This report is a joint product of the members of the Inter-agency Task Force on Financing for Development. The Financing for Sustainable Development Office of the United Nations Department of Economic and Social Affairs serves as the coordinator and substantive editor of the Financing for Sustainable Development report.

The online annex of the Task Force (http://developmentfinance.un.org) comprehensively monitors progress in implementation of the Financing for Development outcomes, including the Addis Ababa Action Agenda and relevant means of implementation targets of the Sustainable Development Goals. It provides the complete evidence base for the Task Force's annual report on progress in the seven action areas of the Addis Agenda (chapters III.A–III.G). The report is by necessity more concise and selective and should thus be read in conjunction with the online annex.

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Foreword

This report is being issued as the impacts of the COVID-19 pandemic grow deeper and more devastating. Already we see the rising risk of a global recession, and disproportionate suffering by the most vulnerable members of the human family. We must act quickly and decisively to protect people and strengthen societies in the face of this shock, which comes on top of a global climate emergency, soaring inequality and growing discontent with the economic and social order in general.

Beyond the necessary and immediate interventions in the realm of global public health, the 2030 Agenda for Sustainable Development remains humankind’s best blueprint for finding solutions to our biggest challenges. Mobilizing financing is critical to supporting emerging economies and developing countries. This United Nations report points the way.

The immediate focus must be on reversing the trajectory of the COVID-19 pandemic, and responding to the unfolding economic crisis. Public health spending must increase, and rapid income support needs to be provided to those who lose jobs and businesses. This is particularly important for the poorest without health care and those with precarious employment. Concessional lending programmes for small and mid-sized enterprises, as well as waivers on loan repayments, will also be necessary. Rapid response measures should be coordinated at the global level to ensure maximum impact and to signal shared resolve to maintain economic and financial stability, promote trade and stimulate growth.

While the pandemic continues to evolve, the future landscape will be uncertain, especially for those countries less able to cope. This report identifies four key areas of long-term action to promote stability and well-being:

First, reversing the backsliding we are seeing in the commitments enshrined in the Addis Ababa Action Agenda, including the decline in Official Development Assistance, especially to least developed countries, and the growing debt distress of low-income and vulnerable countries.

Second, raising ambition on climate mitigation, adaptation and finance.

Third, making the most of the opportunities that arise from new digital technologies by closing the digital divide and creating decent jobs.

Fourth, capitalizing on the growing momentum for sustainable investment among investors, firms and savers.

This report brings together the latest thinking on these issues from across the international system and presents a wide range of policy recommendations in each of these areas. I hope that it will provide useful guidance to all as we address today’s crisis and embark on a Decade of Action to deliver the Sustainable Development Goals.

António Guterres
Mobilizing financing is key to implementing the 2030 Agenda for Sustainable Development. But finance is not an end in itself—it is a means to improve people’s lives and achieve the Sustainable Development Goals (SDGs). Without resources, we cannot meet these goals.

Financing is not only about money. Policy and regulatory actions are also necessary both at national and international levels. In 2015, Member States adopted, through the Addis Ababa Action Agenda, a global framework to guide these actions. While significant steps have been made since its adoption, financing remains a major bottleneck. The current global environment, including slow growth and high debt, has compounded financing challenges. The Covid-19 crisis threatens to derail implementation of the SDGs further, with significant human and economic consequences.

The international community needs to come together and forcefully act as we progress into the Decade of Action to deliver the SDGs. The new coronavirus underscores the need for global cooperation—to share lessons and solutions, agree on common standards, and help countries most in need.

The 2019 High-level Dialogue on Financing for Development, under the auspices of the United Nations General Assembly, showed political will. We must turn this will into concrete actions and raise our ambition.

The 2020 Financing for Sustainable Development Report, the fifth report of the Inter-agency Task Force on Financing for Development, provides a comprehensive assessment of the state of sustainable finance. Prepared by more than 60 agencies of the United Nations system and partner international organizations, the report brings together a wide range of expertise and perspectives. It puts forward a set of policy recommendations to mobilize financing flows, and align them with economic, social and environmental priorities. These recommendations should assist Member States and all other stakeholders as they work toward fully implementing the Addis Agenda and achieve the SDGs.

Six key messages emerge from this year’s analysis:

- The global context is difficult; growth remains subpar, with serious downside risks, while high debt levels and rising greenhouse gas emissions exacerbate challenges.
- Recent trends on several issues are not going in the right direction and need to be reversed. ODA must be increased; trade tensions resolved and investment in the SDGs mobilized.
- Collective action is crucial as key challenges to sustainable development are global in nature and cannot be addressed by single-country efforts.
- On the positive side, several MDBs completed successful replenishments, increased lending and further aligned their financing with the SDGs.
- Digital technologies present tremendous potential for the SDGs, but public policies should be adjusted to accelerate progress, address exclusion and risks of discrimination, and ensure benefits for the society at large, including decent jobs.
- The private sector gradually realizes that business as usual is not the future and that a transition towards more sustainability is key to the long-term financial success of companies. Policymakers need to support this transition and make financial systems a driver of change.
The report begins its assessment of progress with an analysis of the global macroeconomic context, which sets the economic framework for implementation efforts. The subsequent thematic chapter explores how digital technologies are fundamentally changing financing for sustainable development and impacting all action areas of the Addis Agenda. The remainder of the report discusses progress in these seven action areas and data. The report also addresses, throughout the chapters, the seven requests for analysis that Member States made in the outcome of the 2019 FfD Forum. Additional analysis and data are presented in the comprehensive online annex of the Task Force (http://developmentfinance.un.org).

Liu Zhenmin
Under-Secretary-General for Economic and Social Affairs
United Nations
Chair of the Inter-agency Task Force

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Task Force coordinator and substantive editor
United Nations Department of Economic and Social Affairs (UN/DESA)

Financing for development major institutional stakeholders
World Bank Group
International Monetary Fund (IMF)
World Trade Organization (WTO)
United Nations Conference on Trade and Development (UNCTAD)
United Nations Development Programme (UNDP)

Regional economic commissions
Economic and Social Commission for Asia and the Pacific (ESCAP)
Economic and Social Commission for Western Asia (ESCWA)
Economic Commission for Africa (ECA)
Economic Commission for Europe (UNECE)
Economic Commission for Latin America and the Caribbean (ECLAC)

United Nations system and other agencies and offices
Basel Committee on Banking Supervision (BCBS)
Committee on Payments and Market Infrastructure (CPMI)
Financial Stability Board (FSB)
Food and Agriculture Organization of the United Nations (FAO)
Global Environment Facility (GEF)
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The financing landscape has changed dramatically since the adoption of the Addis Ababa Action Agenda. Digital technology has transformed key aspects of financial systems. There has also been rapidly growing interest in sustainable investing, in part due to greater awareness of the impact of climate and other non-economic risks on financial returns.

Yet, just as we begin the decade of action, global challenges have multiplied. The economic and financial shocks associated with COVID-19—such as disruptions to industrial production, falling commodity prices, financial market volatility, and rising insecurity—are derailing the already tepid economic growth and compounding heightened risks from other factors. These include the retreat from multilateralism, a disconnect and distrust of globalization, heightened risk of debt distress, and more frequent and severe climate shocks. Together, these make sustainable finance more difficult—and further undermine the ability to achieve the Sustainable Development Goals (SDGs) by 2030.

Amid these destabilizing trends, the 2020 Financing for Sustainable Development Report of the Inter-Agency Task Force finds that the international economic and financial systems are not only failing to deliver on the SDGs, but that there has been substantial backsliding in key action areas. Governments, businesses and individuals must take action now to arrest these trends and change the trajectory.

Arrest the Backslide

The unfavourable context identified above is exacerbated by the following trends:

- **Slowing economic growth**: global growth is expected to slow markedly in 2020, to significantly below the decade-low growth of 2.1 per cent in 2019, with high risk of a global recession.
- **Declining Assistance**: official development assistance (ODA) fell by 4.3 per cent in 2018, and ODA to least developed countries (LDCs) fell by 2.1 per cent.
- **Growing Financial Risks**: short-term financial market volatility has increased due to COVID-19. Prior to that, an extended period of low interest rates had incentivized riskier behaviour throughout the financial system. Financial intermediation has steadily migrated to non-bank financial intermediaries (who hold over 30 per cent of global financial assets).
- **High Debt Risk**: debt risks will likely rise further in the most vulnerable countries. Forty-four per cent of least developed and other low-income developing countries are currently at high risk or in debt distress. That’s a doubling of debt risk in under five years (it was 22 per cent in 2015). This number could rise as COVID-19 and related global economic and commodity price shocks put increasing pressure on some countries, particularly oil exporters.
- **Increasing Trade Restrictions**: substantial new trade restrictions have been introduced: the trade coverage of import-restrictive measures are almost 10 times larger than two years prior. The World Trade Organization’s Appellate Body, meanwhile, no longer has enough members to rule on trade disputes. The COVID-19 crisis compounds the impact of these restrictions and significantly disrupts trade in goods and services. This crisis also disrupts global value chains, with merchandise exports expected to fall by a minimum of $54 trillion.
- **Increasing Environmental Shocks**: greenhouse gas emissions continue to rise, posing risks to sustainable development. Between 2014–2018, the estimated number of weather-related loss events worldwide increased by over 30 per cent compared to the preceding five years.

In this environment, many countries—and especially least developed countries, small island developing States, and other vulnerable countries—will not be able to achieve the SDGs by 2030.

An urgent priority for the international community is to arrest the backslide. While many of these issues have deep-rooted causes, there are four immediate actions that can help turn the tide:
Financial instruments, highlighted throughout this report, should be used to promote economic growth and achieve the United Nations’ Sustainable Development Goals (SDGs). Effective financial instruments can catalyze and concentrate capital, reduce risks, and stimulate growth. Policy responses need to be designed to help those most in need so that the burden does not fall on those least able to bear it. Donors should immediately reverse the decline in ODA, particularly to LDCs. Official bilateral creditors should immediately suspend debt payments from LDCs and other low-income countries that request forbearance, and other creditors should consider similar steps or equivalent ways to provide new finance. Financial instruments, highlighted throughout this report, should be implemented and utilized to reduce climate risks and raise resources for SDG investments. However, these actions alone will not suffice, and piecemeal approaches will not succeed. Our most intractable challenges—e.g., the increasingly strained multilateral trading system, debt challenges, climate risks, and other systemic risks—are global in nature and can only be addressed if all countries come together and work toward common objectives. Collective action remains indispensable.

Accelerate the Transition
As we strive to address these long-standing concerns, the urgency of the 2030 Agenda also demands that we take every opportunity to accelerate progress. The Task Force has identified two key areas that will help accelerate the transition toward sustainable finance: (1) the rapid growth of digital technologies and (2) the growing interest in sustainable investment. Digital technologies can enable inclusion and support the SDGs. The approach to human-centred finance should build on the growing interest, as well as other Task Force members and the European Union. Lessons learned from pioneers in the methodological work at the global level can be marketed on the basis of their contribution to sustainable development.

First Accelerator: Harness digital technologies in support of sustainable finance
The impact of digital technologies is wide-reaching across all the SDGs and on financing for sustainable development through financial markets, public finance, and development pathways. Yet, existing policy and regulatory frameworks are not suited to the new realities. While there is uncertainty as to how digital economies will evolve over the next ten years, policymakers do not have the luxury to wait. The national and global policy and regulatory frameworks put in place today, and described below, will determine whether digital technologies accelerate or reverse progress, particularly with regard to its distributive impact. A new approach is needed to ensure that technological change supports implementation of the SDGs—ones that prioritize people.

Prioritize inclusion. Digital technologies can enable inclusion and widen access to products and financial services and increase efficiencies, but their impact on inequality must be managed.

Many remain excluded from the digital economy, particularly women and girls.

Second Accelerator: Nurture the growing interest in sustainable investment
The approach to human-centred finance should build on the growing interest in sustainable investment. Increasingly, business leaders are acknowledging that they must take sustainability factors into account in order to achieve long-term financial success and ensure the viability of their business model. Similarly, individual investors are increasingly interested in supporting sustainable finance. However, the tools necessary to make informed choices are not readily available. Investors are not often asked about sustainability preferences by their financial advisors, and reliable sustainability metrics and standards are not in place globally to properly evaluate and vet potential impact. This needs to change. Voluntary actions, which have characterized the sustainable finance industry to date, are insufficient to achieve the scale of change that is required. Policymakers must encourage the growing interest in sustainable investment and help to implement the following three measures.

1. Adopt Sustainability Risk Disclosures: Policymakers should adopt global mandatory financial disclosures on climate-related financial risks. Businesses should also be accountable for broader sustainable development impacts and required to include common and comparable sustainability metrics in their reporting to shareholders and stakeholders.

2. Establish Sustainability Standards: Regulators should establish minimum standards for sustainability information to provide to investors for investment products, verifying how and where products can be marketed on the basis of their contribution to sustainable development.

3. Require Sustainability Preference Solicitation: Investment advisors should be required to ask clients about their sustainability preferences, along with information on climate-related financial risks.

The United Nations can support policymakers and business in the implementation of the above measures. Specifically, the UN can help create a clear understanding of what sustainable investment means, providing the policy guidance and technical standards necessary to enable countries to implement and utilize to reduce climate risks and raise resources.

Aggregate and Advance, Together
The international community needs to take immediate concerted actions to respond to COVID-19. Governments should coordinate measures at the global level to ensure maximum impact and signal global resolve to maintain economic and financial stability, promote trade and stimulate growth. More broadly, implementing sustainable development—whether responding to COVID-19, eradicating poverty, reducing inequality, or combating climate change—requires every actor, national and subnational, to be on board. As many of these challenges are global, addressing them requires joint, integrated approaches. Silver and single-country efforts will be insufficient. The current crisis also underlines the need to strengthen investment in crisis prevention, risk reduction and planning. Experience from responses to past disasters and other hazards underline the need to create adequate crisis-resilient financing instruments before the crisis arrives, building incentives for risk reduction into their design. Postponing such investments increases the ultimate costs to the society.

International forums to aggregate and align resources and advance collective action exist but remain underutilized. By making use of the ECOSOC Financing for Development Forum, and other UN forums, such as the 15th UNCTAD quadrennial conference, we can ensure that the entire world is better prepared to respond to greater than the sum of its parts. As we work together to creatively solve global challenges, we must continue to pursue inclusive multilateralism to ensure that no country is left behind in this decade of Action.

About this report
The 2020 Financing for Sustainable Development Report of the Inter-agency Task Force provides a comprehensive assessment of progress in all action areas of the Addis Ababa Action Agenda. This assessment is grounded in an analysis of the global enabling environment. Chapter I describes a challenging global macroeconomic context that is hampering progress. The thematic chapter (Chapter II) explores how digital technologies are changing financing—including financial sectors, public finance, and development pathways (trade and investment). The chapter puts forward policy options across the Addis Agenda action areas to make the most of the tremendous opportunities that new technologies create, while carefully managing risks.

The remainder of the report (Chapters III to VI and IV) discusses progress in the seven action areas of the Addis Agenda. Each chapter begins with a summary that highlights key messages and presents policy options. The chapters provide updates on implementation and lay out challenges and policy options on both the national level, including links to integrated financing frameworks (see also Box 1 for an update on the Task Force’s work on integrated financing frameworks), and for international cooperation. They also address the requests made by Member States in the intergovernmentally agreed conclusions and recommendations of the 2019 ECOSOC Forum on Financing for Development. Table 1 lists the issues and where the related content can be found in this report.

Box 1: Integrated national financing frameworks
The Task Force has continued its work on integrated national financing frameworks (INFFs), the focus of last year’s thematic chapter. Responding to growing interest from countries, the Task Force is further developing the INFF methodology, and preparing guidance material. A first module on an INFF inception phase has been published. Four additional modules (for the building blocks of operationalizing an INFF: (i) assessment and diagnostics, such as costs and financing needs assessments; (ii) a financing strategy; (iii) mechanisms for monitoring and review; and (iv) governance and coordination) will be made available later in the year. This material provides guidance not just to a “dawn” country but to “sun” countries that have expressed interest in implementing INFFs. These efforts are supported by UNDP and UN Resident Coordinators, as well as other Task Force members and the European Union. Lessons learned from pioneers inform the methodological work at the global level.

Source: UN DESA

Chapter III.A on domestic public resources assesses progress in national tax policy and administration, focusing on opportunities and challenges created by digitization, as well as international tax cooperation. Responding to a request by Member States, it discusses the various components of tax financial flows, putting special emphasis on corruption-related flows. The chapter also discusses how to align fiscal systems and expenditure with sustainable development.

Chapter III.B on private business and finance reviews measures to improve the business enabling environment and analysis of the use of financial instruments to fill the investment gap in developing countries. The chapter also discusses measures to make the financial system more sustainable and companies more accountable for their environment and social impacts.

Chapter III.C on international development cooperation responds to three requests by Member States, including an analysis of trends in concessional financing; the use of public finance instruments in development cooperation, including blended finance, and challenges related to graduation. It concludes with a discussion of progress in the development effectiveness agenda. In Chapter III.D on international trade as an engine for development, main issues include reforms to preserve and strengthen the multilateral
The Task Force is made up of more than 60 United Nations agencies, programmes and offices, the regional economic commissions and other relevant international institutions. The report and its online annex draw on their collective expertise, analysis and data. The major institutional stakeholders of the financing for development process—the World Bank Group, the International Monetary Fund, the World Trade Organization, the United Nations Conference on Trade and Development, and the United Nations Development Programme—take a central role, jointly with the Financing for Sustainable Development Office of the United Nations Department of Economic and Social Affairs, which also serves as the coordinator of the Task Force and substantive editor of the report. The Task Force carried out background research, held dedicated technical meetings, and engaged outside experts to inform this analysis. The report further benefited from the work of the Intergovernmental Group of Experts on Financing for Development, which held its seventh session in Geneva from 25 to 27 November 2019, on the topic of international development cooperation and moderated systemic issues.

In Chapter IV on data and monitoring, main issues include the new roles of national statistical systems amid a rapidly changing data ecosystem, and new financing mechanisms for raising resources to meet the data needs of the 2030 Agenda.

Table 1

<table>
<thead>
<tr>
<th>Request from the 2019 FfD Forum</th>
<th>Request</th>
<th>Remarks</th>
<th>Chapter Workstream Request</th>
</tr>
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<tbody>
<tr>
<td>Domestic public resources</td>
<td>Illicit financial flows</td>
<td>2019 Forum outcome (para 12):</td>
<td>We request the IATF to report available data on international cooperation on asset returns and to devote specific sections in its 2020 report to summaries of channel-specific and component-specific estimates of the volume of illicit financial flows, and the use of technological advances to strengthen tax administration, as well as combat BTF.</td>
</tr>
<tr>
<td>Domestic and international private business and finance</td>
<td>Measurement of private sector impacts</td>
<td>2019 Forum outcome (para 14):</td>
<td>We request the IATF to further its analysis on impact and metrics for measurement of the contribution of private sector investments and instruments to SDGs at the global level.</td>
</tr>
<tr>
<td>International development cooperation</td>
<td>Innovative instruments</td>
<td>2019 Forum outcome (para 16):</td>
<td>We invite the IATF to explore in its 2020 report, building on existing work, the challenges faced by developing countries experiencing diminished access to ODA and concessional finance due to graduation and during transition, as well as recommendations to overcome such challenges.</td>
</tr>
<tr>
<td>Graduation</td>
<td>ODA breakdowns</td>
<td>2019 Forum outcome (para 18):</td>
<td>We request the IATF to report available data on international cooperation on asset return and to devote specific sections in its 2020 report to summaries of channel-specific and component-specific estimates of the volume of illicit financial flows, and the use of technological advances to strengthen tax administration, as well as combat BTF.</td>
</tr>
<tr>
<td>International trade as an engine for development</td>
<td>Trade finance</td>
<td>2019 Forum outcome (para 18):</td>
<td>We invite the IATF to continue to monitor developments with respect to trade financing gaps, particularly for MENA, as part of its 2020 report.</td>
</tr>
<tr>
<td>Science, Technology, Innovation and Capacity Building</td>
<td>Fourth industrial revolution</td>
<td>2019 Forum outcome (para 1):</td>
<td>We look forward to the thematic chapter of the IATF’s 2020 report on financing sustainable development in areas of disruptive technologies and rapid innovation.</td>
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Chapter I

The global economic context and its implications for sustainable development*

1. Introduction

In early 2020, the inter-agency Task Force on Financing for Developing (Task Force) members lowered their already tepid growth forecasts due to rapid worldwide spread of COVID-19. Even in the most benign scenario, global growth is now expected to slow further in 2020, with a substantial risk of a global recession, significantly below the decade-low growth of 2.3 per cent in 2019.¹ The baseline outlook is subject to downside risks and uncertainty, including a renewed escalation of trade disputes and a further rise in geopolitical tensions could also affect global growth in the short to medium term. Beyond these risks, the climate crisis continues to pose a rising threat to economic prospects. Without decisive policy action, there is a distinct possibility of a prolonged sharp slowdown in global economic activity.

These challenges pose extremely serious risks to the timely implementation of the Sustainable Development Goals (SDGs). Subdued global growth was already setting back progress towards higher living standards. Before the outbreak of COVID-19, one in five countries—many of which are home to large numbers of people living in poverty—were likely to see per capita incomes stagnate or decline in 2020. This number will likely be higher due to economic disruptions from the pandemic.

Existing economic vulnerabilities are being further aggravated by the impact of COVID-19 and related factors. Disruptions in industrial production are affecting global value chains and putting additional pressure on already weak trade and investment growth. Economic insecurity and job losses are impacting consumer demand. Rising volatility in financial markets could expose vulnerabilities in some economies with systemically important financial sectors. Risks of debt distress in public and private debt—both of which were already at record-high levels relative to gross domestic product (GDP) in developed and developing economies before the crisis—are increasing. The related fall in commodity prices (particularly oil prices, which have been aggravated by political tensions) is putting further pressure on debt sustainability in some countries. In Africa, six countries with high oil exports could experience significant shocks, while the fall in tourism will hurt small island developing States and other tourism-dependent countries.

