and payment services positively impact SMEs, employment & economic growth (SDG 8) and improvements to industry, innovation, and infrastructure (SDG 9).
From direct service offerings	 Individual or SME loans, including in partnership with local or national banks, enable financial inclusion and economic growth (SDG 8); alternative job opportunities (SDG 8) and economic activities (gig economy) can also help reduce inequalities (SDGs 5 and 10).
	 Issues of data privacy, security as well as algorithmic bias can negatively impact individual consumers, SMEs, as well as peace, justice and strong institutions (SDG 16). This can also negatively impact gender and other inequalities (SDGs 5 and 10).

22 https://www.codastory.com/authoritarian-tech/mobile-credit-kenya/

https://businesstoday.co.ke/status-of-online-gambling-market-in-kenya/
 FSB (2019), BigTech in finance: market developments and potential

financial stability implications, December.

²⁵ https://www.knkx.org/post/activists-push-amazon-do-more-preventhuman-rights-abuses-its-supply-chain



inequalities (SDG 10). As BFT are not paying benefits or taxes within LDCs, there are diminishing oversight and resources available to address these. BFT monopolies can lock entire regions and populations into what some are calling "Dirital address" lateral diside

"Digital colonialism". Integrated payment platforms with social media and digital currencies can impact not only LDC economies but also the global economy, with implications for LDCs' monetary policies and for global financial stability.

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