To date, monetary policy easing in many systemically important countries has helped support near-term activity. During periods of high uncertainty, monetary policy can boost liquidity to ensure continued functioning of markets, and support lending. However, monetary policy will be insufficient to mitigate the economic impact of a global pandemic and restore medium-term robust growth to the world economy. Swift and forceful policy action is needed in response to COVID-19, drawing on the full policy toolbox—that is, fiscal policy,*

supported by monetary, macroeconomic and capital flow management policies—according to countries’ fiscal policies and financial vulnerabilities.

Given the interrelated nature of the global economy, rapid response measures should be coordinated at the global level to ensure maximum impact and signal global resolve to maintain economic and financial stability, promote trade and stimulate growth. Over the medium term, structural and regulatory reforms, public and private investment, and strengthened social protection will be important to facilitate growth, address the rapidly changing technological landscape, and boost sustainable development prospects—all of which is discussed throughout the rest of this report.

2. Outlook and risks for the global economy

2.1 Growth trends

According to the United Nations World Economic Situation and Prospects 2020, global growth decelerated to 2.3 per cent in 2019, its slowest pace since the 2008-2009 financial and economic crisis, amid weakening trade and investment activity (figure 1.5). The growth downturn was broadly based across geographic regions, with about two thirds of countries worldwide recording weaker GDP growth in 2019 compared to 2018. The global economy is expected to slow further in 2020, owing to the impact of COVID-19.

Progress towards poverty reduction has slowed in recent years and might slow further due to the impact of COVID-19. The number of people living in extreme poverty has risen in several sub-Saharan African countries, where poverty rates are already high. Poverty rates have also edged up in parts of Latin America and the Caribbean and Western Asia. Growth in most least developed countries (LDCs) remains significantly below levels needed to eradicate extreme poverty by 2030. Only 15 per cent of LDCs are growing at 3.0 per cent or more, and 37 per cent are growing at 1.0 per cent or less. Growth in high-income OECD countries is also projected to decline, from 2.7 per cent in 2019 to 2.1 per cent in 2020. Growth in developing economies is projected to slow to 2.3 per cent in 2020 and 2.0 per cent in 2021, compared to 2.9 per cent in 2019.

In per capita terms, the global economy grew at a moderate pace of 1.2 per cent in 2019. This aggregate figure masks stark differences in economic performance across regions and countries (figure 1.2). As economic growth remains highly uneven across regions, many developing countries have continued to fall further behind. Before the outbreak of COVID-19, average income in one out of five countries (predominantly in Africa, Latin America and the Caribbean, and parts of Western Asia) were projected to stagnate or decline, with more countries expected to see per capita income decline due to COVID-19. Many of these countries are commodity exporter.

Commodity-dependent developing countries as a group, average annual growth of GDP per capita fell from 2.9 per cent during 2010-2014 to 0.5 per cent in 2015-2019. In one third of these countries (home to 870 million people), average real incomes are lower today than they were in 2014. These countries are also likely to be significantly hit by the pandemic outbreak and related commodity price drops. Prices for soybeans and copper fell approximately 8 and 15 per cent, respectively, between January and March, while oil prices collapsed in the first half of March (with political issues exacerbating the impact of falling demand). A sustained drop in commodity prices would severely compound debt and financial vulnerabilities.

Note: e = estimate.

Source: UN DESA.

2.2 Macroeconomic risks

On 11 March 2020, the World Health Organization declared a global pandemic due to the spread of COVID-19. At the time of writing, the situation continues to unfold at rapid speed, making it difficult to forecast the global economic impact. Nonetheless, a review of some of the effects on supply and demand, as well as financial and other transmission channels, can help identify critical areas for policy intervention.

Unlike typical financial crises, where instability in the financial sector may impact the real economy, COVID-19’s most direct impact is on health and human well-being, with immediate effects on economic activity and jobs, which then feed into the financial sector.

COVID-19 affects both the supply and the demand side of the economy, through direct effects (costs of health care, morbidity and mortality) and indirect effects (restrictions of movement and voluntary social distancing). The crisis has already had a significant impact on the economy, including through a disruption of global supply chains; a collapse in travel and tourism; rising unemployment and a decline in consumer demand, a sharp rise in fear and insecurity, and financial market volatility. The pandemic will also strain social systems. Managing the crisis will be particularly difficult for countries with limited fiscal space and weak social protection. Together, these effects are compounding existing financial and debt vulnerabilities (see section 2.4 below).

On the supply side, plant closures and a restricted labour supply are impacting global supply chains, trade, investment, and commodity prices. Investment is also likely to fall, as companies delay capital expenditures. For example, China’s manufacturing output and investment contracted significantly in early 2020, with exports falling 17.2 per cent and investment falling 24.5 per cent year on year during January-February (see box 1.1 on COVID-19).

On the demand side, restrictions of movement and the cancellation of public events, together with social distancing are affecting the services industry, to date most notably in tourism and hospitality, which will impact a range of countries, including small island developing States. Heightened economic insecurity, including loss of income due to reduced working hours or layoffs (particularly for those without access to a strong safety net), and rising financial losses are likely to dent consumer spending, in turn further impacting business expectations and investment.

Commodity exporters are also expected to be among the countries most affected by the slowdown due to the concurrent fall in commodity prices, particularly oil prices, raising the risk of debt distress for some highly indebted countries. In Africa, six countries with high oil exports could experience significant shocks.

Small and medium-sized enterprises (SMEs) that do not have financial cushions to rely on may struggle to adapt to the demand shock. There was a significant increase in borrowing by SMEs in the period prior to the crisis in some developed countries. Without relief, there is a high risk of increased defaults by SMEs, as well as by individuals losing their mortgages or student loans.

In early March, global financial markets witnessed large losses and elevated levels of volatility not seen since the onset of the 2008 world financial and economic crisis. The highly leveraged nature of the global economy, margins calls may trigger additional sales, leading to a further fall in prices and contagion across asset classes. Developing countries are already experiencing capital outflows, with portfolio outflows from emerging market already surpassing levels observed during the global financial crisis.

Policy options

Given the global nature of the pandemic and its economic impacts, the international community needs to take swift concerted action. Rapid response measures should be coordinated at the global level to ensure maximum impact and signal global resolve to maintain economic and financial stability, promote trade and stimulate growth. In addition, the global community will need to support vulnerable countries that may have limited fiscal space and weak health systems, including through technical support to countries where the virus has not yet manifested. The Group of Seven and Group of Twenty Finance Ministers and Central Bank Governors have signalled their readiness to cooperate.

At the country level, increased public health spending, including on screening, supplies, and treatment capacities, can help slow the spread and impact of COVID-19, and have a multiplier effect on the economy. Additional fiscal policy measures can include paid family sick leave, wage subsidies and cash transfers. These are particularly important for the poorest, those without access to health care, and those with precarious employment. Countries may also need to support concessional lending programmes for SMEs.

After an initial emergency phase, fiscal policies can also help economic recovery by supporting demand and promoting medium- and long-term sustainable development trajectories (see section 4). This could include increasing public investment and incentives for private investment in sustainable development, to help offset the expected fall in investment due to COVID-19. Short-term policies today also affect future outcomes, so extreme immediate crisis measures should be aligned with and supportive of sustainable development. The policy response should be sustainable, sustainable and equitable, to avoid a repeat of the protracted and slow recovery from the 2008 crisis.

In terms of monetary policy, central banks do not have tools to help restore the global supply chains that COVID-19 has disrupted, or support services demand in countries that significantly limit personal mobility. Monetary policy can help counter tighter financial conditions, including through policy measures that facilitate the flow of credit to support small and medium-sized enterprises.
2.2 Impact of trade tensions
COVID-19 is also expected to compound already weak international trade and global manufacturing activity (see box I.1). Rising tariffs and shifts in trade policies have dampened trade and investment in most regions. The “Phase 1” trade agreement that was reached between China and the United States in January 2020 has provided some short-term relief for businesses and investors. Nevertheless, as many of the issues underlying the trade disputes remain unresolved, there is a possibility that trade tensions could re-erupt across countries, although it is unclear whether and how COVID-19 will affect such measures. Moreover, as more countries resort to unilateralist strategies to resolve their trade disputes, the World Trade Organization and its rules-based multilateral trading system is increasingly being undermined, making multilateral dispute settlements more complex, increasing inefficiencies in global trade and weakening the positions of small and developing countries (see chapter III.D).

Renewed pressure on trade would further hurt growth prospects around the world both directly and indirectly. Global value chains could experience more severe disruptions, raising costs and extending the weaknesses in exports. Persistent high trade policy uncertainty could also prolong the investment slump in many countries.

2.3. Subdued investment growth
COVID-19 is also expected to exacerbate already low investment growth prior to the outbreak (see box I.1). Global investment fell in 2019, in tandem with the slowdown in trade flows and industrial production. The fall in investment is most pronounced in developing economies, reflecting trends in China as well as other large developing countries (Figure I.3). A protracted slump in investment activity could also dampen productivity growth, thus affecting both short-term output and medium-term potential growth (see section 3.3).

In developed countries, the decline in investment was, on average, greatest in machinery and equipment, and residential real estate. Investment growth in intellectual property products held up relatively better and witnessed a strong increase in the United States, possibly reflecting the growth of the digital economy (Figure I.4). A related trend in some developed countries may be an increase in market concentration, which would lead to lower competition and possibly reduced investment and innovation (see chapter III).

In developing countries, the pace of investment growth varied significantly between regions (Figure I.5). Trade weaknesses discouraged export-oriented investment. In a few large emerging countries (e.g., Argentina and Turkey), the sharp decline in domestic investment reflected ongoing adjustments to severe macroeconomic imbalances. For commodity exporters, including several economies in Africa, Western Asia and Latin America and the Caribbean, subdued commodity prices continued to weigh on capital spending and public investment. The fall in commodity prices in early 2020, if sustained, is expected to continue to hinder investment in these countries. In contrast to developed countries, investment in digitization has remained relatively low in most countries for which data is available (with the exception of China).
by almost 20 percentage points during the second half of 2019 alone, to reach levels similar to those before the crisis. Also, significantly more countries than before the crisis show high levels of vulnerability of sovereigns and of the non-financial corporate sector (figure I.7) (see chapter III.E). Public and private debt have risen to record high levels relative to GDP in both developed and developing economies (figure I.8). High sovereign debt could be a growing source of risk to financial stability for some developing countries. Between 2010 and 2019, interest payments as a share of government revenue increased in more than 70 per cent of developing countries—despite historically low yields—and 44 per cent of least developed and other low-income countries are currently considered to be in debt distress or at high risk of falling into debt distress (see chapter III.E).

In developed countries, corporate debt has increased since 2011, surpassing pre-crisis levels (after an initial decline following the 2008 world financial and economic crisis). In large developing countries and emerging economies, the ratio of corporate debt to GDP has risen by 31 percentage points since 2011, with government and household debt ratios each growing by over 15 percentage points. Yet, much of the financing raised by corporate borrowing has been used for share buybacks, to pay out dividends and boost short-term investor returns, or to fund mergers and acquisitions, rather than for productive investments.3

While the growth in corporate debt in some countries (e.g., China) is concentrated in large firms, including state-owned enterprises, in others (e.g., the United States) it is more pronounced in smaller and medium-sized companies (SMEs). As COVID-19 is expected to have a particularly large impact on SMEs (see box I.1), the risk of corporate default has increased significantly in these countries. “Lower for longer” interest rates also create incentives that lead to riskier behaviour in the financial system. For example, institutional investors that have enjoyed historically low yields increasingly invest in alternative assets, such as real estate, infrastructure and corporate debt.

Note:

1. See chapter III.A.

Note:

1. April 2019 GFSR
2. October 2019 GFSR

Source:

IMF , Global Financial Stability Report, October 2019

Source:

IMF , Global Financial Stability Report, October 2019

Source:

IMF , Global Financial Stability Report, October 2019

Source:

IMF , Global Financial Stability Report, October 2019
2.5. Risks from other non-economic factors: climate change

While it is hard to predict the further spread and duration of the COVID-19 pandemic, its economic impact is being felt strongly across the globe. Beyond the immediate threat, climate change and other natural hazards are posing an increasing risk to the short, medium and longer-term economic outlook. Between 2014 and 2018, the number of weather-related loss events worldwide is estimated to have increased by over 30 per cent compared to the preceding five years.4 Climate shocks inflict significant and long-lasting damage, including loss of income, destruction of physical and human capital, and widening inequalities. While the estimated overall cost of disasters in 2019 ($150 billion) was lower than in the preceding three years, there were many events with losses in the low billions. This highlights the volatile nature of annual losses, as statistics are often dominated by large individual events.5 Nonetheless, an estimated 68 per cent of loss events during 2005-2017 were caused by small and medium, localized and frequent disasters.6 Although rebuilding efforts provide a temporary boost to economic growth, they also divert scarce resources away from other development needs. Debt levels inevitably rise as governments borrow to finance recovery efforts, driving up borrowing costs and further burdening public budgets.

Climate-related risks are also increasingly affecting the financial sector. As risk evaluations of assets change, insurers and banks may be exposed to larger losses that could impact financial stability. While addressing climate change will take a wide range of policy measures, an increasing number of central bank governors have acknowledged the need to respond to the risks it poses to the financial sector. In 2019, the Network of Central Banks and Supervisors for Greening the Financial System published a set of guidelines that urges central banks to price climate change risk when regulating financial companies, and to invest with sustainability goals in mind for their own portfolios (see chapter III.F).7 Some central banks governors do not consider climate change to be as relevant for monetary policies, since they expect only limited effects on their own countries’ GDP growth and inflation in the near term. There is also no consensus on the role of central banks’ own portfolios in supporting green investment. For instance, the US Federal Reserve and the Bank of Japan consider this outside their mandates, while the Bank of England and the European Central Bank have indicated strong interest in such policies.8 The Bank for International Settlements launched a green bond fund in 2019, as an option for central banks to include environmental sustainability objectives in their reserve management.9

3. Medium-term challenges: productivity and equity

3.1. Recent trends in labour and total factor productivity

The recent investment slump has caused a slowdown of capital deepening,10 reinforcing a longer-term trend of slowing productivity growth in many developed and developing countries. Indeed, all major developed economies have experienced a downward trend in labour productivity growth over the past three decades (figure 18). The growth of total factor productivity (TFP) (the efficiency with which capital and labour are used together for production) has also slowed. Notably, productivity growth from ICT investment seems to have resisted the overall downward trend over the past two decades, albeit without significantly boosting total productivity (see also chapter II).

Both structural and near-term factors may explain why expectations of rapid productivity gains from new digital technologies have not yet materialized at an economy-wide scale in developed economies (box I.3). Structural factors that have affected productivity growth since the late 1990s and early 2000s include demographic shifts, relative growth in the service sector, slowing gains in education and gender equality, a slower pace of trade integration and innovation,11 and a slowing rate of technological diffusion (the speed at which technological innovations spread within and across economies).12 These longer-term factors have been exacerbated by the decline in investment since the 2008 world financial and economic crisis, and more recently the increase in global trade tensions and policy uncertainty. Although average labour productivity continues to grow significantly faster than the growth in GDP, most have also experienced sharper slowdowns compared to the decade before the 2008 world financial and economic crisis. This has mainly been due to a sharp downturn in total factor productivity growth, suggesting less dynamic economic transformation processes and slowing gains from trade integration. Aggregate figures mask stark differences among the various regions; notably, as illustrated in figure 1, there is a large gap between East Asia and South Asia and the other developing regions. Weak investment and slow productivity growth in Western Europe, Latin America and the Caribbean, and sub-Saharan Africa do not bode well for medium-term economic development prospects. Without strong structural policy measures to boost productivity, including large-scale infrastructure investment, improvements to the quality of education and promotion of innovation capacity, rapid progress towards the SDGs will remain elusive in many countries.
Box 1.3 Slow productivity growth in times of rapid technological advances: the productivity paradox

High expectations for the potential of digital technologies contrast sharply with the downward trend in productivity growth in developed economies over the past few decades. Neither the digital revolution that began in the 1960s nor the more recent advancements, including progress in artificial intelligence and machine learning, have fundamentally changed this trend. This apparent disconnect between rapid technological advancements and slowing productivity growth is known as the “productivity paradox.”

Many potential explanations, which are not mutually exclusive, have been put forward: (i) output, and therefore productivity, may be underestimated in national statistics; (ii) technological progress and its diffusion may be slower than expected; and (iii) increasing market concentration due to the nature of the digital economy has weakened investment and, therefore, productivity. In addition, spending patterns and employment have also been moving away from tangible goods to services (childcare, health care, education), where productivity growth tends to be slower.

National accounts may underestimate output for two main reasons. First, many new technology firms provide “free goods”—such as free navigation systems or social media networks—and “better goods”—such as better phones, media and communications services, and software. Without prices that reflect the value of these “free” and “better” goods, national accounts will continuously underestimate their contribution to economic output. Second, national accounts may severely underestimate investments, as the capital stock is increasingly shifting towards intangible assets—such as patents, branding and managerial knowledge, which are much harder to quantify than tangible assets. Nonetheless, these measurement problems are not new and do not seem to have become significantly larger over time. They are thus unlikely to account for a large part of the observed productivity slowdown.25

Regarding the nature and speed of technological progress and its diffusion, some recent studies have raised doubts about whether the current wave of innovations will have the same economy-wide effects as technological breakthroughs of the past. Some argue that the age of great invention may be essentially over, and the pace of technological progress will likely continue to slow.26 Others stress that new ideas are simply harder to find and that an ever-increasing number of researchers are required to maintain a given rate of growth in productivity.27

As discussed in chapter II, increasing market power may have also contributed to the observed productivity slowdown by reducing competition and, with it, the need to innovate and innovate. Where this is due to the “winner take most” nature of the digital economy, technical progress would be self-defeating, as potential productivity gains would be undermined by its effects on market concentration.28 However, others argue that the rise in market power is mainly due to higher entry barriers in many sectors as a result of mergers and acquires, lobbying, and regulatory capture.29

Other economic and structural factors have also contributed to current productivity headwinds, as discussed in chapter II. While no single narrative can provide a full explanation, a better understanding of the productivity puzzle in different country contexts can help improve policies to support future productivity growth, as a key contributor to sustainable development.

Source: UN DESA.

See for example Gustavo Adler and others, "Gone with the Headwinds: Global Productivity", IMF Staff Discussion Note 17/04 (April, 2017); Ian Goldin and others, “The Productivity Paradox: Reshaping Rapid Technological Change and Stagnating Productivity”, Oxford Martin School Programme on Technological and Economic Change (April, 2018).30


3.2 Impact of technological changes on wages and profit shares

The documented slowdown in average labour productivity growth—particularly visible in developed economies—has hurt workers by limiting the potential for real wage growth. This trend has often been accompanied by two other developments: (i) a decline in the labour share of income, reflected in a growing gap between labour productivity growth and real average wage growth; and (ii) rising wage inequality, reflected in a growing gap between real average wage growth and real median wage growth.31

While a decrease in the labour share has been documented for a majority of countries since the early 1980s,32 trends in wage inequality vary by countries and regions. Wage inequality has remained significantly in most developed countries over the past decades, with the bulk of the increase occurring in the 1980s and 1990s, driven mainly by a widening gap between top and median wage earners. Among developing regions, wage inequality has risen in many East Asian countries, while Latin America and the Caribbean and parts of Africa have experienced some decline in wage inequality in recent decades. Although not as prominent in developing countries, there is also a risk of future job losses in job polarization, owing to automation and digital technologies (see chapter III). Up to now, technological progress has been identified as an important driver of the growing gap between productivity and median wages. In developed economies, a technology-driven decline in the price of investment goods has induced firms to substitute capital for labour, thus lowering the labour share.33

Technological change has also contributed to the rise in wage inequality, as it is a complementary input to the work of highly skilled workers but a substitute to that of low- or medium-skilled workers. The latter may be made redundant or receive relatively lower wages. However, other factors have also played an important role—from increasing trade integration and expansion of global value chains, which has particularly hurt some lower-skilled workers in developed countries, to issues in the bargaining position of workers, owing to declining labour union membership and a shift towards more non-standard employment.

3.3 Gender equity

Wage inequality also continues to be an important aspect of gender inequality. Globally, the gender gap—which measures the percentage difference in pay between men and women—is estimated at about 20 per cent, with important differences across country groups.34 In developed countries, the gap is generally more pronounced at the upper end of the income distribution, as effective minimum wage policies reduce the gap at the lower end. In developing countries where a large share of female employment is in the informal sector, the gap is larger at the bottom. These differences in pay for the same work are further exacerbated by opportunity gaps, with women often encountering challenges to move into new, more secure roles. As highlighted by several recent reports, the world is not on track to achieve the gender goals of the Addis Ababa Action Agenda and the 2030 Agenda for Sustainable Development, and overall progress in reducing gender gaps has been slowing.35 While women have been catching up in basic capabilities—through access to education, voting rights, and the removal of legal barriers—progress has been much slower when it comes to more enhanced capabilities that involve greater power and responsibility as well as political and economic leadership.36 Women account for about 60 per cent of contributing family workers worldwide (generally not receiving monetary compensation). COVID-19 may further impact gender equity—for example, through mass school closures that lead to additional childcare work, and other unpaid care work that is still predominantly carried out by women.37 Women make up only a very small part of the highest-paying jobs,38 and only about 18 per cent of firms worldwide are led by women.39 Eliminating gender inequalities requires a wide range of policy measures, in both developed and developing countries. In many countries, there is still room for further legal reforms, as well as increased transparency, financial incentives (e.g., linked to cash transfer programmes) and programmes aimed at changing women’s and men’s attitudes.40 Trade unions, together with Governments, business, and employers’ organizations can take a number of actions to tackle gender pay gaps—such as mainstreaming the principle of equal remuneration, awareness-raising, and targeted action, in addition to increased representation of women in decision-making bodies.41

4. Policies for sustainable development

Policymakers need to mitigate the short-term risks of COVID-19, without losing sight of medium- and long-term structural issues. This will require
an immediate, concerted, global response to the crisis (see box II.2), along with a balanced policy mix for the medium term that draws on the full toolkit of economic policies.

Short-term actions also affect medium-term outcomes, so it is important that any crisis response take into account longer-term impacts and be aligned with sustainable development. Task Force members have called for fiscal policy to play a more proactive role in supporting demand, particularly in countries where fiscal space exists. Macropolicy measures will also be important, especially in countries with high financial vulnerabilities. Capital flow management can help countries with larger balance sheet mismatches mitigate the impact of capital flow volatility (see chapter II.2). In addition, strengthened social protection systems, along with fiscal tightening, will be important, especially in countries with high financial vulnerabilities. Sustainable development requires prioritizing public investment in sustainable and resilient infrastructure, enhancing redistributive policies, and strengthening social welfare systems. Public investment, along with incentives for private investment, will also be needed to help counteract the fall in investment due to COVID-19. These should be aligned with sustainable development.

Integrated national financing frameworks can help national policy planning by supporting resource mobilization and allocation within the context of an enabling international environment. Rapid technological innovation creates new opportunities for both domestic and international finance to support the achievement of the SDGs. Public policies can contribute to harnessing these opportunities, while mitigating risks, as discussed in chapter II.

Figure I.11
Fiscal policy stances
(Number of countries)

<table>
<thead>
<tr>
<th>Year</th>
<th>Large easing</th>
<th>Small easing</th>
<th>Small tightening</th>
<th>Large tightening</th>
</tr>
</thead>
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<tr>
<td>2009</td>
<td>80</td>
<td>70</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>2010</td>
<td>70</td>
<td>60</td>
<td>50</td>
<td>40</td>
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<tr>
<td>2011</td>
<td>60</td>
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<tr>
<td>2012</td>
<td>50</td>
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<tr>
<td>2013</td>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
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<tr>
<td>2014</td>
<td>30</td>
<td>20</td>
<td>10</td>
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<tr>
<td>2015</td>
<td>20</td>
<td>10</td>
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<td>2016</td>
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<td>2017</td>
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<td>2018</td>
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<tr>
<td>2019</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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</tbody>
</table>

Source: IMF, World Economic Outlook Database October 2019.
Note: Small easing/tightening is defined as a change in the structural fiscal balance of less than 0.5 per cent of GDP. Large easing/tightening is greater than 0.5 per cent of GDP.

Endnotes

1 World Economic Situation and Prospects 2020, p. vii. The 2.3 per cent growth in 2019 is based on at-market exchange rates. When adjusted for purchasing power parity (PPP), real GDP is estimated to have risen by 2.9 per cent. These figures are broadly in line with the estimates by other Task Force members. The Global Economic Prospects reports global growth of 2.4 per cent based on at-market exchange rates, and the “World Economic Outlook Update”, which uses PPP, reports 2.5 per cent.

1. Introduction

Digital technologies have come into much sharper focus since 2015, impacting the main areas of finance and development highlighted in the Addis Ababa Action Agenda: (i) financial markets; (ii) public finance; and (iii) development pathways (trade and investment).

Digital technologies create tremendous opportunity for achieving a more sustainable financial system that supports the Sustainable Development Goals (SDGs). The promise of digital technologies is clear: they can enable inclusion and wider access to products and services and increase efficiencies, particularly in the financial sector and in public financial management. They can also strengthen societal resilience to crises. During the COVID-19 outbreak, digital communication tools help sustain human interaction and continuity in some vital economic activities, although many developing countries do not have such capacities, putting them at a disadvantage.

But like similar transitions in previous eras, rapid technological change also causes “growing pains” and the emergence of new risks. How quickly and effectively policies and regulatory frameworks adjust will determine their contribution to sustainable development.

Currently, our institutions and policy frameworks are often ill equipped to address new risks, such as the growing dominance and market power of big tech firms across sectors and national borders. In some sectors and countries (e.g., payments in China, financial inclusion in East Africa), digital technologies are causing rapid and dramatic change; in others, impacts are much more gradual or uncertain. How frontier digital technologies will evolve over the next ten years, and how they will affect inequality, jobs, and development pathways, remains unclear.

However no country, and no financing and economic policy domain, will remain entirely unaffected. While policy solutions will always be context specific and depend on a country’s unique circumstances, all countries must get ready today to be prepared for an increasingly digital economy of tomorrow. This thematic chapter of the Financing for Sustainable Development Report 2020 presents policy options across all action areas of the Addis Agenda to harness the potential of digital technologies for the benefit of people, ensuring that gains are shared widely and risks are managed carefully, and that national actions are supported by collective global measures.

Several key recommendations emerge from the analysis in this report:

- Take a strategic approach to digital finance to provide a common frame of reference for all actors. This can take different forms—as part of a science, technology and innovation (STI) strategy or road map, a dedicated digital economy strategy, or explicit integration of digital technologies in the broader planning process (e.g., embedded in a country’s integrated national financing framework);
- Put basic building blocks in place today to participate in the digital economy, including (i) prerequisite infrastructure; (ii) digital skills; and (iii) updated enabling regulatory and policy environments;
- Revisit policy frameworks and the regulatory architecture to respond to the cross-cutting and wide-ranging effects of digital technologies on financing. Silo-style regulation will not be viable when digital technologies, information and communications technology (ICT), data, finance, and other sectors interact in myriad ways;
- Maintain a level playing field to ensure that the entry of players that harness the power of big data leads to innovation and diversification rather than market domination (e.g., big tech in the financial sector). Digital technologies should benefit people not just as consumers, but also in their role as producers and workers;
- Identify labour-enhancing development pathways to pursue structural transformation while avoiding to incentivize the adoption of labour replacing digital
2. Impact of new digital technologies on economies and societies

2.1 Which opportunities and challenges do digital technologies create for sustainable development?

Digital technologies can be a key lever for achieving the 2030 Agenda for Sustainable Development and leaving no one behind. While ranging from technologies that have become ubiquitous, such as mobile phones, to more recently developed frontier technologies (an almost costless flow of unprecedented amounts of data, which lowers transaction costs and can help overcome inefficiencies linked to information failure and thereby increases their impact on financial and product markets. This third section puts forward financial policy and institutional responses across the action areas of the Addis Agenda to achieve the SDGs. This section examines the basic building blocks of a digital economy, and the three highlighted areas of finance and development: financial markets, public finance and development pathways.

### Box II.1 What are the key digital technologies?

#### Technology innovation has been the main driver of long-term growth and prosperity over the last 200 years. Transformative general-purpose technologies, such as electricity or the internal combustion engine, have fueled global growth of gross domestic product. Each of these technologies spawned a wealth of innovations that, once economies and societies had fully adjusted, lifted living standards for the vast majority.

Digital technologies, which build on the storage and processing of information represented in bits, were first developed after the Second World War. With the rise of the Internet in the 1990s, which enabled computer-to-computer communication at low cost, that multiple markets and sectors were rapidly mobilized through the Internet. Cloud computing minimizes fixed costs for hardware and other complementary investments. Companies can rapidly deploy cloud-based applications at a low cost, without having to maintain servers or data centers. Cloud computing is a key component for startups, which do not need to invest in IT infrastructure or the costs of maintaining hardware and software. They can use cloud services to scale up quickly and focus on their core business.

- **Cold computing refers to shared pools of hardware composed of computer networks, servers, data storage and applications software that can be rapidly mobilized through the Internet. Cold computing minimizes fixed costs for hardware and other complementary investments. Companies using cloud services by third-party providers such as Amazon, Google, Microsoft, IBM, Alibaba and others are billed according to storage space and computer run time. They do not have to shoulder the full costs of acquiring, setting up, and operating hardware and software.

- **The diffusion of smartphones and other internet-connected devices has facilitated aggregation of Big Data sets that underlie the implementation of digital technologies. With the advent of cloud storage, very large data sets can be conveniently stored, accessed and analyzed on a massive scale. Superfast computers can be used to discern patterns and predict trends, which can aid decision-making in areas ranging from finance to environmental management.

- **AI:** Artificial intelligence (AI), which includes machine learning and deep learning, is at the leading edge of digital technology. A new crop of algorithms and the availability of much greater computing power is enabling machines to learn from the examples and experience captured in big data. For example, a deep learning algorithm for a self-driving car must recognize vehicles, pedestrians and cyclists, in all weather conditions. With the help of advances in machine learning, new algorithms can combine the image of a vehicle with the patterns trained, the network can identify any vehicle with a high degree of probability. The utility of neural networks extends to bio-imaging, credit analysis and other areas.

- **5G networks:** greater interconnection and improved edge computing devices, the Internet of Things (IoT) and the Internet of Manufacturing Things (IoMT) is likely to flourish. AI-enabled computers—the size of a credit card are already installed in vehicles, in machinery and infrastructures to make them more resilient to unexpected situations, conditions, problems and triggers a response. IoT-connected devices that allow vehicles and other assets to communicate with each other (e.g., a truck communicating with a semitrailer) can help improve road safety and traffic efficiency.

- **Distributed ledger technology (DLT):** a database technology that allows the creation, storage and secure transfer of information. Often referred to as blockchain, this technology stores records of information across distributed computers. DLT can be public (permissionless), in which case all participants have the exact same role, or private (permissioned), wherein some participants have specific rights, such as the ability to accept new participants or audit the ledger.

Concerns about the digital economy are great around the world. Estimates of future job losses due to automation and AI vary widely, ranging from a low of 1 to 10 per cent to almost half of all existing jobs. So far, the widespread introduction of digital technologies has not led to a rise in unemployment. There is, however, evidence that digital technologies have contributed to greater wage inequality in developed countries, as routine and manual jobs have disappeared, with those affected by job losses forced to accept lower-skilled and lower-paying jobs (e.g., in services industries). While most analyses of automation focus on developed countries, developing countries are also affected. Developing countries’ comparatively lower advantage of low-cost labour may erode. Automation could reduce the potential of the manufacturing sector and (some services) to absorb the large number of workers, including youth, that enter the labour force each year. So far, evidence of adverse effects of automation in developing countries is limited, but this may change over time. This raises the question whether traditional development pathways that focus on labour-intensive economic activity related to digital technologies is increasingly concentrated in a few urban areas with good infrastructure and, especially, access to a large pool of highly skilled workers. This contributes to a self-reinforcing mechanism that increases the concentration of opportunity, income and wealth.

Geographic concentration of value creation in the digital economy also extends beyond borders: the two largest economies alone, the United States and China, account for 97 per cent of market capitalization of platforms valued at more than $1 billion globally (72 and 25 per cent, respectively).
Digital technologies impact all sectors of the economy. In line with other recent major United Nations reports, this chapter differentiates between the following:

- **The core digital sector**, responsible for developing and providing key digital technologies (for example, cloud computing and artificial intelligence);
- **The digital economy**, or that part of economic output deriving solely or primarily from digital technologies with a business model based on digital goods or services, which includes a broader range of activities that create economic value through the application of these technologies (for example, digital platforms and digital services); and
- **The digitalized economy**, which describes wider structural implications of digitalization for the economy as a whole.  

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- The digital economy, or that part of economic output derived solely or primarily from digital technologies with a business model based on digital goods or services, which includes a broader range of activities that create economic value through the application of these technologies (for example, digital platforms and digital services); and
- The digitalized economy, which describes wider structural implications of digitalization for the economy as a whole.  

Digitalization holds the prospect of dematerialization of production, and thus of more sustainable growth patterns. This is because more digital technologies, and especially new networked and artificial intelligence (AI) applications, are rapidly emerging as important drivers of change in energy systems and for energy demand. Internet-connected digital technologies and “smarter” energy systems (e.g., smart heating controls) will play an important role in transitioning to a more sustainable and energy efficient economic system. Yet, energy savings may be concentrated, or even outweighed by the high energy use of many digital innovations. For example:

- The energy footprint of all smart phones per average year of use was 30 per cent larger than that of passenger cars in 2015, and this gap is expected to continue to grow in line with more rapidly increasing numbers of smart phones;  
- Online video streaming is on the same order of magnitude as air transport in terms of energy use and CO₂ emissions (1.0 and 2.5 per cent of global CO₂ emissions, respectively). Video streaming on mobile phones is vastly more energy consuming, with 5G expected to further increase overall power consumption;  
- Algorithms rely on vast amounts of data that are stored in data centers. Bottom-up estimates for data centers’ energy use in 2018 range from a five-fold increase (from 200 to 1,000 TWh) to a fourteen-fold increase to roughly 4,950 TWh.

Traditional government energy policies, such as electricity market reform and price incentive schemes, are needed to support the development of new services and devices that are energy-efficient or energy-saving. Government-backed, long-term research and development on new materials, devices and new computing architectures including quantum computing can further help to reduce power consumption of digital technologies and AI systems.  

Before analysing financing policy and institutional responses that can help ensure that digital technologies contribute to sustainable finance and achieving the SDGs (Section 3), it is first necessary to understand the unique properties that characterize digital technologies.

### 2.2 What are the economic properties of digital technologies?

Digital technologies have dramatically reduced the costs of storing, processing and transmitting data. As a result, it has made unprecedented amounts of economically relevant information available to economic agents, such as digital data collected from the footprints of personal, social and business activities on mobile phones, social media and the Internet (see also box II.4 on the data economy).

Analogous to previous periods of technological change, digital technologies impact economic activity in two broad areas:

- They facilitate a more effective exchange of flow of information, goods and services. Companies have access to relevant economic and financial information, can more easily reach customers, coordinate suppliers, and organize their operations. This is similar in impact to the contributions made by railways, shipping containers, telegrams and similar innovations in the past.  
- They increase efficiency and lower the cost in the production of goods and services. Digitalization allows companies to save on raw materials, energy, storage space, time and labour. Information and communications technology, robots and other digital technologies play the same role that the spinning jenny or the steam engine played in previous industrial revolutions.

Digital technologies and the environment

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Digital data has become an increasingly important input for the production of goods and financial and other services. Companies have learned to harness and extract value from it, from vast amounts of data and turn it into assets of significant value.

The data value chain begins with data collected from individuals and connected devices in the Internet of Things. Aggregators and custodians store and organize the data, making it accessible and marketable. Algorithms analyze and extract useful information. Data publishers then translate the results into insights for their clients. Data-giants like Amazon leverage the entire data value chain. They capture data from both consumers and their production chain, organize and analyze the data, and extract insights.

Figure 8.4.1 The data value chain

Source: UN DESA elaboration based on Light and others, 2016.

The data economy is growing in size; it represents 1.0, 0.8, and 0.5 per cent of gross domestic product (GDP) of the United States of America, Japan and the European Union, respectively. It also generates much larger indirect and secondary economic effects. In the European Union, for example, the total impact of the data market on the region’s economy in 2017 was €336 billion, or 2.4 per cent of total GDP. This is because the data increases the value of upstream industries that can monetize it.

How value is generated in the data economy has important distributional, privacy, ethical and public policy implications. Data-driven industries are highly concentrated. Access to detailed personal data increasingly allows companies to charge each customer different prices. The collection and use of personal data, designed to influence behavior, also carries with it a potential for abuse. With a few large firms dictating the terms and conditions of data availability and use (as well as capturing the profits), the data economy can further exacerbate income and wealth inequality, and even impact the security and stability of political systems.

The data value chain

- Capture data
- Store and organize
- Analyze
- Report
- Expanding into new stages

Box II.4
The data economy

Digitalization technologies can lower entry barriers and present opportunities for firms, including those in developing countries, to access larger markets. The Internet, cloud-based computing, and open software environments reduce the need for major investments in software and services. Emerging digital technologies such as AI are now being rented by firms in both developed and developing countries by the hour through cloud-based computing platforms. In many sectors, the main non-labour costs of a start-up are a laptop computer and an internet connection, together with cloud-based computing services and/or a 3D printer.9 Digital technologies’ impact reaches beyond the core digital economy: by reducing expert costs for micro, small and medium-sized enterprises (MSMEs) in developing countries, the Internet has expanded their access to global markets.20 Cheaper production and easier search and matching of actors mean that geographic boundaries are becoming less relevant. Third, online platforms have emerged as important new forms of intermediation. Platform-based businesses have a major advantage in the data-driven economy. They can record and extract all data related to online actions and interactions among their users. This data can then be monetized, for example, by selling targeted online advertising, operating e-commerce platforms, renting out cloud services, or allowing consumers and firms to share their underutilized assets (the sharing economy).21 Thanks to network effects, a product or service gains additional value as more people use it, online platforms can grow and gain market share very quickly.

More of the world’s top reinsurance companies now use platform-based business models. Google has about 90 per cent of the global market for Internet searches. Facebook accounts for two thirds of the global social media market. Amazon boasts an almost 40 per cent share of the world’s online retail activity. In China, Alibaba has been estimated to have close to 60 per cent of the Chinese e-commerce market. What is known is that more than one billion active users and, together with AliPay (Alibaba), its payment solution has captured virtually the entire Chinese market for digital payments. Such platforms can disintermediate distributors and retail centers, enhancing market efficiencies. At the same time, global digital platforms have taken steps to consolidate their competitive positions, which may end up slowing down economic dynamics and precluding developing-country platforms from reaching competitive scale.

Fourth, market concentration is growing across industries and countries, despite lower entry barriers. “Winner take most” mechanisms have become more common even beyond the core digital economy, and digital technologies are partly responsible. A small number of so-called superstar firms have increased their productivity (and profits), as increasingly complex technologies require enormous sophisticated complementary investments and highly specialized skills in the workforce, while the majority of firms, even in the same industry, have lagged behind.

3. Sustainable financing and development policies for a digital era

Changing business models and market structures demand a comprehensive rethink of financing and development policy and regulatory approaches. Digital technologies

- Affected all parts of society and economy, hence any policy responses need to be mindful of these impacts across traditional industry boundaries, policy domains and on various stakeholders;
- Are complex and highly technical, so that no one actor is likely to have sufficient knowledge and information to make informed decisions;
- Are evolving rapidly, so that experiences with new technologies are often limited and uncertainty over future developments is high.

For these reasons, countries should take a strategic, whole-of-society approach, which engages all relevant stakeholders, and can solicit relevant information, raise awareness and provide a common frame of reference for all actors.18 This is reflected in the Addis Agenda, where Member States commit to “dToF, science, technology and innovation strategies as key elements of our national sustainable development strategies.”

In practice, these strategic responses can take different forms—as part of an STI strategy or STI roadmap, a dedicated digital economy strategy, or through the explicit integration of digital technologies in broader planning processes (e.g., embedded in a country’s integrated national financing framework).

The financial sector: How is the financial system changing in response to digitalization? How can it be better equipped to drive the development of digital technologies and serve the needs of digitalization? What are the challenges, such as to financial stability, and what are the policy options? (Addis Agenda action area B, on private business and finance; C on debt and debt sustainability; and F on systemic issues)

Public finance: How can policymakers use digital technologies to enhance public finance management efficiency and combat illicit financial flows, while adapting tax and expenditure policies to a digitizing economy? (Addis Agenda action area A)

Development pathways: How is the developmental model changing? What investment, trade and technology policy options exist to find development pathways in the context of digitalization? (Addis Agenda action area A, on private business and finance; C on international development cooperation, D on trade, and G on science, technology, innovation and capacity building).

3.1 Becoming digital-ready

Closing digital gaps requires investments in physical infrastructure, affordable access, digital skills and data.

Digital infrastructure

Affordable connectivity remains a challenge, particularly in least developed countries and remote regions. Digital infrastructure is one of the basic preconditions for affordable access to the Internet. It ranges from the point where the Internet enters a country, such as submarine cable landing stations or satellite dishes (the first mile), to national backbones infrastructure, such as a national backbone that interconnects regions (the middle mile), to local access networks that connect users (the last mile), as well as non-visible components such as data and centres, spectrum, and others (the “invisible mile”).

Developing such broadband networks requires significant investment. Both public and private investments are usually needed to create and maintain high-quality ICT infrastructure. Markets are most likely to deliver this infrastructure closest to the end-user, particularly in cities, where ICT infrastructure investments often have a positive financial return. Public sector involvement is often necessary in the first and middle miles. Public involvement will also likely be necessary to close most of the remaining gaps in broadband network infrastructure, which tend to be in

...
Adapt financing policies and institutions

- Financial market regulation
- Public financial management and taxation
- The ‘real economy’: investment, trade, technology and related policies

Source: UN ESHA

Use digital technologies for achieving the SDGs:

- for inclusive, stable and long-term oriented financial systems
- for enabling sustainable growth paths
- for achieving equitable outcomes

Digital skills: education and training policies

Lack of digital skills is a major obstacle to greater access to and use of digital technologies. This skills gap, along with affordability, is often the primary reason individuals and households as well as firms do not use the Internet. In a survey of more than 2000 MMS in 111 countries, firms noted lack of technical skills as the second most important challenge for e-commerce adoption.29

Curricula in schools and universities can be adapted to include digital literacy, including basic digital skills as compulsory elements, along with more advanced ICT-related skills (e.g., coding). Digital skills education for women and girls needs to be accelerated rapidly to establish more women as digital creators.

Digital technologies in turn can contribute to more effective learning outcomes. Ed tech, which applies ICT to improve education (e.g., through computer-assisted learning or online learning), can also strengthen students’ digital skills. Blended programmes and computer-assisted learning, such as games, can be particularly effective in this context.30 While digital technologies are allowing more children access to learning, especially in remote regions and during humanitarian crises, many miss out. About 28 per cent of youth worldwide—around 346 million individuals—and 60 per cent of African youth are not online, compared with just 4 per cent in Europe.31

Digital skills training should also be part of professional development programmes and technical and vocational training. Effective technical and vocational programmes can play an essential role in strengthening job-specific digital skills. Experience suggests that targeted programmes—those focusing on women or long-term unemployed, for example—are likely to yield greater results, and that the involvement of businesses allows for programmes that are better aligned with firms’ needs.32 Digital skills might be most effectively acquired through on-the-job training. Governments could also incentivize this in different ways, such as through tax rebates or co-financing schemes.33

Countries are experimenting with new models to support ICT skills development. For instance, Rwanda is employing young Rwandans as “digital ambassadors” who are trained in ICT and soft skills and then provide training on the Internet and other ICT technologies throughout the country, including in rural communities. Bangladesh has set up thousands of Union Information Service Centres, which offer access to the Internet along with training.

Data policies

National data policies are necessary to protecting the essential rights of individuals and communities and unlocking the economic opportunities that lie in collecting, sharing and analysing individual data. Effective legislation that addresses data privacy and security for consumers and firms is not yet in place in many countries. A recent development in this area is the General Data Protection Regulation (GDPR) in the European Union (EU), which defines standard data protection laws for all member countries and lays down the rules relating to the processing of personal data by an individual, company or organization, including the transfer of personal data outside the EU. The GDPR makes it easier for EU citizens to understand how their data is being used and clarifies what companies that process personal data must do to safeguard these rights. Several countries outside the EU have since introduced measures aligned with the EU approach, and several major ICT corporations are applying a standardized approach globally.34 Similarly, the California Consumer Privacy Act specifies new consumer rights relating to the access to, deletion and sharing of personal information collected by businesses.

Privacy and security demands have to be balanced with the objective of creating value from data and supporting innovation. Economic value stems from pooling and analysing large amounts of individual data. Controlling access to large data sets grants individual firms a competitive advantage that could entail a barrier to market entry for competitors and lead to market concentration. Data ownership regulations can help address these issues by defining who can access, use and delete data.35 To share economic value more widely, several alternative ownership mechanisms are being considered. These range from personal data markets, where users are given ownership rights over their own data, to collective data ownership, where data is treated as a public resource.36 There could be several different models of collective ownership. In an extreme case, data could be owned by public authorities. Alternatively, public authorities could regulate how data is accessed, used and deleted without assuming ownership. “Data subject rights” grant individuals a range of specific rights, including the right to access, the restriction of processing, and data portability. For example, the EU Payment Services Directive allows customers to transfer data to third-party providers to facilitate a level playing field for market contestants.

Digital identity

Digital identity systems, which allow people to be authenticated through a digital channel, have been introduced in a number of countries. They can significantly increase access to financial services, public services and benefits. This can also benefit financial inclusion and other SDGs areas, and thus help unlock key benefits of digital technologies.37 Such systems rely on the basic infrastructure discussed above to be in place. Risks related to data privacy, credit ratings or exclusion of those that do not have digital identity, need to be addressed.

3.2 Financial markets, macro and systemic issues

Financial markets play a central role in allocating resources in the economy and fueling economic growth. Yet, at the same time, the history of financial markets has been marked by volatility, boom and bust cycles, and financial crises, often impacting other sectors, jobs and livelihoods. People and firms can lack access to financial services, including both deposits and credit, and thus be excluded from full participation in the economic growth process.

Many of these problems are driven by information failure—either missing information or unequal access to information (asymmetric information). For example, there is a clear relationship between market herding and uncertainty.38 Because digital technologies translate data into unprecedented amounts of financially relevant information, they have the potential to improve the efficiency of markets and facilitate access for previously excluded or underserved populations. Yet, digital technologies also create new challenges. The effect of digital technologies on financial stability, integrity and equity are highly uncertain.
The financial sector fulfills several functions that help households, businesses and Governments carry out economic activities. These functions can broadly be divided into three categories: (i) payments; (ii) intermediation (i.e., savings and borrowing); and (iii) risk management and advisory services.

Digital technologies are transforming all three areas (Table II.1). Their rapid spread has accelerated financial innovation and driven the emergence of new actors and solutions.

(i) Payments

Functioning national payment systems and the ability to send and receive payments across borders are the backbone of the financial system. Over the past ten years, mobile money has become an integral part of the adult population of Kenya, Rwanda, Uganda and the United Republic of Tanzania are active mobile money users. Place-to-peer (P2P) services facilitate financial transactions between two people through the use of digital money. Cross-border mobile money has led to a notable decline in remittance costs across countries (see chapter II.B).

Box II.6

Trade-offs between increased efficiencies and heightened risks and equity concerns also occur in risk management. Algorithmic trading—that is, automated trading instructions that facilitate large and frequent trading transactions—has been around since the 1970s. Thanks to big data, AI and machine learning, algorithmic trading tools have now expanded into investment and portfolio management services, and have become accessible to customers. For example, e-trading platforms and robo-funds employ portfolio management algorithms that undertake investments guided by the analysis of big data. The ability to more precisely assess financial risk enables insurance companies to offer more, on-demand, pay-per-usage and parametric insurance solutions. Insights from big data can help customers to reduce premium risks or avoid insuring against risk altogether by facilitating risk prevention. However, the increasing reliance on non-traditional data sources for screening or monitoring potential risks can also lead to highly targeted and individualistic pricing models. If taken to their extreme, these could exclude high-risk groups from insurance markets and undermine the foundational principles of risk pooling (see chapter III.B). The ability to more precisely assess financial risk enables insurance companies to offer more, on-demand, pay-per-usage and parametric insurance solutions. Insights from big data can help customers to reduce premium risks or avoid insuring against risk altogether by facilitating risk prevention. However, the increasing reliance on non-traditional data sources for screening or monitoring potential risks can also lead to highly targeted and individualistic pricing models. If taken to their extreme, these could exclude high-risk groups from insurance markets and undermine the foundational principles of risk pooling (see chapter III.B).
What policies are needed to respond to new and emerging technologies in financial markets?

Because technology can change the very structure of financial markets, it calls for a shift to new regulatory frameworks. Policymakers have the opportunity to shape the contours of these new digital markets, which could potentially damage financial stability. Policymakers can seize the moment to adopt new policies that foster innovation and enhance competition. This section explores national policy actions and international cooperation in areas such as taxation, competition policy and financial stability.

Digital technologies give financial institutions access to unprecedented amounts of information on consumers. This requires safeguards to protect consumer data privacy and security (see section on basic building blocks above). Higher levels of data can enhance tax revenue and reduce non-compliance. However, they also raise new challenges for policymakers, who need to balance the need to gather new information with the risk of creating new vulnerabilities. Moreover, as this information is collected and used by firms and governments, there is a risk of exacerbating social inequalities and increasing the use of third-party data.

3.3 Public finance

Digital technologies are reshaping how Governments design and implement their tax, spending and fiscal policies. It has direct impacts on public financial management and the tax base. Innovations in tax administration make it easier to track and enforce compliance. However, they also raise new challenges for policymakers, who need to balance the need to gather new information with the risk of creating new vulnerabilities.

Digital technologies in tax administration

Digital technologies can support authorities in managing public resources. As discussed below, they can

- Foster accessibility to timely and precise information on the state of the economy.
- Foster public financial management and service delivery; and
- Improve transparency and accountability.

To do so, the building blocks discussed above need to be in place across the public sector: appropriate ICT infrastructure, adequate organizational capacity and skilled staff. Not all technologies are equally suitable for use in all countries, and existing IT infrastructure and institutional capabilities may limit the speed at which Governments can transform their public financial management systems through digitization. Indeed, country experiences with previous IT-based reform efforts, such as Financial Management Information Systems, offer cautionary lessons, and suggest that capabilities to make major transformations are limited.

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In response to the increasing digitalization of the global economy, policy-makers in developing countries have to adjust their investment, trade, technology, data and competition policies to enable further sustainable development. Since the 1970s, global production processes in the manufacturing sector are increasingly shaped by global value chains, which open opportunities for developing countries to participate in the global economy, attract direct investment, and access global markets and more advanced technologies. A number of developing countries were able to take these opportunities to achieve rapid and sustained growth and structural transformation, by building domestic linkages and gradually upgrading to more technology-intensive tasks. Entry in these manufacturing value chains thus provided an “incubator” to economic progress. This is because manufacturing combines three properties:

(i) Its products are tradable, allowing developing countries to sell beyond small domestic markets;

(ii) It combines low-skilled labour with advanced machinery and capital, facilitating rapid productivity growth;

(iii) It employs labour with limited skills for the modern economy, which with limited skills for the modern economy, which typically served as entry points for developing countries, such as textiles, apparel and footwear.

Box II.7

Adoption of advanced digital production technologies: a concentrated global landscape

Digital production technologies (artificial intelligence, big data analytics, cloud computing, Internet of Things (IoT), advanced robotics and other digital technologies applied in manufacturing activities) remain very lowly concentrated across countries, sectors and firms. While some emerging economies are entering into the ongoing race, large parts of the world remain marginalized from the productive dynamics of the new digital era. Moreover, even within economies actively engaging with new technologies, the share of firms using them remains very limited.

This finding is consistent with the experience of previous technological revolutions, which have divided the world into leading and following economies, depending on countries’ involvement in creating and using emerging technologies. Based on developing countries’ exposure to emerging production technologies—industrial robots, CAD-CAM, additive manufacturing and machine learning—four broad categories of economies emerge:

(i) Frontrunners: This group includes the top 10 economies in terms of innovation and use. They account for 91 percent of all global patent applications and almost 70 percent of exports of all capital goods associated with these technologies, and include China, Japan, Germany, the United States, the United Kingdom and a few other economies.

(ii) Followers: A second group of 40 economies is actively engaging with new technologies, but to a much lesser extent than frontrunners. They include countries active in the production and export of digital technologies—including emerging economies such as Brazil or India—and those specialized in its use (mainly importers), composed largely of emerging economies such as Mexico, Thailand and Turkey.

(iii) Latecomers: Included here are 29 economies with low patent or trade activity involving Advanced Digital Production Technologies (ADP). While they have marginally engaged with new technologies, it is not clear whether they will succeed in becoming followers;

(iv) Laggers: These are economies with no or very low engagement with ADP technologies.

Box II.8

Promoting innovation and learning in the digital economy

The public sector can also play a more proactive role by taking a variety of demand-side measures to support innovation. Because technology has a large tacit component (i.e., knowledge that is not codifiable), it is acquired in large part through learning by doing. Without public support, the risks and costs associated with learning and adopting new technologies can outweigh the benefits of competing with established firms from leading economies. Demand-side measures include the following:

- Strategic public procurement can be used to support the growth of national digital-capability production. For example, the e-Sri Lanka initiative included provisions to support the participation of domestic firms in public ICT tenders. Local content promotion was combined with capacity support and awareness raising and has increased local SME participation in winning bids.
- Publicly funded research often plays a catalytic role in supporting innovation. Building maximum levels of technological and production capabilities typically requires intensive research and development efforts to build a solid technological base. It also requires access to the global knowledge base. The public research system can contribute to strengthening firms’ capabilities to absorb, use, and eventually develop digital technologies. For example, public funding can be used to encourage project proposals for advanced digital production technologies in Colombia and Turkey.76 Governments can also encourage partnerships between existing academic organisations and firms, by creating spaces for co-creation and applied research, or set up targeted research institutions that act as incubators for new businesses.77
- “Mission-oriented” interventions can provide incentives or dedicated funding for desirable technologies and outcomes.40 Many countries have initiatives to support specific digital production technology development. Gender-sensitive approaches can bring gender analysis into algorithmic and AI design. In the context of digital technologies, Governments can also try to steer research and innovation into directions that augment existing workers’ skills and capabilities, rather than labour-saving technologies that replace labour and contribute to inequity or wage polarization (box III.9).

Box III.9

A robot tax against dystopia

Historically, automatics did not lead to mass unemployment thanks to the emergence of new tasks and skills satisfying new demands. But what if this time is different? What if robots and artificial intelligence outperform humans, replacing more workers than are needed for emerging tasks?69

Robots and computer-assisted machines are not liable to pay liable taxes. Yet, formal-employer-employee relationships provide the financial bedrock for social insurance systems that also cover unemployment benefits. Rapid automation could thus provide a double shock to public finances, decreasing revenues and increasing expenditures triggered by mass job displacements. This would require novel forms of general taxation. Some have proposed a “robot tax” to raise revenues to supplement decreasing labour taxes, and to disincentive slow or non-job-displacing robots.69,78

Lawmakers could, for example, levy a fee on labour-replacing robots required to pay the statutory taxes paid by employers and employees, or disallow tax deductions for businesses that invest in human-replacing technologies. This would correct current biases in the tax code, which often subsidize capital investment, incentivizing automation where human beings would otherwise remain competitive.79 At the same time, increasing the cost of innovative activities, through additional taxes, could dampen productivity and economic growth.


Aligning international engagement with national policy objectives

Digital technologies have created new opportunities to access global markets. To make the same move to global market concentration in some core sectors of the digital economy threatens to prevent development of local digital capabilities, platforms and firms. Countries should run a coherence check on the “rules of engagement” with the global economy to assure whether they fit for purpose for this digital age. There is also significant scope to further enhance the contributions of digital cooperation and South-South cooperation in particular, to help close digital divides (box III.10). Areas of interest include:

- E-commerce is growing quickly, but many of the poorest developing countries struggle to take advantage of opportunities created. The WTO Information Technology Agreement eliminates tariffs on a number of ICT products, and WTO members do not currently impose any national regulatory restrictions on digital content, services, or electronic transmissions (see chapter III.2).81 However, at the same time, the effect these measures may have on tax revenues is not fully understood, particularly as the digital economy grows in size, and in light of challenges with digital taxation. They may also put local firms at a disadvantaged position in these areas (such as online platforms) that are characterized by strong cross-border concentration and monopolization. Therefore, multilateral rules to regulate e-commerce may be needed to ensure a level playing field; the cross-border and global dominance of global Internet platforms can pose challenges for less-developed countries, policymakers have engaged actively with global platforms to ensure that local companies have access to them. Others have taken steps to enable the growth of local platforms. For example, prohibiting market access to global ride-sharing companies allowed local providers space to develop their own businesses in Ethiopia.82

But what if this time is different? What if robots and artificial intelligence outperform humans, replacing more workers than are needed for emerging tasks?69

In the digital sector, access to technology can, in principle, be more straightforward, given that its products exist as pure applied and codified knowledge.80 Open-source software makes its source code publicly available, supporting the development of absorptive capacities. On the other hand, many companies treat their source code as trade secrets. Some recent trade and investment agreements prohibit Governments from adopting any policies that require sharing of source code, except for national security reasons.84 This includes technology transfer clauses, joint ventures and training agreements; because emerging digital technologies rely on access to large amounts of digital data, the regulation of the flow and transfer of data across borders takes on increasing importance. Digital data flows easily across national borders, enabling tighter economic links, value chains and social connections. However, such data flows also create challenges for data privacy and security, economic policy and national security. In response, some governments restrict data flows, through data localization requirements, tariffs, or bans on trading data. For example, Rwanda has adopted a Data Revolution Policy that ensures that it retains exclusive sovereign rights on its national data, notwithstanding the possibility to host sovereign data outside the country under agreed terms.86 Several recent and ongoing trade negotiations have sought to ensure free flow of data across borders by imposing constraints on national regulatory interventions in the internet and sometimes on the costs and benefits of free versus regulated border cross data flows is needed to understand how technology followers can maintain sufficient space for regulatory, regulatory interactions in the legitimate of legitimate policies, and effective competition policies to participate in the data-driven economy.87

As intangible assets become more important, so does the importance of intellectual property regimes that aim to balance the rights of the creators of knowledge with those of its users and the larger public interest. Striking this balance is becoming more difficult in the digital age, particularly because of the nature of new technologies and data as a resource, one of cross-border transactions, and because of the scale of concentration of market power of local firms in core ICT sectors. There is an ongoing debate whether (and if so, how) intellectual property systems need to adapt to answer new questions—for example, whether to adapt for intellectual property protection, or to what extent intellectual property protections could constrain national authorities in regulating AI and other algorithms with regard to their social impacts. These questions require further study and discussion.88

Therefore, multilateral rules to regulate e-commerce may be needed to ensure a level playing field; the cross-border and global dominance of global Internet platforms can pose challenges for less-developed countries, policymakers have engaged actively with global platforms to ensure that local companies have access to them. Others have taken steps to enable the growth of local platforms. For example, prohibiting market access to global ride-sharing companies allowed local providers space to develop their own businesses in Ethiopia.83

Competition policies need to adjust for a digital age. Traditional enforcement tools are not well adapted to the business realities of online platforms. Non-monetary prices for consumers, personalized pricing facilitated by algorithms and other features make it difficult to define the relevant market, establish a theory of harm, or determine the type of abuse of market power under current legal frameworks. Competition authorities need to look at market power through a different lens. Emerging issues include addressing competitive relationships and strategies across markets; entry barriers; conflicts of interest; the emergence of gatkeepers and bottlenecks; and the use and control of data and the dynamics of leveraging power. For example, merger control regimes should be referred to be able to scrutinize the acquisition of small start-ups by big technology companies. Competition authorities need to analyse impacts on innovation, potential or future competition, control over data and extensiveness of market power by incumbents.27 (see box II.8 for country examples).

Box II.8 Competition policies for a digital age

Countries have taken different steps to create competition policy tools adapted to the new business realities:

- The revised competition law in Germany includes new criteria to assess the market position of platforms, such as direct and indirect network effects; the parallel use of services from different providers and the switching costs for users; economies of scale in consuming market effects; access to data relevant for competition, and innovation-driven competitive pressure; the Government of India’s new e-commerce rules prohibit e-commerce platforms from selling products from companies in which they have an equity interest. Platforms are required to provide services, including fulfilment, logistics, warehousing, advertisement and marketing, and payments and financing to sellers at arm’s length and in a fair and non-discriminatory manner. Platforms are not permitted to mandate any seller to sell any product exclusively in their marketplaces;

- Regulation also can be used to ensure market access and level playing fields in digital markets, which may reduce the need for costly intervention by competition authorities. The European Union (EU) Payment Services Directive (PSD2) allows users to transfer data to other service providers. The EU also adapted a regulatory framework to improve fairness of online platforms ‘trading practices in June 2019.24

- Competition law enforcement and regulation for big global technology companies are particularly challenging for developing countries, which often rely relatively strongly on competition authorities with limited resources. In addition, platforms do not necessarily have physical presence in countries where they operate; but three practices affect local businesses and consumers. Regional competition rules and authorities may be an option, such as COMESA Competition Commission in Africa, which reviews mergers affecting the COMESA region. The Intergovernmental Group of Experts on Competition Law and Policy of the United Nations Conference on Trade and Development provides an international forum to exchange knowledge and experiences in the area of competition law and policy.77


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Box II.10
Development cooperation in a digital world

The adoption and utilization of digital technologies remains highly uneven across the globe. Development cooperation can help close these gaps, and international dialogue can enhance peer learning across countries in a rapidly evolving field.

Most major development cooperation providers have adopted digital strategies to promote the use of digital technologies in development projects, and to support digitalization for sustainable development in partner countries. Yet, while development cooperation actors recognize the importance of digitalization, available estimates suggest that only a small fraction of official development assistance is dedicated to it (see also chapter B.II.6). For example, only 1 per cent of project funding by multilateral development banks targeted the information and communications technology sector between 2012 and 2016.b

South–South digital cooperation and regional integration initiatives can play an important role in sharing good practices and learning from existing regulatory experiences. Areas of significant promise include:

- **Broadband ecosystem**—More advanced developing countries can support others in developing broadband infrastructure to create a level playing field and access to opportunities arising from digital services;
- **Digital payment infrastructures and e-commerce**—Regional digital payment infrastructure capacities such as the Integrated Regional Electronic Settlement System of the Southern Africa Development Community facilitate financial transactions at the regional level and support regional e-commerce. Flanked by a regional e-commerce strategy that provides uniform rules for consumer protection, intellectual property, competition, taxation and information security, this can foster the integration of regional markets;
- **Development banks and digital entrepreneurship**—National and regional development banks can play an important role in financially supporting micro, small and medium-sized enterprises to develop digital innovations and technology for use at the regional level. Intergovernmental investments in digital technologies can foster technology transfers between regions if they allow source-code sharing.

Source:
- ITU, “Donor support to the Digital Economy in Developing Countries”, UNCTAD-Technical Notes on ICT for Development No. 13 (United Nations publication, TN/UNCTAD/I.TC/2013/1, March 2013);

Endnotes


6 For example Digital Economy Report 2019.


9 See for example Digital Economy Report 2019.


19 See for example Digital Economy Report 2019.


21 For example Digital Economy Report 2019.

22 Ibid.

23 For example Digital Economy Report 2019.


29 For example Digital Economy Report 2019.


Ibid.


Dani Rodrik, “Premature deindustrialization.”


Ibid.


Ibid.

Domestic public resources have a unique role to play in financing for sustainable development. The link between revenue collection and effective expenditures for quality public goods and services forms the basis of the social contract between citizens and the state. Member States of the United Nations also recognized that significant additional domestic public resources are necessary to realize sustainable development and committed to enhancing revenue mobilization.

Since 2015, there have been improvements in tax policies and international cooperation in some significant areas, yet five years into the implementation of the agenda, positive reforms have not been fully integrated and aligned across sectors and institutions—nationally or internationally. The slow and steady progress in domestic public resource mobilization is insufficient to match the scale and ambition of the 2030 Agenda for Sustainable Development. Only about 40 per cent of developing countries clearly increased tax-to-gross domestic product (GDP) ratios between 2015 and 2018. Political will for reform and assistance for capacity-building are inadequate, while sustainable development is not yet universally prioritized in expenditure allocation and budget processes.

Many more Members States should be preparing multi-year country plans for tax policy and administration reform, to increase revenue mobilization and support public investment to achieve sustainable development. For medium-term revenue strategies to be effective, they should be country-owned, reflect development priorities, be prepared by the whole of government, and have the full backing of national political leaders. This reinforces the social contract and accountability to citizens, who can demand better service delivery alongside more effective governance.

Fiscal reform plans should also take account of existing capacities and impediments and should focus on the binding constraints to greater revenue raising, which can help countries prioritize actions to raise revenues. Fiscal systems also need sufficient resilience and flexibility so they can face unexpected circumstances, such as the rapid spread of COVID-19 in the first quarter of 2020. In such situations, revenues are likely to decline as economic activity slows, while expenditures may increase, especially health-sector spending.

Governments should invest in technology to support all parts of the fiscal system, such as tax administration, enforcement of laws against financial crimes, and budget execution. Such investment should be aligned with medium-term revenue and expenditure plans, and can be supported by international partners. There is enormous scope to use technology to strengthen public financial management and reap returns in greater revenue mobilization and more efficient spending. This includes relatively old technologies, such as digital databases for expenditure and tax administration, as well as new technologies, such as artificial intelligence and distributed ledgers.

The continued digitalization of the economy is also making tax norms agreed almost a century ago obsolete. Any new international tax norms being developed to address challenges from technology must be well-tailored for developing countries—including the least developed and smaller countries—and inclusive of developing-country voices in their formation and agreement. Countries need to be afforded sufficient additional time to determine the advisability of reforms before they are agreed and provided with technical assistance to accurately assess the medium- and long-term impact of proposed changes on their economies.

While significant progress has been made in international tax cooperation, the interests and voice of developing economies require greater priority and attention. The global community could better ensure effective inclusion in tax norm-setting processes; adaptation of tax norms and practices to the realities and needs of developing countries; and greater investment in capacity-building from development partners.
Countries without access to information, and without sufficient domestic capacity to enforce increasingly complex international tax norms, will be unable to boost revenue mobilization to finance cross-border activities.

Policy actions on illicit financial flows (IFFs) lie beyond the political horizon. To be most effective, efforts to tackle IFFs should focus on specific components. International cooperation is needed to tackle all aspects of IFFs. Especially important actions include spontaneous information-sharing and mutual legal assistance. Internationally, tax-related IFFs are being tackled with some of the international tax cooperation tools. Effective national actions for combating tax-related, corruption, and other kinds of IFFs in all countries include: more capacity to prevent and investigate suspicious transactions; more effective cross-institutional coordination in national enforcement; and more assertive implementation of national commitments made under the United Nations Convention Against Corruption.

New technologies, such as cryptocurrency, are facilitating IFFs, underscoring the importance of concerted enforcement efforts and constant vigilance of the financial system. New technology, such as artificial intelligence, can enable better identification of suspicious activity—for example, by matching tax filing data to other data sets, such as customs declarations, financial account information, or real estate transaction registers. However, technology should be only one component of a broader political strategy to tackle illicit finance.

Nationally and internationally, corruption occurs as public and non-state actors respond to the incentives and social and economic constraints that are present. Embedding new expectations and social norms, along with shifting political settlements related to accountability, transparency and integrity will require leadership from the top as well as localized, sector- and context-specific actions. Countries also need to step up implementation of prior commitments and cooperation on slates asset recovery and return. More regular and rigorous statistical information-sharing an legal assistance requested and provided, as well as the results in terms of assets returned, can be useful.

How revenues are spent is as important as the amount mobilized. Medium-term expenditure frameworks, which complement revenue frameworks, bring together a holistic picture of the fiscal system. Expenditure frameworks should be aligned to the SDGs which can be facilitated by being part of integrated national financing frameworks (INFs). Some countries have already started mapping their budgets to the Sustainable Development Goals (SDGs). Policymakers should embed gender equality and women’s economic empowerment in expenditure and strategic procurement across all sectors. Spending should be informed by national disaster risk reduction financing strategies. Similarly, environmental sustainability needs to be made a core element of domestic public investment policies if we are to meet climate goals. Multilateral-agencies provide tools for these and other areas, including capacity building. This chapter begins by reviewing trends in taxation, tax administration and tax avoidance and evasion. It then provides an update on international tax cooperation, including an analysis of proposed changes to tax norms related to the digitalization of the economy. The next section provides an examination of IFFs, before the final section explores ways to align expenditure and procurement with sustainable development.

2. Domestic resource mobilization

2.1 Taxation trends and medium-term revenue strategies

In 2018, available data shows that 53 developing countries increased tax revenues, while 46 countries registered a decline. Middle-income countries and small island developing States (SIDS) saw increases in tax revenue (measured as the median tax revenue-to-GDP ratio) to 19.3 per cent and 21.6 per cent, respectively. While development countries (SIDS) saw a slight decrease to 12.1 per cent (Figure III.A.1). The median tax revenue-to-GDP ratio of developed countries decreased slightly, largely due to personal and corporate tax reform in the United States of America that prompted a drop in tax revenue from 26.8 per cent of GDP in 2017 to 24.3 per cent in 2018. Tax revenues have reached a plateau in most developed countries, ending the trend of annual increases seen since the 2008 financial crisis.

Revenues also vary widely from country to country within a single region. While revenues in Africa fell on average across the region from 2012 to 2017, this mainly reflects the impact of the fall in commodity prices on tax revenues in commodity-dependent countries; tax revenues rose in non-commodity dependent countries over the period. The Arab region is illustrative in this regard. Total revenues (which includes taxes, royalties and other revenues) in oil producing countries fell over this period, while those of oil importers increased (Figures III.A.3 and III.A.4). In the wake of the commodity price falls, many countries in the Arab region expanded tax revenue to offset royalty declines, but this failed to compensate. Oil importers have introduced fiscal consolidation measures, although all importers have as well. In this region, additional revenue could be mobilized through tax reforms that improve progressivity and compliance and broaden the tax base.

Developing countries are more reliant on corporate income taxes than developed countries, a reliance that in middle-income countries has grown over the last two decades. Developing countries, particularly SIDS, also rely more on trade taxes, although recent increases in tariffs (see chapter III.D) may temporarily affect the tax mix in some large economies.

Figure III.A.5 Median tax revenue by type of tax, 2017 (Percentage of GDP)

Source: IMF.

<table>
<thead>
<tr>
<th>Tax type</th>
<th>Least developed countries</th>
<th>Small island developing States</th>
<th>Middle-income countries</th>
<th>Developed countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate income tax revenue</td>
<td>21.6</td>
<td>20.7</td>
<td>19.8</td>
<td>18.6</td>
</tr>
<tr>
<td>Personal income tax revenue</td>
<td>4.9</td>
<td>4.3</td>
<td>5.0</td>
<td>7.2</td>
</tr>
<tr>
<td>Trade tax revenue</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Total tax revenue</td>
<td>26.8</td>
<td>25.3</td>
<td>25.1</td>
<td>26.2</td>
</tr>
</tbody>
</table>

Source: IMF.

Developing countries have seen the tax mix become more reliant on personal income taxes in recent years. The tax mix in these countries is more reliant on personal income tax revenues than in developed countries, and may temporarily affect the tax mix in some large economies.

Tax policies and decisions on the optimal tax mix for each country will depend on national economies and social structures, as well as national political trends. But they are also influenced by and must respond to global trends, such as the impact of technological changes on wages and profit shares (see chapters I and II). In a global environment of low interest rates, countries with access to markets may find borrowing more politically expedient than undertaking incentiv measures. The political environment for changes in the tax mix also needs to be considered, as widening the tax base means some constituencies that previously were not paying (or were paying very little) income tax will now be asked to make greater contributions to domestic public resources.

Figure III.A.6 Median goods and services tax revenue, 2002–2017 (Percentage of GDP)

Source: IMF.
Medium-term revenue strategies

The 2019 Financing for Sustainable Development Report highlighted the importance of integrated government planning in raising resources and achieving the SDGs. A medium-term revenue strategy (MTRS) can be a cornerstone of effective tax reform and development policy and an important element of broader effective government planning. Such broader planning can happen through INFFs. An MTRS is a comprehensive approach to tax reform, based on revenue goals that are aligned with development needs, including social and economic equality, gender parity and inclusion, and environmental impacts. It considers revenue mobilization to support greater public investment as well as the revenue system’s impacts on economic and social development. By linking revenue collection to expenditure for quality public service delivery through political and business cycles, an MTRS can strengthen the social contract between citizen and state.

Developing a country-owned MTRS can be a mechanism for Governments to meaningfully address their own unique challenges in revenue mobilization, as well as a framework within which Governments can adapt and adjust reforms as implementation challenges arise. As of 2019, 19 countries are in some stage of development of an MTRS in collaboration with the International Monetary Fund (IMF) or the World Bank Group. Twelve other countries have begun the process of dialogues and formulation, including workshops, consultations with stakeholders, and initial tax policy analysis.

2.2 Tax administration

Strengthening tax administration is an important component of medium-term planning. Tax administration suffers from lower capacity in LICs and some middle-income countries. Low-income countries have approximately one tenth of the staffing of high-income countries (Figure III.A.8). In all income groups, population per tax administration employee increased between 2016 and 2017, suggesting either decreasing capacity of tax administration or an increase in productivity of staff, perhaps through adoption of technology. The percentage of female staff and executives in tax administration increases with higher country-income levels (Figure III.A.9). More equitable representation of women among staff at tax administrations and in finance ministries, which often make tax policy, can assist in ensuring that the gender impacts of fiscal policies are more effectively included in decision-making.

There are also other tools available that can help countries as they prepare revenue strategies. For example, the Tax Administration Diagnostic Assessment Tool (TADAT) is an assessment framework used to measure key components of a tax administration.1 As at end-January 2020, 32 TADAT assessments have been conducted. The framework is being used (both formally and informally) to guide high-level decisions on tax administration reform efforts. Additionally, some customs administrations are using relevant elements of the TADAT framework—such as risk management, voluntary compliance and revenue accounting—to monitor performance and implement remedial measures.

Adoption of technological tools can increase capacity and productivity of tax administration and compliance with a tax regime. There are key differences in the use of technology in tax administration among countries of different income levels. For example, effective adoption of electronic filing not only streamlines efforts for the tax administration but can also reduce compliance costs for taxpayers.7 Use of e-filing is significantly lower in low-income countries than in middle- or high-income countries, although rates increased from 2016-2017 across all groups (Figure III.A.10). Similarly, lower-middle-income countries have the highest adoption rates on average of electronic payments, which lag in low-income countries (Figure III.A.11). This indicates significant scope for improvements in efficiency of administration through adoption of digital technologies.

Traditional technology and software solutions can simplify tax administration and provide an enhanced suite of e-services for taxpayers, with options ranging from integrated, purpose-built solutions to purchased, off-the-shelf tax administration solutions. International partners are already helping countries with such solutions. Digital technology is also creating new tools to improve tax compliance and reduce the administrative burden on taxpayers. For example, technology can help strengthen accuracy of information in tax administration databases. Connected devices, such as secure electronic cash registers, can measure and transmit accurate real-time data and boost tax compliance by addressing unreported sales.9 The technology at the heart of the sharing and gig economy also creates data, which can be used to facilitate transparency and simplification of tax obligations, with minimal burden on taxpayers and administrations alike.10
Big data approaches (see chapter II) can help identify suspicious or incorrect information. Combined with artificial intelligence (AI), it can also be used to improve identification of tax examiners. Some countries have experimented with having subject matter experts—tax technology development sessions involving programers and public officials—to quickly develop new AI tools that make use of multiple databases to validate information. Such approaches rely on the ability of multiple agencies and ministries, as well as potentially substantial authorities, to share information while maintaining trust and privacy. In the most advanced practices, Governments can use non-government data to help validate governmental data or flag suspicious information.

For most developing countries, it is still too early to assess the impact of these techniques. In technology adoption, including in technology adoption, should be considered carefully alongside the entire package of revenue reforms, with investment that is tied to medium-term plans and coherent with the overall financing framework. International partners can back these investments with financing and capacity-building.

### Tax avoidance and evasion

Revenue losses due to tax avoidance and evasion have direct negative impacts on the ability of the state to provide public and social services and indirect impacts on inequality and trust in the government and effectiveness of the state.

As taxes are a key component of the social contract, the perception of fairness of the system and the quality of public services can impact the likelihood of payment full by individual taxpayers. If the taxpayer believes the tax system is fair, that others with similar income are also paying their taxes, and that the quality of public services matches the tax burden, trust in the tax system may grow and even a taxpayer with the ability to evade taxes may not believe evasion is justified. In practice, the virtuous circle can take many years to achieve, as changing social norms related to tax payment is difficult. Efforts to enhance tax compliance through raising trust need to be complemented with effective and credible enforcement and facilitation measures.

Additionally, taxation of multinational entities (MNEs) is more complicated given their ambiguous participation in national social contracts. There is some evidence that MNEs pay disproportionately less tax than small and medium-sized enterprises (SMEs), and it is clear that actual taxes paid are much lower than statutory tax rates, often by design. Multinational enterprises design their tax strategies at headquarters and may not participate in the social contract in any particular host country in the same way as a domestic enterprise. Internal MNE payment and other systems may incentivize staff to design corporate tax strategies that avoid corporate taxation in the host country.

There are gray areas between tax avoidance/minimization techniques and unlawful tax evasion. For example, especially aggressive transfer-pricing approaches can be found, on further scrutiny by tax authorities, to have crossed over the blurry line between avoidance and evasion. Cross-country analysis of data from the International Survey on Revenue Administration shows that for tax audits—including those of individual and corporate taxpayers and across all types of audits (comprehensive, issue-oriented and desk-based)—rates of success are above 50 percent. Figure III.A.12 shows that a very high percentage of comprehensive audits find that taxpayers are underreporting, although the relatively higher success rates in lower-income countries relate to a much lower number of audits. Data from the United States shows that around 70 per cent of corporate income tax returns undergoing further examination are subject to additional tax payments after examination, although the majority of audits do not result in prosecutions for tax evasion. There are two implications: some taxpayers are using aggressive tax strategies that cross the blurry line, but it also indicates the need for greater clarity in the law to reduce the presence of gray areas.

The Task Force has regularly provided references to estimates of international corporate tax avoidance and evasion, predominantly in the form of corporate tax base erosion and profit shifting (table III.A.3). New research confirms previous findings that developing countries are more susceptible to profit shifting by multinational corporations than developed countries.

### 3. International tax cooperation

The Addis Agenda recognizes the need to scale up international tax cooperation as a complement to national tax policy and administration reform. The globalization of financial activities, and the advances in technology that reduce barriers to goods and financial flows, necessitate countries working together on tax matters and combating illicit finance (see section 4). Through cooperation, countries can address the challenges of corporate and personal tax avoidance and evasion while encouraging investment through fair distribution of taxing rights.

#### 3.1 Progress on tax transparency

Tax transparency and exchange of information between Governments provides tax authorities with access to banking, ownership, accounting and financial data for implementing effective audit strategies. The Task Force on Tax Transparency recommended that a global standard for exchange of information should be established and that countries should be encouraged to provide full, timely, and effective exchange of information with all relevant tax jurisdictions.

**Table III.A.1**

<table>
<thead>
<tr>
<th>Description</th>
<th>Underlying data used</th>
<th>Estimate provider</th>
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The Global Forum conducts peer reviews of all its member jurisdictions to assess their significant impact on tax collection, compliance with international standards for transparency and exchange of information, and capacity to implement the rules effectively, and the possible opportunity to reduce tax avoidance and evasion. New and updated legal instruments to promote exchange of tax information and mutual assistance among tax authorities have had a major impact on the underlying tax norms, choosing whether to participate in international tax cooperation instruments, and how profits should be allocated.

Participation in international tax cooperation instruments, 2017–2019

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<tbody>
<tr>
<td>2017</td>
<td>140</td>
<td>120</td>
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</tr>
<tr>
<td>2018</td>
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<td>120</td>
<td>120</td>
<td>120</td>
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<td>120</td>
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<td>120</td>
<td>120</td>
<td>120</td>
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</table>

The 2019 Financing for Sustainable Development Report outlined the conceptual issues countries face as they grapple with taxation of the digital economy (see also chapter II). The growth of e-commerce and digital business models can disrupt different fiscal systems, including indirect and direct taxation. The increased supply of goods or services across borders has introduced challenges to collecting VAT and goods and services taxes (GST). The complexity of organizing, administering and enforcing VAT/GST payment under traditional rules when the supplier and the digital platform are not located in the jurisdiction of the customer can cause considerable revenue losses if no appropriate measures are taken. A key question is what role country authorities expect of digital platforms in the collection of VAT/GST online sales and whether the legal framework is in place to enable them to play that role. The Organization for Economic Cooperation and Development (OECD) has developed standards to address the complexity, including through VAT/GST collection obligations for e-commerce marketplaces and other digital platforms. Over 50 countries, including 12 middle-income countries, have already implemented these standards, and other developing countries are expected to do so. Rather than trying to collect VAT/GST from digital platforms, other countries are making collection a requirement for other actors in the supply chain, such as financial institutions issuing credit cards in their jurisdictions. Such approaches are relatively new, and it is too early to assess their effectiveness.

In relation to the taxation of multinational corporate profits, digitalization changes the demands on residence-based and source-based taxation because it is now easier to operate in a market without triggering tax residency. In the tradition tax rules, taxation in the tax country is usually based on physical presence in the jurisdiction. Once the right to tax the MNE has been established, MNE profits are allocated between jurisdictions based on the arm’s length principle (i.e., using market prices to value internal group transactions). However, arm’s length pricing may not adequately reflect value creation in highly digitalized businesses, when intangible assets are an important part of value creation, or in transactions with so-called “value creation businesses. This leads to questions about the appropriate threshold of economic engagement that justifies the right for corporate income taxation in a jurisdiction and the most appropriate methods of profit allocation.

The policy discussions on how to address the range of challenges have advanced significantly since 2019. At the OECD-basied Inclusive Framework on BEPS, a Programme of Work was agreed for the negotiation in May 2019, which contained two pillars of work: (i) a review of the rules that determine if a business can be considered “ Nexus” to tax (i.e., a digital presence) and how profits should be allocated; and (ii) global minimum taxation rules giving jurisdictions the right to “tax back” when taxpayers are subject to low levels of effective taxation in other jurisdictions (called the Global Anti-Base Erosion proposal, or “GloBE” for short). For pillar one, the OECD secretariat had issued a proposal for a “unified approach.” It would create a (i) new definition of which businesses have a taxable presence that does not rely on physical presence, and; (ii) a profit allocation rule that uses formulas, rather than arm’s length pricing, for apportioning some of their profit. This approach is more complex than the original ideas outlined in the 2019 Financing for Sustainable Development Report. Rather than redefining what is a taxable presence for all businesses, the unified approach proposes that a new definition only applies to companies that either have highly digital business models or are consumer-facing businesses. Second, the proposal on profit allocation suggests that, for these businesses, corporate profit would be split into three different components with different rules applying to each component (Figure III.A.14). The proposal does not yet include precise definitions or thresholds for each component. One of those three different components relates to baseline distribution and marketing, for which the proposal is suggesting a simplification of existing rules so that there is a fixed amount of profit allocated to the source country. This new fixed remuneration could be applied to all businesses.

The complexity of the proposal has generated significant debate and disagreement on the wisdom of adopting such rules and their usefulness to developing countries. Recently, one systematically important country proposed that the new pillar one norms be implemented on a safe harbor basis, which would allow companies to either opt in or opt out of the rules globally. This could, depending on the regime for those that opt out, put Governments’ tax collection in a weaker place today than previously.

A further feature of the proposal is the creation of effective and binding dispute prevention and resolution mechanisms to improve tax certainty. Currently, given the sovereign nature of tax, countries generally resolve tax disputes through a series of procedures through which the tax authorities of the countries involved seek to resolve the tax dispute. These procedures are not mandatory, and country authorities generally retain sovereignty to determine what is the appropriate amount of tax due in their jurisdiction. The new proposal creates a new approach to allocating profits internationally and, as a result, suggests new methods to resolve disputes and prevent double taxation. It seeks to limit the ability of countries to seek tax payments that they
determine are due, although the details have not yet been agreed. Manda-
tory binding arbitration on tax disputes is opposed by many develop-
ing countries, not least because many countries have negative perceptions of
such procedures. The actual minimum rate of tax to be
implemented on a safe harbour basis could raise major difficulties,
but also recognized that significant divergences will need to be
resolved. Many Inclusive Framework members have expressed concern that
implementing pillar one on a safe harbour basis could raise major difficulties,
increase uncertainty and fail to meet all of the policy objectives of the process.
The members aim for final decisions to be taken by consensus and in a quick
agreement on key policy features at the next meeting in July 2020.
Many countries have questioned the wisdom of agreeing to new rules
without full and accurate economic impact assessments. Assessments are
difficult to prepare because of a lack of accurate country-by-country infor-
mation for all MNEs and significant uncertainty over the final thresholds
and definitions that would be applied. Preliminary analysis prepared by
the OECD, presented in February 2020, estimates the increase in global
tax revenue as a result of the two pillars combined at up to $100 billion
annually. The estimates of revenue gains are concentrated in developed
countries with large economies, but, as a percentage of corporate tax
revenues, are broadly similar across jurisdictions at all income levels.
Discussions are also ongoing in the United Nations Committee of Experts on
International Cooperation in Tax Matters’ Subcommittee on Tax Challenges
Related to the Digitalization of the Economy. The United Nations is holding a
large workshop in September 2020 to build the capacity of developing
country officials who will be advising their ministers and participating in
the international negotiations on taxation of the digitalized economic
activity. This capacity may also help authorities engage in regional tax
cooperation mechanisms to coordinate measures, as well as consider
alternatives in case no agreement is reached. Norms that are better adapted
to developing-country capacities will necessitate less capacity-building, and
thus may more quickly deliver financial returns in terms of increased revenue.
The 2019 Financing for Sustainable Development Report set out several di-
mensions of analysis that should be undertaken on proposed new tax norms:
(i) the enforceability of the proposals given tax administration capacities;
(ii) impact on existing tax policies; and (iii) the distributional impact of the
proposals. These remain recommended dimensions of analysis that Member
States should undertake. They can guide an understanding of whether new
proposals will further exacerbate tax gaps described in the first section of
this chapter, lead to increased revenue mobilization, or undermine the
long-term ability of Governments to align tax policies with sustainable
development. In the Addenda, Member States emphasized the import-
ance of inclusive cooperation and dialogue among national authorities on
international tax matters. This emphasis should be retained as countries
decide on tax norms that could potentially be in place for another century.

### 3.3 Capacity-building efforts

The discussions above underscore the importance of strengthening
capacities for tax policy design, administration and enforcement. Such
investment has high returns and should support country-owned and
country-created strategies for revenue mobilization. To meet the needs
of a changing world, tax capacity-building also needs to adapt. Indeed,
when developing countries agree to new norms in their interests, they
often need to build new capacities to implement those norms effectively.
Yet, there is no single best strategy for provision of capacity building, nor
a single type of intervention that is more effective across all countries. In
2016, the Platform for Collaboration on Tax (Box III.A.1) made rec-
ommendations on enhancing the effectiveness of external support in
building tax capacity in developing countries, which remain relevant to
capacity-building partners.

There are now four years of data on the volumes of official development
assistance (ODA) dedicated to enhancing domestic public resource mobili-
ization. In 2019, ODA disbursed for this purpose jumped 2.1 percent per year
to reach $261 million, or 0.22 percent of ODA, still short of the 2016
peak of $329 million.

The PCT partners are increasing their capacity-building. Examples include
Tax Inspectors Without Borders, a joint initiative of OECD and the
United Nations Development Programme; technical assistance related
to implementing new or revised tax transparency and exchange of
information standards, the United Nations training of tax officials,
back-to-back with meetings of the United Nations Tax Committee
and its subcommittees; the approximately 180 person years of technical
assistance in the latest fiscal year provided by IMF; and the World Bank’s
new public-private partnerships on the use of innovative technologies
for tax administrations.

### 4. Illicit financial flows

Combating illicit financial flows (IFFs) involves an essential develop-
ment challenge, as IFFs reduce the availability of reliable resources for
achievement of the 2030 Agenda. There is no agreed definition on what
constitutes “illicit financial flows”, and this term still generates disagree-
ment. The Task Force agreed in 2017 that there are generally three
components of IFFs (although not mutually exclusive or comprehensive): (i)
offering originating from transnational criminal activity; (ii) corruption-related
IFFs; and (iii) tax-related IFFs (Figure III.A.15). As the different components
of IFFs are not comparable, the Task Force has noted that separate analysis of
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Volume estimates

Standard-setting and regulation, supervision and enforcement are also considered key components of institutions needed to combat illicit financial flows; it is not just a matter of service and financial regulators and supervisors, prosecutors, the judiciary, foreign and finance ministers, and political decision-makers. Internationally, greater focus on improving policy coherence must continue to be a priority.

Figure II.A.15 Schematic diagram of illicit financial flows

A conceptual framework for IFFs, including a concise definition and typology as well as the scope of measurement was submitted to the Inter-agency and Expert Group on SGG indicators (IASG-SGG), which develops the global indicator framework for the SDGs. In October 2019, the IASG-SGG endorsed a relaunch of the indicator to Tier II, signalling that it is conceptually clear, has an internationally established methodology and standards, and that data is not yet regularly produced by countries. This framework defines IFFs as "financial flows that are illicit in origin, transfer, or use, that reflect an exchange of value instead of purely financial transactions; and that cross country borders." Two main categories of IFFs are identified:

- Transnational criminal activity
- Tax-related

The techniques used to launder the proceeds of crimes and to commit tax crimes are often similar. There is a need to improve cooperation between tax and anti-money-laundering authorities. International institutions have provided tools and training for how tax authorities can assist in money-laundering awareness. Key lessons are the need for efficient information-sharing and a culture and mechanisms of cooperation between the two types of authorities.

4.3 Tackling corruption and state capture

Corruption is a complex social, political and economic phenomenon that affects all countries. Many international organizations have adopted a definition of corruption that encompasses the abuse of public office for private gain. The United Nations Convention against Corruption (UNCAC) lists bribery, embezzlement, abuse of functions, trading in influence, obstruction of justice, and money-laundering as types of corruption. Private corruption, which involves the misuse of any entrusted position for private gain, is a form of corruption that encompasses the abuse of public office for private gain.

The Global Forum has incorporated into its standards a requirement to ensure the availability of beneficial ownership information for all legal entities and arrangements. This is a result of a broader trend towards the Financial Action Task Force (FATF) (see section 4.4) and the Global Forum (see section 3.4) on the exchange of information on beneficial ownership information, covering both legal framework and enforcement in practice. Since 2016, one third of the recommendations (164 out of 418) issued to jurisdictions in Global Forum peer reviews have pertained to beneficial ownership information, indicating that more needs to be done to fully implement the beneficial ownership requirements.

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4.2 Policy measures for tax-related IFFs

Tax-related IFFs are being tackled with some of the international tax cooperation tools described earlier, which increase tax transparency and exchange of information and make it more difficult to hide wealth or transfers through offshore structures. The global exchange of information network facilitates access to the information and assistance from the destination or intermediary countries for IFFs. A recent study finds that bank deposits in international financial centres from non-bank counterparties, which increased significantly from the early 2000s to 2008, fell by 24 per cent (US$11 billion) by the first quarter of 2019. These falls are significantly correlated with the country hosting the financial centre signing automatic exchange-of-information agreements.

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The impacts of corruption come in political, economic, social, and even environmental outcomes. Corruption may lead to higher prices for the companies involved, as well as reductions in public revenue and inefficient public expenditure. The impact of corruption on growth has been studied extensively. Empirical research finds that GDP per capita is positively correlated with a perceptions-based indicator called ‘control of corruption’, but causal relationships are difficult to establish, in part because of the difficulty in accurately measuring corruption.

Different acts of corruption also have very different impacts on sustainable development and the breaking of the social contract. Grand scale theft of public assets and state capture have fiscal implications, and possibly broader macroeconomic ones, while also destroying public trust of the state. Highly localized low-ticket bribery related to service delivery generally does not impact on the fiscal system nor have a broader macroeconomic impact, although it can have significant impacts on the victims of bribery who may be extremely poorest and thus may suffer disproportionally even from a small bribe. There is evidence in several spheres for corruption being associated with worse environmental outcomes. Extractive industries, due to the large volumes of transactions, rents and profits connected with mining and fossil fuel exploitation, seem to attract more attention from corrupt actors than other sectors. The relationship has motivated the early and more advanced development of transparency norms in the sector, such as the Extractive Industry Transparency Initiative and the European Union’s adoption of an Accounting Directive that has, since 2016, required public country-by-country reporting of payments to Governments by the extractive and logging industries. On the positive side, surveys of firms in many countries suggest a decline in bribery.

Programmes that have successfully reduced corruption have been associated with much higher tax revenue generation. National frameworks for transparency and accountability can reduce the opportunities for corruption, but the success of any particular framework in reducing corruption will depend on the national political settlement and institutional arrangements. Procurement policies (see section 3.2) can be models for public transparency and accountability. Political arrangements can sometimes undermine both the effective enforcement of formal rules and corruption prevention strategies. In these contexts, anti-corruption interventions can be prioritized based on political feasibility and the criticality of the sector to wider anti-corruption efforts. Interventions can thus be organized sequentially based on the scale of impact on sustainable development prospects.

Technology can be useful in disrupting existing norms or incentives. For example, using technology to distribute government service access can empower citizen voice, change the dynamics of service delivery, and bolster the social contract. Long-term success usually requires redistributing power and changing norms, for which a new stable political settlement must be found.

The UNCAC is the only legally binding universal anti-corruption instrument. The Convention’s far-reaching approach and the mandatory character of many of its provisions make it a unique tool. The Convention covers the four main pillars of anti-corruption: preventive measures, criminalization of corruption and law enforcement; international cooperation; and asset recovery. Based on peer reviews in the areas of criminalization of corruption and law enforcement and international cooperation, conducted under the implementation Review Mechanism of UNCAC, a set of non-binding recommendations and conclusions can help UN Member States. Highlights of these good practices include: (i) strengthening data collection; (ii) the adoption of comprehensive legislation for the confiscation of proceeds of crime; (iii) access to information by
50

44 Money-laundering standards
Combating money-laundering helps to preserve the integrity of financial institutions, both formal and informal, and protect the smooth operation of the international financial system. The UN Convention includes article 14, which obligates all States parties to set up a regulatory regime for financial institutions in order to deter and detect all forms of money-laundering, while article 21 requires the criminalisation of the laundering of proceeds of crime. In the Addis Agenda, Member States committed to identify, assess and act on money-laundering risks, including through effective implementation of the FATF standards on anti-money-laundering/counter-terrorism financing. As its 40 members and observers include all members of the Group of 20, and all major financial centres, FATF standards operate as de facto global standards for the world’s financial system. FATF conducts peer review for adherence to its standards, as do new FATF-style regional bodies covering most countries of the world.

45 Asset recovery and return
The process of tracing, freezing, confiscating and returning stolen assets to their country of origin is usually a complex and lengthy one, involving multiple jurisdictions and often complicated by technical, legal or political barriers. Chapter V of UNCAC provides the framework for the return of stolen assets, requiring States parties to take measures to prevent, seize, confiscate, and return the proceeds of corruption. The Stolen Asset Recovery (StAR) Initiative, a joint project of the World Bank Group and UNODC, promotes implementation of Chapter V of UNCAC to help drive concrete action to recover and return proceeds of financial crime. This initiative, launched in 2007, has 26 member countries and has significant experience in anti-corruption authorities; and (v) expanding the spontaneous transnational cooperation on IFFs in September 2020, which will showcase the Fund’s wide-ranging anti-money-laundering and counter-terrorism financing. As its 40 members and observers include all members of the Group of 20, and all major financial centres, FATF standards operate as de facto global standards for the world’s financial system. FATF conducts peer review for adherence to its standards, as do new FATF-style regional bodies covering most countries of the world.

5. Expenditure and strategic procurement in public budgets
As the main vehicle for implementing government policy, the budget should be intimately linked with the attainment of SDGs. Budget processes are a critical link in the chain connecting sustainable development objectives, strategies and plans, public spending and, finally, outcomes. A well-formulated medium-term budget framework (MTBF) is a natural platform for integrating the SDGs with domestic public resource allocation. These MTBFs need to be coherent and consistent with other elements of a country’s IMF

51 Financial instruments for expenditure
Governments have harnessed their public financial management skills over decades. While each government’s procurement procedures and tools might be slightly different, countries have standard ways to budget and spend resources. Still, many are looking for new tools, instruments and innovations that can help to improve the budgetary system. This is more focused on the SDGs

52 Procurement effectiveness and alignment with sustainable development strategies
Public procurement frameworks can be used as strategic tools to reinforce sustainable development, as noted in the Addis Agenda. Given public procurement’s weight in most economies and national budgets, improvements in the efficiency and effectiveness of this key government function, beyond simple rule-compliance, are an important lever for improving spending. Governments are increasingly employing public procurement to achieve policy objectives that are aligned with the 2030 Agenda, such as promoting innovation, sustainability, social inclusiveness and SMEs. Increasing fiscal pressure has further highlighted the importance of public procurement reforms. As of 2016, all OECD countries reported to have developed procurement policies towards broader policy objectives, such as a green investment, promotion of SMEs, and efficiency. Between 2016 and 2018, there has been an upward trend in the development of policies addressing green procurement and, particularly, responsible business conduct (figure III A.16).

Public investment in infrastructure
Infrastructure stimulates economic growth and plays a key role in the SDGs, with positive spillovers across sectors. The Task Force provided analysis of how to undertake quality investment in infrastructure in its 2017 and 2019 reports.

Given the enormous investment need, private, public, domestic and international resources will be required. However, public and private sources of finance are not substitutable. Each has its own incentive structures, goals and mandates. Meeting infrastructure investment needs will require credible financing plans, which can be incorporated into IFIs. Raising public revenues and reallocating existing spending to infrastructure should be key elements of such plans, but may be insufficient. For countries with moderate levels, additional borrowing might be necessary, especially for projects that generate financial returns. Galvanizing private sector involvement is possible, but the associated fiscal costs and risks need to be carefully managed (see chapter III B).

As of 2018, all OECD countries reported to have achieved significant progress in developing policies to enhance the role of public procurement in achieving the SDGs.

The IMF executive board plans to do a stock-take on the institution’s work on IFIs in September 2020, which will showcase the Fund’s wide-ranging work in this area. One area of possible further cooperation in is developing the technological tools that can be used to help identify and combat IFIs. While such tools will need to be adapted to individual country contexts and risk factors, the creation of AI software that can be applied in many jurisdictions could introduce efficiencies of scale, thereby lowering costs for individual countries. Regional tax and anti-money-laundering cooperation bodies can be venues for exploring joint work. However, they cannot be one-off developments, as the software and tools will need to constantly evolve to spot the latest loopholes and threats.

In early March 2020, the President of the General Assembly and the President of the Economic and Social Council launched a High-Level Panel on International Financial Accountability, Transparency and Integrity (FACTI Panel). The panel will produce an interim report outlining its analysis in July 2020, and its final report providing recommendations in February 2021. The General Assembly is organizing a Special Session on corruption in April 2021.
public infrastructure governance can also help Member States attract more private financing for infrastructure, if they desire to pursue blended finance options (see chapter II.C). The IMF’s Public Investment Management Assessment (PIMA) tool helps countries strengthen key infrastructure governance institutions (figure III.A.17). The tool offers a comprehensive framework that helps evaluate Governments’ procedures and processes to provide infrastructure to the public.

Procurement resilience

Rising economic losses due to disasters and the subsequent cost of recovery and reconstruction can deplete public financing for SDG investments. To protect public investments and strengthen stability, disaster risk considerations should be systematically embedded into domestic public financing, including expenditure and strategic procurement planning. In most countries, expenditure for disaster risk reduction in public budgets is marginal and inconsistent. Domestic public finance, including dedicated budget lines for disaster risk reduction within sectoral budgets, along with disaster risk-informed public procurement, can be an effective entry point for mainstreaming disaster risk reduction across public investment.

Several countries have developed hazard maps, risk assessments and risk profiles at national, subnational and local levels which can ensure a context-specific, disaster-risk-informed approach to public expenditure and procurement. With risk-sensitive budget reviews, countries can identify gaps in public budgetary allocation for disaster risk reduction across sectors. Some countries have established national funds for disaster risk reduction and prevention. These provide a mechanism for Governments to co-finance investments in risk reduction with the private sector at national and local levels. Others have applied disaster risk screening tools to integrate risk reduction in public investment planning, ex ante, and procurement. However, no single instrument is optimal for all risk scenarios. Disaster risk reduction financing strategies require a risk-layered approach. In the extensive risk layer (high probability and low expected loss), investment for risk reduction and prevention is the most cost-efficient. In the intensive risk layer (low probability and high expected loss), risk reduction is often financially prohibitive, especially in LICs and SIDS. Where risk must be retained, risk transfer schemes, such as insurance, and catastrophe bonds can be more cost-efficient (see chapter II.C). However, it is critical to integrate measures to incentivize risk reduction across these tools.

Disaster risk reduction financing strategies should be aligned with the objectives of national disaster risk reduction strategies and incorporated into broader planning processes, such as through an NEF. Their implementation should be enabled by clearly defined, comprehensive disaster risk reduction legal and regulatory frameworks. Technical assistance is available from international partners for countries that need to build the capacity for developing such strategies and regulatory frameworks. These issues need to be better mainstreamed into all the assistance provided by multilateral institutions.

Incorporating gender equality

Gender responsive budgeting (GRB) enables Governments to plan and budget for efforts to support achievement of gender equality objectives. Although progress has been made in implementing GRB globally, significant gaps remain. SDG Indicator 5.c.1, the international standard for GRB, assesses government efforts to put in place gender-focused policies, gender-responsive public finance management systems and budget transparency. An analysis of 69 countries and areas reporting on Indicator 5.c.1 in 2016 found that 19 per cent fully met those criteria and 59 per cent approached the requirements. The data also revealed a gap in policy implementation. Among the same set of countries, 90 per cent had policies and programmes in place to address gender gaps, but only 63 per cent reported adequate resource allocations to implement them.

Countries implementing GRB have been more likely to issue directives and/or guidelines and use sex-disaggregated data to inform budgeting. Actions that link resource allocations with assessment of outcomes and impact are less common but essential. Fewer countries are conducting ex ante gender impact assessments, producing gender budget statements and/or gender audits of the budget. When conducted, they can provide insights into the contributions of gender policies and the expenditures for their implementation to meaningful outputs and outcomes. Audits can enable Governments to make corrections/changes in the next budget cycle to improve the achievement of intended gender equality results. Deliberate integration of gender assessments into policy formulation is possible. Countries with the most advanced GRB practice are effectively mainstreaming gender in each step of their budget planning, execution and reporting processes and working across all sectors. When done well, these actions produce data and learning to inform strategic decisions in the next cycle and increase transparency of gender budget information to strengthen government accountability.

Alignment of overall budgets is not the only way to advance gender equality through public expenditure. Some developed countries use public procurement to encourage government contracting with women-owned/led small businesses. Indeed, corporations in certain developed economies, such as the United States of America, have designed policies that actively seek out women-owned businesses and other diverse suppliers as part of their overall business strategies. As discussed in chapter III.B, women-owned/led businesses face constraints in access to capital, human resources, and even an inequitable legal environment. Government procurement policies can focus on removing barriers and developing the capacity of these suppliers to compete with other businesses.

Tools for procurement performance evaluation

A new tool to track the performance of public procurement systems is the 2019 revision to the Methodology for Assessing Procurement Systems.
5.3 Transparency and accountability in public finance

Accountable public financial management institutions and systems play a crucial role in implementation of national policies for sustainable development and poverty reduction. The establishment of new national social contracts will be enhanced with transparency and accountability of budgets and more effective service delivery. While there are no universal tools for benchmarking transparency and accountability of budget processes, many developing countries make use of the Public Expenditure and Financial Accountability (PEFA) framework. 49 PEFA assessments conducted between 2006 and 2016 (by an average of 27 countries per year) show an upward trend in aggregate PEFA scores over time. Nevertheless, the overall trend in year-over-year performance has been relatively slow moving and well below “good practice” scores. Over time, the external scrutiny and audit pillar has consistently had the worst average performance, while the cross-cutting comprehensiveness and transparency pillar has had the best performance.

Endnotes

1 Data is based on revenues excluding social insurance contributions.
2 2018 data includes fewer observations than 2017, so changes in the median may be only a statistical artifact.
22 Safe harbours typically are aimed at increasing tax certainty, and thus reduce the ability of tax authorities to challenge and audit the taxpayer that has adopted into the generally less complex safe harbour rules.
39 Ibid.


49 PEFA was initiated in 2001 by The European Commission, the IMF, World Bank, and the governments of France, Norway, Switzerland, and the United Kingdom.
Unlocking private business and finance is one of the greatest challenges to achieving sustainable development and reviving the economy following the impact of the COVID-19 crisis. On a country level, Governments have several levers that they can use to create a thriving business environment and reduce investment risks. To help prioritize actions, policymakers should identify and target binding constraints to private sector development in support of the Sustainable Development Goals. This could include a range of areas: the first area is strengthening the legal and regulatory environment. The second is providing infrastructure services essential for sustainable development and the functioning of the economy. Despite all the initiatives in this area, infrastructure gaps remain considerable between developed and developing countries. The international community should further help countries build the internal capacity necessary to deliver cost-efficient and resilient infrastructure solutions, including developing “investible projects” when feasible. The third is addressing financial constraints, particularly affecting micro, small and medium-sized enterprises. This requires harnessing technological advancements, for instance to overcome data gaps for credit risk assessment.

Building an enabling business environment, however, may not be sufficient to mobilize investment at the speed and scale required to achieve the sustainable development goals (SDGs), particularly in countries most in need and in sectors key for sustainability. Identifying the types of financial instruments most likely to deliver results given the local context will again require a proper assessment of the key constraints to investment. This chapter lays out a range of tools and financial instruments that can be used to overcome some of the impediments to private investment. For instance, international vehicles can be used to manage currency, disaster and political risks, in part through their ability to diversify across countries and risks. Smartly structured private equity and venture funds, including those bringing together public and private investment, could mobilize the additional equity financing needed to support innovative companies in less advanced economies. But, as discussed in chapter III.C, country ownership and fair risk-reward sharing between public and private partners is necessary for these instruments to be effective. Innovative models, such as auction systems, can be designed to minimize subsidies and optimally use scarce concessional resources.

Major changes are also required in the way private business and finance works. The need for a systemic change is evident from the lack of sufficient progress in many sustainable areas where companies have a large impact, including carbon emissions, gender balance, disaster risk, and waste production. Business leaders are increasingly acknowledging that taking sustainability factors into consideration will be necessary to achieve long-term financial success and ensure the future viability of their companies. However, turning this awareness into action requires the following:

- Adjusting corporate governance, aligning internal incentives (such as remuneration criteria for CEOs), and addressing the persisting short-termism in capital markets;
- Making companies more accountable. This is impossible without meaningful information on companies’ social and environmental impact. Reporting requirements for large corporates need to include a common set of sustainable metrics regardless of their materiality impact. Through its analytical work, the Inter-agency Task Force on Financing for Development can facilitate convergence between reporting initiatives and the emergence of harmonized and comparable data. This is key to support sustainability-driven investor initiatives, such as the Global Investors for Sustainable Development (GISD) Alliance;
- Enabling people to use their money to support changes they believe in. Every survey shows strong appetite for this from individual investors. However, individuals do
not always have the possibility to do so, either because no one asks them questions about their sustainability preferences; they cannot find credible investment products; or because they are sold products marketed as sustainable with no actual impact. This needs to change. Investment advisors should be required to ask their clients about their sustainability preferences along with other information they already request; • Establishing minimum standards for investment products to be marketed as sustainable. A common definition of what constitutes sustainable development investing would be an important step towards setting such standards. International platforms, such as the United Nations, need to be invigorated to develop a shared understanding at the global level, and avoid the proliferation of competing and possibly conflicting standards.

The chapter starts by reviewing investment trends and the different components to create an enabling business environment. The chapter then examines financial instruments that can be used to mobilize additional private investment. It concludes by exploring ways to transform private investment growth in traditional tangible assets and infrastructure, with a focus on climate-related risks.

2. Investment trends

There are several trends in private investment which are important for achieving sustainable development and the SDGs. These include (i) low investment growth in traditional tangible assets and infrastructure, with higher growth in investment in digital technology; (ii) weak foreign direct investment (FDI), but a shift from developed to developing countries; and (iii) a greater interest in sustainability, with a focus on climate-related risks.

Figure III.B.1

FDI inflows and the underlying trend, 1990–2018

As noted in chapter I, investment rates are currently below historical averages, despite record low interest rates. The outlook for private investment has weakened over the last decade amid global uncertainties and declining investment confidence. Investment growth has been particularly weak in areas of traditional investments, such as machinery, construction and other tangible assets. The COVID-19 crisis further clouds investment prospects.

Private investment in infrastructure projects in developing countries has also been weak relative to historical averages, at less than $100 billion a year between 2016 and 2018. While infrastructure commitments increased 14 per cent in the first half of 2019, the figures for the rest of the year will remain well below the $160 billion peak reached in 2012. In particular, since 2014, investment has fallen in sectors with more limited financial returns, such as water, sanitation and hygiene, and education. Investment in the generation, transmission and distribution of electricity has remained flat, while investment in telecommunications, transport and agriculture has increased. This broader trend is mirrored in FDI, which has experienced anemic growth since 2008. Adjusted for short-term volatility and fluctuations caused by one-off factors, such as tax reforms, FDI has averaged only 1 per cent growth per year this decade, compared with 8 per cent in 2000-2007, and more than 20 per cent before 2000 (figure III.B.1). In 2019, global FDI reman flat at an estimated $1.19 trillion. In 2020, the downward pressure on FDI caused by COVID-19 is expected to be -5 to -15 per cent (compared to previous forecasts projecting marginal growth in the underlying FDI trend for 2020-2021). The impact on FDI would be concentrated in those countries that are most severely hit by the epidemic, although negative demand shocks and the economic impact of supply chain disruptions could affect investment prospects globally. Lower profits from many multinational enterprises would also translate into lower reinvested earnings (a major component of FDI).

Technological change has been a driver of the underlying trend of low FDI. Digitalization has enabled multinational enterprises to generate sales abroad with limited local presence. It has also facilitated a shift of international production from tangible cross-border production networks to intangible value chains and non-equity modes of operations, such as licensing and contract manufacturing. This is reflected in the much faster growth of trade in services and international payments for intangibles (royalties and licensing fees) than for tangible production indicators such as FDI and trade in goods. The growth of foreign sales of the top 100 multinational enterprises outpaces growth in foreign assets and employees, suggesting that these enterprises are becoming ever more intangible with a lighter operational footprint, which might create challenges for local authorities to collect taxes (see chapter III.A).

Another long-term trend is the growing share of FDI flows towards developing economies. In the ten years prior to the 2008 crisis, developing economies attracted 30 per cent of global FDI flows, on average. This percentage increased to about 40 per cent in the last ten years, and exceeded 50 per cent in 2019 and 2020. Yet, these flows have not been equally distributed among all countries equally. While certain regions have been able to attract more investment, particularly in Central Africa, South-East Asia and East Asia, in other regions, FDI declined below pre-crisis levels.

Notable changes are also happening in investment practices. Sustainability issues are receiving greater consideration, although the impact of such investing is often uncertain. Investment strategies that focus on profit maximization, while considering the impact of environmental, social and governance (ESG) factors have increased by 34 per cent between 2016 and 2018. FDI-led projects have mushroomed, increasing by 14 per cent in the twelve months through June 2019. Green bond issuance reached new heights in 2019, at about $210 billion, representing close to 50 per cent increase from 2018. Yet this still represents only a small part (about 1 per cent) of the global issuance market. More funds have also been allocated to impact investment, which aims to generate positive social and environmental impact alongside a financial return (i.e., “doing good” as an explicit investment objective). Respon- dents to a 2018 industry survey, who collectively manage $239 billion in impact investment assets, invested over $33 billion into more than 13,000 impact investment projects, primarily in energy, microfinance and financial services. Yet, while sustainability-aligned investment strategies and impact investment assets have increased, they still represent a small portion of overall financial assets (figure III.B.2).

3. Private sector development strategies

To thrive, private companies need an enabling business environment, including stability, efficient infrastructure services, access to finance, and legal and regulatory frameworks.

3.1 Building a conducive legal and regulatory environment

Countries have made strides to reduce administrative hurdles for companies, as reflected in the falling cost of starting a business (figure III.B.3).
environmental and health standards, and disaster risk reduction standards, regulations and legislation, even if these measures may imply increasing the cost of doing business. For example, some countries are strengthen-
ing rules against harmful pesticides in agriculture, raising minimum standards in building codes, and establishing new protected areas (e.g., Palau banned commercial fishing in 80 per cent of its marine territory to protect its ecosystem). These laws raise the costs for businesses, but can be necessary to achieve the SDGs, underscoring the importance of develop-
ing regulations in an integrated manner (such as through an integrated national financing frameworks (INF), which includes an analysis on trade-offs). International organizations can support countries in advancing their objectives in these areas. For example, the ILO-IFC Better Work Programme in the garment industry help governments to improve labour laws, suppliers to comply with international standards, and multinationals to become more responsible.

An enabling business environment also requires competition policies to facilitate entrance of new businesses and avoid monopolistic behaviours by dominant firms. Growing market concentration has been greatest in the digital age, where further increase in market power by already dominant firms can deter investment and innovation, as well as exacerbate inequality. Policy measures could include stricter rules for mergers with detrimental impact on competition, for instance when incumbents buy rising competition (see chapter II).

3.2 Providing infrastructure services while leveraging technology

Another lever for policymakers to support private sector development is the provision of efficient infrastructure services, which companies rely on to operate. Figure II.B.4 shows that the perceived infrastructure quality gap between developed and least developed countries (LDCs) has grown, not shrunk, over time according to surveys of business executives in more than 130 countries.

Well-developed infrastructure plans are needed to address these gaps. They should include adequate stakeholder consultations and incorporate climate impact, disaster risk assessments and resilience, as well as gender assess-
ments in order to provide a long-term vision. This vision will allow countries to avoid having costly stranded assets later on, such as coal-fired power plants, or essential infrastructure assets unable to function during and after natural disasters. Each dollar invested in infrastructure resilience is expected to deliver a 5.6 benefit through avoided repairs and disruptions and lower maintenance costs in low- and middle-income countries.

Making the right decision is critical as infrastructure assets typically last for decades and upfront costs should be weighed against operational costs over the asset lifecycle. In fact, infrastructure investment gaps compatible with full decarbonization have been found to cost no more than polluting alter-
atives when accounting for the lifecycle cost of infrastructure assets.

Technological advancements can help project prioritization and planning, for instance, through data analytics and enhanced project management. For example, SOURCE is a customizable software designed to help Govern-
ments prepare, procure and implement their infrastructure projects, which is supported by multilateral development banks (MDBs).

Technological change is also influencing the choice of infrastructure by im-
pacting costs. For example, the cost of electricity from solar PV decreased 77 per cent between 2010 and 2018, making clean energy competitive with fossil fuel alternatives, as demonstrated by the vast majority of new electricity-generation projects using renewable-energy sources.

Private investment is thus not always the answer to all infrastructure challenges. The public sector still accounts for 67 to 91 per cent of infrastructure investment spending in developing countries. Public in-
vestment will continue to dominate infrastructure spending—particularly in sectors with limited cash flow potential to repay the private investor, such as sanitation and education—where affordable access for all has to be provided. While financial engineering can be used to create instruments that attract private investment even in these cases (see section II.B.4), it can be cheaper and more efficient to use public finance.

Supportive technical support can help developing countries determine the most cost-effective capital structure (e.g., public versus private financing models) and build institutional capacity for project planning, preparation and negotiation. In addition to existing technical assistance programmes, private sector specialists could offer to support developing countries in building a pipeline of viable projects targeted towards private investors. This could include support from both developed- and developing-country experts, with some of the support possibly through pro bono assistance from a network of infrastructure specialists (e.g., “infrastructure experts without borders” in the same fashion as “tax inspectors without borders”).

3.3 Addressing financial constraints

Without adequate financial services, individuals and companies are unable to fully participate in the economy. In recent years, fintech developments—and particularly mobile money services—have contributed to a rapid increase in account ownership and facilitated financing for micro- small and medium-sized enterprises (MSMEs). Nonetheless, about 1.7 billion adults remain unbanked, and important access gaps persist between men and women, poorer and richer households and rural and urban populations. For example, the financial inclusion gender gap in developing countries remained at 9 percentage points in 2017, unchanged since 2011.
The slow increase in account usage suggests that not all newly opened accounts meet their owners’ needs, be it in terms of affordability, ease of use or effectiveness for routine transactions. It also points to the need for additional enabling factors—particular in the case of fintech services—such as infrastructure, secure digital identity systems, and digital and financial education. An appropriate regulatory framework is also important, not only for supporting innovation but also to protect the economy against the risk of overindebtedness (for the role of fintech in financial inclusion, see also chapter III.G).

At the same time, about 171 million or 41 per cent of formal MSMEs in developing countries have unmet financing needs. Globally, MSMEs receive less credit, and their loan applications are more frequently rejected than those of large firms (figure III.B.6). A much greater share of MSMEs identifies access to finance as a major constraint in comparison to large firms, and women-owned/firms are more often affected by financing constraints. These discrepancies are more pronounced in LDCs, where financial sectors tend to be less developed.

Traditional bank lending to MSMEs has long been hindered by a lack of instruments for overcoming asymmetric information, such as credit histories, accounting data and traditional collateral. Another hurdle is the high cost involved in due diligence relative to the size of the loan. In many developing countries, less competitive banking sectors have also played a role, as banks can charge higher prices for services and have fewer incentives to service marginal customers. Financing instruments such as factoring and leasing have gained ground, most likely because they mitigate some of these challenges. For example, leasing allows the lender to retain ownership of the financed good. Several countries have also successfully introduced movable collateral frameworks that enable MSMEs to use their assets (such as equipment and receivables) as non-traditional collateral.

Domestic and international private business and finance

Box III.B.1

Cost of remittances

Global flows of remittances—mainly wages that migrant workers transfer to their families—are projected to have reached $707 billion in 2019, a nominal increase of 3.5 per cent from 2018. The average cost of sending $200 dollars has continued to stagnate at about 7 per cent since the end of 2017 across all regions, well above the 3 per cent target in the 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda. This has a large impact on receiving families, as each percentage point in transaction costs deprives them of about $5.5 billion per year.

The costs, however, vary substantially across remittance corridors. According to the World Bank’s indicator for the cheapest available transfer options, 60 per cent of all remittance corridors had options costing less than 5 per cent of the transfer amount at the end of 2019. By contrast, the cost of transfers remains particularly high in sub-Saharan Africa, at about 9 per cent on average (figure III.B.7).

Fintech companies, such as mobile operators, systematically charge lower fees than conventional money transfer operators and banks, and have been instrumental in lowering costs in these corridors. Apart from mobile money, blockchain technology could address some of the shortcomings of the traditional payment system, including access, speed of clearing and settlement, and transaction costs; however, issues of compliance with anti-money laundering and countering the financing of terrorism (AML/CFT) regulations still need to be addressed.

The high fee for transfers in some corridors can be related to the cost of compliance with AML/CFT regulations, and in some countries, the loss of correspondent banking relationships. Promoting financial inclusion can help combat the high cost in some countries, as cash remittances can be onerous, in part due to AML/CFT compliance. Many non-bank/fintech solutions rely on banks to meet these regulatory requirements, which limits their use to banked customers. The structure of the remittance market can also keep the cost of remittances stubbornly high—for instance, where exclusivity agreements curb competition and act as a powerful barrier to entry.

Even when low-cost services are already present in a country, there are other aspects that impede people from adhering to them, including accessibility, awareness, literacy and trust. Countries face different challenges, ranging from poor information and communications technology infrastructure to a strong cash culture, which calls for policy responses tailored to each country-specific context (see chapters II and III.G). Continued work is needed at the global level to agree on common standards and improve information sharing (including digital IDs) to facilitate compliance with AML/CFT regulations for cross-border payments and counter the decline in the number of correspondent banking relationships, which has had a significant impact on remittance service providers’ ability to access banking services.

Figure III.B.1

Average total cost for sending $200, by region, 2015–2019 (Percentage)


Notes: Data from the most recent survey year was included for each country (between 2006 and 2019, with a median of 2017). Aggregates are calculated as averages of country data.

Figure III.B.6

Percentage of firms whose recent loan application was rejected, ca. 2013 (Percentages)

Source: UN DESA, based on World Bank, Enterprise Surveys.

Notes: Data from the most recent survey year was included for each country (between 2006 and 2019, with a median of 2017). Aggregates are calculated as averages of country data.
More recently, fintech solutions offer promise in helping MSMEs overcome the financing gap, through the use of greater access to data for credit risk evaluation, peer-to-peer lending and crowd-funding platforms, supply chain financing, and non-cash merchant payments (see chapter III.G). The use of such services can also create positive feedback loops, as electronic transaction histories can strengthen the information base for risk assessments and better credit ratings can unlock access to additional services.31 Governments can identify gaps and implement a coherent set of policies to promote solutions that improve financial services to underserved individuals and companies through national financial inclusion strategies, as part of integrated national financing frameworks. Such financial inclusion strategies have been adopted by or are being developed at least 69 countries. Some countries have begun to review past progress and implementation gaps to adjust their strategies to new developments, including fintech. The international community should help countries in developing these strategies.32,33

Entrepreneurship and investment promotion

Policymakers can also take a more active role to support private sector development. Governments can, for instance, help stimulate entrepreneurship by sponsoring incubations in universities, granting seed capital to start-ups and providing technical support to entrepreneurs.34 For example, the United Nations Conference on Trade and Development (UNCTAD) has provided training to entrepreneurs and MSMEs through its Empretec capacity-building programme. Governments have also used investment promotion agencies or industrial parks and special economic zones (SEZs) to attract foreign direct investment. There are currently 5,400 zones across 147 economies.35 Most zones offer tax incentives and business-friendly regulations regarding land access, permits and licenses or employment rules. However, results have been mixed. Only about half of investment promotion agencies worldwide believe the zones in their country have given a significant boost to FDI attraction, and many countries systematically access the performance and impact of SEZs.36

At the same time, new types of SEZs are emerging, including ones that focus on renewable industries, such as high-tech, that move beyond trade- and labour-intensive manufacturing activities of traditional SEZs.37 These zones can create linkages between firms to help stimulate technological development and local innovative capacities. There is also a case for building SDG model zones to attract investment in SDG-related activities, promote linkages with domestic activities and advocate for high ESG standards. For instance, some small scale.

4.2 Private equity and venture capital

Capital markets are a key source of equity financing but remain under-developed in many countries and mostly inaccessible to smaller businesses. Private equity and venture capital (PE/VC) are important sources of funds for entrepreneurs and promising companies (which otherwise often rely on friends and family for initial capital). PE/VC fund managers make direct investment in selected companies, with the aim of creating capital, technological and managerial expertise to raise the firm’s value and make a profit at the exit (e.g., by selling the company to another industry player after a few years). These markets also remain underdeveloped in many countries. For example, in Africa, about one in ten equity investments is directed to a few large economies, such as Brazil, China, India and South Africa. PE/VC investment is also low in Africa, where only $2.5 billion has been invested annually over the last five years.45 While PE/VC investors may be interested in looking outside traditional markets for more attractive returns, to date, high perceived risks in developing countries have impeded investment. Development finance
institutions can help in these cases. They can accompany investors in more challenging markets and strengthen their collaboration at the country level to remove barriers to private investment.46 Public authorities might also be willing to co-invest in privately managed PE/VC funds to support the local economy and job creation or other public goods. The objective is to support innovative business models, the right instrument is equity financing through a diversified portfolio. Unlike grants or subsidized loans, equity financing allows the public to capture the upside potential, which could then be reinvested in public goods. While some of the businesses seeking investment may ultimately fail, the gains from a few winners should compensate the failures of the losers. Indeed, this is the model that VC firms and other fund managers have used profitably for many years. When the perceived risk is disproportionate vis-à-vis the expected returns, public returns can be subordinated to private returns in co-investment schemes as a way to attract private investment while still benefiting from potential upside (see box III.B.1).47 More innovative models could also be tried. For example, public money could be used to make equity investments in firms that generate positive externalities (e.g., quality jobs) but fail to attract private investors. Such investment could be structured to cap the entrepreneur’s upside so that entrepreneurs will not use public money unless they really need it.48 Nonetheless, finding the appropriate risk-sharing mechanisms is difficult, and so is finding the right size of public intervention. One objective is to keep the interests of all investors and the fund manager aligned. Another is to avoid creating market distortions—for instance, for other investors who might not benefit from this kind of risk-reward mechanism. This requires transparency and monitoring systems in place to assess the results of public support mechanisms, as well as innovative mechanisms, such as the bidding process discussed above. Another risk associated with private equity has been the intensive use of debt leverage to enhance investment returns. Although the lower access to debt finance in most developing countries mitigates such risk, the use of leverage should be monitored, since excessive risk could make companies less resilient to economic downturns and also have systemic implications.

Box III.B.2 Ontario Venture Capital Fund

In 2008, the Government of Ontario in Canada decided to revive its venture capital ecosystems that had suffered from poor returns. To do so, a joint initiative was launched with institutional investors. A fund of funds managed by a third-party investor was created to invest in local venture capital and growth equity funds. The public sector invested $90 million, while institutional investors contributed $110 million. The Government agreed that its capital would be “first in, but the last out.” This meant that public money was invested first. Returns from realized investments were first distributed to private investors and a predefined return rate was achieved. Any returns above that level of returns were shared between the public and private investors. The subordination of government capital made the platform attractive for private investors. The initiative created a funding source for a new generation of venture capital managers in Canada, while generating returns for both public and private investors. Similar structures could be considered in developing countries.

4.3 Line of credit to financial institutions and credit guarantees

Private finance can also be constrained by the lack of liquidity of local financial institutions. To address this constraint, development banks provide these institutions dedicated credit lines for on-lending. These lines of credit can be accompanied by credit guarantees that partly cover local banks against losses on loans targeting under-served market segments. Governments and development partners have widely used these instruments to spur lending to MSMEs and sustainable activities (e.g., green investment) through local partners with greater local knowledge. In 2017, intervention in the banking and financial services sector, primarily through guarantees and credit lines, represented roughly 30 per cent of all private finance mobilized through official development finance interventions (see box III.B.3).49 Development financing institutions have begun to examine the impact of lines of credit, although limited data on sustainable development impact makes this difficult to access. There are several risks which could impact the effectiveness of this type of instrument. First, local financial institutions could gain from cheaper funding, but not change their lending practices. Second, the mechanism could crow out other sources of domestic finance. Third, it could create macroeconomic imbalances or overindebtedness, especially when the lending is in foreign currency. Precautions thus need to be taken. First, development finance institutions need to ensure that sufficient information is available on the final beneficiaries of these credit lines (e.g., borrowers from the local banks), for instance by requiring appropriate reporting from these banks. Second, the additionality of credit lines needs to be carefully monitored and assessed to ensure that development bank interventions are contributing to better access to finance for targeted segments and not merely replacing what local financial institutions would have done anyway. A reward system could be introduced to address such risk. For example, the Affirmative Finance Action for Women in Africa (AfAFA) initiative from the African Development Bank offers preferential terms to institutions that provide loan guarantees, well on-precedented objectives regarding women’s access to financing. Third, development banks should provide credit lines in local currencies wherever possible and ensure that credit lines do not result in foreign currency risks being passed on to MSMEs with no capacity to manage them. Finally, credit line effectiveness also depends on complementary measures that make MSME lending sustainable in the long run. These measures include regulatory reforms to improve information on borrower creditworthiness. The last area is changing dramatically due to advances in fintech (see chapter III.G).

4.4 Co-lending / investing platforms

While some investments are best met by local institutions, institutional investors, such as pension funds and insurance companies, hold trillions of dollars in assets that could be brought in support of sustainable development, particularly investments with positive cash flows to repay the investors. However, one of the challenges in mobilizing these investors is the lack of scale in many projects, especially in smaller countries. Most institutional investors cannot afford to spend resources on screening small transactions. Financial instruments that bundle smaller deals together could help provide a solution. Another solution would be to strengthen collaboration between global and local institutional investors.

Box III.B.3 Amounts mobilized from the private sector

Amounts mobilized from the private sector by instrument (2012–2018) (Percentage)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Amounts Mobilized from Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares in Collective Investment Vehicles</td>
<td>15.6</td>
</tr>
<tr>
<td>Syndicated loans</td>
<td>36.1</td>
</tr>
<tr>
<td>Credit lines</td>
<td>29.8</td>
</tr>
<tr>
<td>Simple co-financing</td>
<td>6.4</td>
</tr>
<tr>
<td>Guarantees</td>
<td>80.9</td>
</tr>
<tr>
<td>Direct Investment in companies and SPIFs, 36.3</td>
<td></td>
</tr>
</tbody>
</table>

Source: (a) IFC. Note: Technical assistance is not included, but work is ongoing to capture private finance mobilized through this instrument.

In an effort to enhance transparency and accountability, 27 multilateral development banks (MDBs) and development finance institutions (DFIs) have also reported publicly on their respective mobilization data of private capital since 2016. These institutions follow a common methodology to isolate and jointly report the private capital mobilized in their project activities. The latest report on 2018 data indicates that in low- and middle-income countries, MDBs and DFIs reported over $6 billion in total private mobilization, a 4 per cent increase in total private mobilization for low-income countries over 2017.

a “ODI,” “Amounts mobilized from the private sector by official development finance interventions in 2017–2018” (January 2020).

Development finance institutions have tools to help investors and banks achieve value while reducing transaction costs. For instance, MDBs have operated syndicated-loan programmes for decades, which allow financiers, such as international banks, to participate in MDB loans and benefit from the preferred creditor advantage of MDBs. More recently, the IFC has created the Managed Co-Lending Portfolio Program (MCLP) that serves as a syndication platform and creates diversified portfolios of emerging market private sector loans. As of 2018, the MCLP has raised $7 billion from international banks. The MCLP infrastructure facility—which offers one solution to channel more funding into emerging market infrastructure while demonstrating a path for other investors to follow—allows investors to gain exposure in these markets by co-lending to a portfolio of companies alongside the IFC on commercial terms, while their risk is mitigated through a first-loss tranche. IFC ISD500 is another investment platform launched in 2020 by a coalition of private and public sector organizations, including United Nations entities, which will use debt and equity to bridge the financing gap of businesses in emerging and frontier markets. The platform comprises six funds; each of them will include a catalytic first-loss layer.

4.5 Securitization

Securitization is another way of bundling deals. In these structures, a bank sells a portfolio of loans to investors by issuing a security. In essence, the bank is selling part of its balance sheet of loans to investors. This allows the issuing banks to free up space on its balance sheet, increasing their lending capacity. Such bundling makes use of diversification by combining different assets with idiosyncratic risks. Typically, securitized assets are
Securitization has been a tool to increase lending in the housing market in countries need regulatory and supervisory capacity to issue such instruments effectively. For example, to ensure banks carry out proper diligence in originating loans, they should keep “skin in the game” (i.e., they need to bear part of the loss). Banks also lowered their lending standards, and in some cases, banks sold off their worst performing loans (since investors had more limited information).

Securitizations can be structured to overcome some of these risks, but countries need regulatory and supervisory capacity to issue such instruments effectively. For example, to ensure banks carry out proper diligence in originating loans, they should keep “skin in the game” (i.e., they need to keep a percentage of the loans on their books). The country context matters. Securitization is easier when capital markets are developed. It also looks more promising in countries where banks have large diversified SME lending, which could benefit from securitization to expand their lending capacity. In contrast, securitization is of little use to banks with ample liquidity. A wider application of such financial engineering in developing countries, including risks, warrants more research.

4.6 Insurance and risk guarantees

Investors might be reluctant to invest if certain risks are deemed too high and cannot be properly managed. Insurance and guarantees can provide a solution by enabling the transfer of risk to entities that are better equipped to hold that risk, such as foreign investors or institutions holding diversified portfolios (for example, across several countries or currencies)—any one loss would be compensated by returns on other investments. The following examples illustrate the benefits of diversification at an international level and suggest avenues to further develop instruments:

- **Political risks insurance**: Political risk insurance has long existed to protect private investors from expropriation risks, breach of contract or currency transfer restrictions. Export credit agencies and development institutions, such as MIGA, which are large providers of political risk insurance, can better manage these risks than individual investors since they have a diversified portfolio of political risk across countries. MIGA and other public insurance providers may also be in a better position to resolve potential disputes than private providers, given their relationship with local governments. Demand for political risk insurance is strong: MIGA’s gross exposure almost tripled between 2009 and 2018. To boost MIGA’s capacity, the use of private reinsurance, in which MIGA sells part of its portfolio to a private insurer, could be expanded so MIGA could recycle its capital for more projects. Standardizing contracts and processes could facilitate the sale of political risk at a portfolio level instead of a project-by-project level. Indeed, it is much more complex to pool contracts with different terms and conditions. Another solution to increasing MIGA’s capacity is to allocate concessional resources to support MIGA in advancing risk insurance in countries where it has reached exposure limits, but such use of concessional resources needs to be weighed against other uses.

- **Currency hedging instruments**: When companies with domestic revenues borrow in dollars or other external currencies, they are subject to currency risk (i.e., they are exposed to losses if the local currency devalues). This situation typically arises in markets where local currency financing is not affordable or available at required volumes and maturities, and where hedging instruments do not exist or are prohibitively expensive. In the medium term, the solution is to develop local capital markets. In the near term, a broader array of risk management tools can be used. In particular, diversification across a basket of currencies considerably reduces volatility on a portfolio level (Figure III.B.8) and has proven to be a powerful tool for currency risk management. There are several mechanisms funded by donors based on this principle, including the currency exchange fund (CFE) and the Local Currency Facility (LCF). As multilateral development banks lend across countries, it could be possible for them to increase lending in local currencies by managing local currency risk through diversification, or by offloading the currency risk to a reinsurer/international vehicle. This was noted in the Addis Agenda, in which Member States of the United Nations “encourage development banks to make use of all risk management tools, including through diversification”;

- **Disaster risk insurance**: Natural hazards pose another risk to investment. An important instrument for managing this risk is through insurance, which mitigates it across locations and types of events, again making use of diversification for risk management. Insurers can lay off some of this risk through capital market instruments (i.e., catastrophe bonds), thus freeing up capital for additional underwriting. Moreover, disaster risk insurance faces challenges, as both risks and losses are often difficult to evaluate, especially as climate change is altering the frequency, variability and impact of weather-related disasters. Disaster risk insurance never fully covers the losses from disasters. Of particular concern, frequent losses from small-scale and localized disasters do not cross certain parameters while they erode the capital assets and resilience of businesses and communities. Diversification and the growing availability of data is helping insurers better understand and price disaster risk, which has led to insurance products being offered in areas that were not covered before. In addition, index insurance products, which provide a pre-agreed sum in case specified parameters are met, such as a drought, can be cheaper to operate as there is no need to estimate the actual loss. For example, these can be used to protect small-scale farmers against losses from extreme weather. However, setting the parameters correctly remains challenging. There are cases where companies that buy insurance are not covered during a catastrophic event because certain triggers are not activated. In addition, the products can be expensive and not well understood by consumers. As a result, their uptake has been slow, despite substantial public support. Regulators can try to build trust through consumer protection and information regarding insurance coverage.

Figure III.B.8 Annual fluctuation vis-à-vis US dollar of individual currencies versus a portfolio of currencies (Percentage)

Source: Currency Exchange Fund (TIC)
companies that are at odds with some of the SDGs. For example, a group of institutional investors representing nearly $5 trillion of assets under management—the UN-supported Net Zero Asset Owner Alliance, committed to transitioning their portfolios to zero greenhouse gas (GHG) emissions by 2050. In the banking sector, 110 banks from 49 countries have committed, through the Principles for Responsible Banking launched in 2019, to work with their clients to encourage sustainable practices.

Yet, the private sector transformation is not happening fast enough or at the required scale. Such a transformation will require (i) rethinking corporate governance; (ii) raising public policy ambitions; and (iii) making financial systems a force for change.

5.1 Rethinking corporate governance

Some business leaders have started to rethink their fundamental approach to business. In 2019, CEOs of almost 200 firms, representing nearly 30 per cent of US market capitalization, redefined the purpose of a corporation away from a sole focus on shareholders to include all stakeholders—customers, employees, suppliers, communities and shareholders—based on the idea that each stakeholder is essential to a company’s long-term success. 62 Many companies have also joined initiatives to improve the sustainability of their industry (e.g., the Fashion Industry Charter for Climate Action launched in 2018 and the Getting to Zero Coalition in the maritime shipping sector launched in 2019).

These are important developments, but they alone are unlikely to alter corporate behavior sufficiently, particularly in the absence of proper accountability mechanisms and change in corporate governance (and internal incentives). To give teeth to the shift in focus from “shareholder” to “stakeholder”, corporate boards should make a statement of purpose that recognizes their different stakeholders, and put mechanisms in place to oversee the implementation of this statement of purpose.63 This is similar to the model followed by Certified B Corporations which have been adopted by about 1,300 companies in 44 countries. 64 Media and non-governmental organizations (NGOs) have a critical role to play in monitoring and ensuring that industry commitments deliver results.

Sustainability issues should be discussed at the board level and be part of corporate governance; (ii) raising public policy ambitions; and (iii) making financial systems a force for change.

Sustainability issues should be discussed at the board level and be part of corporate governance; (ii) raising public policy ambitions; and (iii) making financial systems a force for change.

5.2 Raising policy ambitions

Public policies are key to providing incentives for companies to align their businesses with sustainable development objectives. There are already some positive developments: for instance, the number of carbon-pricing initiatives continues to increase, now covering about 20 per cent of GHG emissions. However, in most cases, the price levels remain too low to change behavior (less than 5 per cent of the global emissions are priced at a level compatible with the goals of the Paris Agreement) and there has been public pushback against certain initiatives, such as in gas prices. 65 A carbon price would create a level playing field so that companies that do take carbon goals into account would not be penalized with lower financial returns in the short run. It would also provide incentives to adopt and develop low carbon technologies without being prescriptive about particular technologies. In 2019, if COP25 in Madrid, 661 investors managing over $7.5 trillion called on Governments to put a meaningful price on carbon. 67 In cases where carbon prices might be politically difficult, policymakers should consider offsetting instruments (e.g., distribution of the revenue). At the same time, carbon pricing should be complemented by additional measures. Policymakers can use regulation—such as labour standards, minimum wages, disaster risk reduction and environmental norms—to incentivize companies’ alignment with the SDGs. For example, legislation to regulate the use of plastic bags (put into place in 127 countries since the early 2000s) have triggered a rethink in the package industry and a more circular economy. 68 Similarly, government leadership is needed to ensure, for instance, that human rights are upheld in the context of business activities, including by passing and enforcing legislation to protect workers and affected communities. However, the Corporate Human Rights Benchmark, which assesses 200 of the largest publicly traded companies, underlines that the current level of compliance is distressing, as more than half of the benchmarked companies score less than 20 per cent on a set of human rights indicators. 72

Overall, the level of policy ambition will determine the private sector’s response. Companies may not modify their practices if they are not convinced that Governments will take the required actions to achieve the global goals.

5.3 Making financial systems a force for change

Financial systems can accelerate the private sector transformation towards more sustainability if they are long-term oriented. To date, investors have primarily been interested in sustainability issues for their impact on financial returns. However, those who want their money to also do good in the world, also need to know the answer to this question: what is the impact of investing on the SDGs?

5.3.1 Sustainable development investment definition

There are a wide range of investment strategies used by portfolio managers, with different impacts and levels of sustainability, under the heading of “sustainable investments”. This creates confusion.

A common definition of Sustainable Development Investing (SDI) could help establish norms that differentiate investment strategies and define minimum thresholds that investment strategies and products should meet to qualify as SDI aligned.

Without a common understanding, there is a risk that financial products and strategies are presented as sustainable without making a meaningful contribution to the achievement of the Goals (i.e., so-called green- and SDG-washing). For example, some “sustainable” funds include tobacco or fossil-fuel companies, based on their relatively good ESG performance compared to industry peers, while their impact on sustainable development is at least questionable. A set of common norms could counter the risk of SDG-washing and misleading investment products that use sustainable development as a marketing tool.

For example, the CEF-led Global Investors for Sustainable Development Alliance, convened by the United Nations Secretary-General, has been working on developing such a definition, building on the spectrum of existing investment strategies while respecting existing definitions of impact investing (figure III.B.9).

Figure III.B.9 shows a range of investment strategies that go beyond impact investing, which has “doing good” as an explicit investment objective, and includes strategies focused on financial return maximization that still align portfolios with the SDGs. It separates strategies likely to create positive change from those that are designed only to do no harm (e.g., negative screening) or mitigate investor risks (e.g., ESG integration and engagement).

Once developed, investors could align their investment with a definition and take actions to increase their portfolio allocation to sustainable development. This could create a strong signal to the market. 73 To implement such a definition, investors would benefit from: 74

**Figure III.B.11 Sustainable Development Investing (SDI)**

<table>
<thead>
<tr>
<th>Key features</th>
<th>Impact</th>
<th>Sustainable Development Investing (SDI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address societal challenges by directing private money to good causes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invest with the intention to generate positive, measurable social and environmental impact alongside financial returns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selecting best-performing companies among assets</td>
<td></td>
<td></td>
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<tr>
<td>Integrate ESG factors into investment decision-making</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclude activities or industries with clearly defined negative impacts on environment (e.g., arms)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integrating ESG factors into investment decisions to better manage risks and enhance financial returns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional investing</td>
<td>Impact</td>
<td>Sustainable Development Investing (SDI)</td>
</tr>
<tr>
<td>Address societal challenges by directing private money to good causes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invest in strategies that focus on environmental, social and governance (ESG) factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examine investments in a range of asset classes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: UN DESA and Global Investors for Sustainable Development based on BAA (Responsible Investment Association of Australasia)
An analysis of the MSCI World Index found that 11 and 20 per cent of companies in this index (about 1,700 stocks from 23 countries) have, respectively, a high and medium positive contribution to the SDGs. In this respect, the contribution of a private company to sustainable development also necessitates an understanding of where companies operate and who they serve, especially in particular whether they target countries and people most in need. This is what some methodologies, such as UNEP FI’s Holistic Impact Analysis Tools are starting to do.

In terms of operations, ESG metrics focus on measuring how a company produces (versus the products and services that the company produces). Figure III.B.10 provides a framework to assess whether a company’s products/services and operations are aligned with sustainable development objectives.

**Figure III.B.10** Framework to assess the impact of (listed) companies on the SDGs

- **Products and Services**
  - Sustainable agriculture
  - Medical equipment
  - Water infrastructure
  - Renewable energy
  - Public transportation
  - Affordable housing
  - Weapons
  - Gambling
  - Tobacco
  - Coal power plants
  - Fast food
  - Deforestation
  - Sustainable production
  - Inclusive workforce
  - Gender balance
  - Health and safety
  - Pollution
  - Waste generation
  - Human rights violations
  - Bribery

- **Operations**
  - Number of metric tons of CO2 emissions avoided
  - % of company revenue associated with positive products and services
  - Geographic revenue breakdown
  - % of revenue from products serving low-income groups
  - Industry specific: Number of people with access to financial services in underserved segment of the population (output for the financial industry)

**Examples of possible metrics**

- Environmental area: % of raw materials from sustainable sources, % of recycled materials, % of water recycled, GHG emissions, green building policy
- Social area: % of women in management, number of jobs created / quality of jobs, employee wages and benefits as proportion of revenue, frequency of occupational injuries
- Taxes and other payment to the Government

Data availability is critical, including, for instance, information on the distribution of revenues, jobs and/or investments per business lines and country. Investors can also use technology to look at unreported data, such as from social media and news outlets, and check whether a specific company might be involved in certain controversies incompatible with sustainable development (box III.B.4).

### 5.3.3 Sustainability reporting

**Enhancing corporate disclosure is key to reinforcing accountability framework.**

Policymakers and consumers cannot hold companies accountable without proper information both on social and environmental issues.

**Examples of possible metrics**

- Number of metric tons of CO2 emissions avoided
- % of company revenue associated with positive products and services
- Geographic revenue breakdown
- % of revenue from products serving low-income groups
- Industry specific: Number of people with access to financial services in underserved segment of the population (output for the financial industry)

**Examples of possible metrics**

- Environmental area: % of raw materials from sustainable sources, % of recycled materials, % of water recycled, GHG emissions, green building policy
- Social area: % of women in management, number of jobs created / quality of jobs, employee wages and benefits as proportion of revenue, frequency of occupational injuries
- Taxes and other payment to the Government

**Table III.B.4** Leverage technology to assess the SDG footprint of the private sector

<table>
<thead>
<tr>
<th>Score (0 (min) to +1 (max))</th>
<th>0.05</th>
<th>0.15</th>
<th>0.25</th>
<th>0.50</th>
<th>0.75</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>2015</td>
<td>2016</td>
<td>2017</td>
<td>2018</td>
<td>2019</td>
</tr>
</tbody>
</table>

There are two main challenges with using self-reported data by companies. First, data might be biased once companies are likely to report only on positive elements. Second, data are updated infrequently (typically once a year). This makes them less relevant for investors who need to react quickly to emerging negative sustainability issues.

**Artificial Intelligence (AI) and natural language processing help address these challenges by analyzing and interpreting unstructured data from thousands of sources, in multiple languages, such as news, social media, regulatory filings, government reports, blogs, industry-specific publications, and NGO websites. To analyze these data, an algorithm uses a sustainable development goals (SDGs) taxonomy to identify relevant SDG-related information across large amounts of unstructured content. The algorithms can then extract, filter, and analyze text and syntax structure to detect positive and negative signals on SDG issues. The resulting time series data can then be transformed into SDG scores.**

**Figure III.B.4.1** Illustrates how AI can be used to monitor the SDG footprint of private companies over time, and shows a relative improvement in the way corporates are integrating SDG considerations.

Increasing transparency is a powerful mechanism to trigger changes. The Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD) recommends companies disclose the impacts of climate-related risks on their business, taking into consideration different climate-related scenarios. As of February 2020, support for the TCFD has grown to over 1,000 organizations, representing a market capitalization of nearly $12 trillion. Yet, the implementation of TCFD recommendations remains partial. Only about 25 per cent of companies disclosed information aligned with more than 5 of the 11 recommended disclosures (based on a review of 1,100 companies from 142 countries). Similar to climate risks, other sustainability issues can be financially material. The Sustainability Accounting Standards Board (SASB) has identified which sustainability issues are likely to impact the financial condition or operating performance of a company by industry. Investors use this information to guide their decisions. As an example, Blackrock, the world’s largest asset manager is aligning the companies that they invest in to publish a disclosure in line with industry-specific SASB guidelines and disclose climate-related risks in line with TCFD recommendations. As more investors follow Blackrock’s lead, corporates will need to be more transparent on sustainability questions to attract capital.

Increasing transparency is a powerful mechanism to trigger changes. Figure III.B.11 provides evidence that what gets measured, gets managed. Countries with the highest level of disclosure are the countries where companies rank the highest in terms of environmental, social and governance performance.

**Financial materiality has so far been the compass for deciding what companies should be disclosing (i.e., a company needs to disclose events or facts that could impact its financial performance and would affect the judgment of investors). However, if corporates are accountable not just to investors but to a broader audience, this compass also needs to cover information required to understand the impact of companies’ activity on issues that matter to the whole society, such as the global goals.**

The largely voluntary nature of sustainability reporting is also problematic. While standards from the Global Reporting Initiative (GRI) are widely used, some investors can still choose to report only on positive results and avoid communicating on negative impacts. The time has come to shift from voluntary to mandatory sustainability reporting, building on industry-led efforts and reporting standards which provide a better understanding of how such reporting can be efficiently done. Mandatory reporting also helps create a level playing field for all.

To ensure a minimal level of disclosure, as well as consistency among metrics used for corporate reporting on SDG impact, policymakers could include in reporting requirements a list of criteria, possibly per industry. To this end, they could, for instance, use the guidance issued by UKTCO on core indicators for entity reporting on contribution towards the implementation of the SDGs, as well as the GRI standards. The former contains 33 indicators on companies economic, environmental, social and governance performance, which are common to all businesses, such as of...
To structure policy actions, Governments can develop a strategy to charge of implementing it. This creates a momentum and support from assigned to a multi-stakeholder committee composed of several ministries, and work place safety among others. Several case studies have confirmed the applicability of these core indicators in different geographical areas, for stakeholder consultations that are necessary before the adoption of regulations or policy reforms. Governments have also established expert representatives from civil society. This kind of platform creates a structure to come up with recommendations to scale up sustainable finance. For example, Canada created an expert panel on sustainable finance in 2018, which outlines fifteen recommendations to mobilizing finance for sustainable growth.94 Central bankers are also considering how to address financial stability risk that sustainability issues may create (see chapter II.6).

These initiatives have led to concrete results. For example, forty-eight pension funds and insurance companies, known as fiduciaries, consider ESG factors into their investment policies to ensure that these issues particularly over long investment time horizons, regulation should explicitly require that pension funds and insurance companies, known as fiduciaries, consider these factors in their investment decisions. Regulation should also include disclosure requirements from pension funds to explain how they incorporate ESG factors into their investment policies to ensure that these issues are sufficiently considered and that beneficiaries are properly informed. It is equally important to make it mandatory for financial advisors and fiducia- ries to ask their clients/beneficiaries about their sustainability preferences and empower people in their financing decisions. Technological advance- ment should be leveraged to strengthen communication between clients and those who manage money on their behalf.

water, energy, generation of waste and carbon emissions, gender equality and work place safety among others. Several case studies have confirmed the applicability of these core indicators in different geographical areas, industries and companies of different sizes.90

S.3.4 Sustainable finance strategies

To structure policy actions, Governments can develop a strategy to promote sustainable finance and considerdesigning an institution in charge of implementing it. This creates a momentum and support from within a Government. For example, in 2016, public authorities in China issued guidelines for establishing the green financial system, which resulted in major progress in green financial products and standards. In the same vein, at least ten countries have adopted a national strategy for impact investing.93 In Brazil, the implementation of such a strategy is assigned to a multi-stakeholder committee composed of several ministries, development and commercial banks, financial market regulators and representatives from civil society. This kind of platform creates a structure for stakeholder consultations that are necessary before the adoption of regulations or policy reforms. Governments have also established expert panels to come up with recommendations to scale up sustainable finance. For example, Canada created an expert panel on sustainable finance in 2018, which outlines fifteen recommendations to mobilizing finance for sustainable growth.94 Central bankers are also considering how to address financial stability risk that sustainability issues may create (see chapter II.6).

These initiatives have led to concrete results. For example, forty-eight of the world’s 50 largest economies now have some form of policy to foster investors to consider sustainability issues.95 Since there is growing evidence that some ESG factors are financially material,94 particularly over long investment time horizons, regulation should explicitly require that pension funds and insurance companies, known as fiduciaries, consider these factors in their investment decisions. Regulation should also include disclosure requirements from pension funds to explain how they incorpora- te ESG factors into their investment policies to ensure that these issues are sufficiently considered and that beneficiaries are properly informed. It is equally important to make it mandatory for financial advisors and fiducia- ries to ask their clients/beneficiaries about their sustainability preferences and empower people in their financing decisions. Technological advance- ment should be leveraged to strengthen communication between clients and those who manage money on their behalf.

Endnotes

1 World Bank, Global Economic Prospects: Heightened Tensions, Sapped Development (Washington, D.C., World Bank, 2019). Investment activity refers here to real gross fixed capital formation (public and private) and outlook is based on surveys.


7 The Index Industry Association, “BA-2019 Index Survey Snapshots”. ESG-based indices are constructed using ESG rating.


16 See Better Work. Available at https://betterwork.org/.


18 See for example the Coalition for Disaster Resilient Infrastructure for more information on the topic (https://resilinfra.org/).


24 Consultative Group to Assist the Poor, “How Digital Finance Boosts Access to Basic Services”.


28 SME Finance Forum, “MSME Finance Gap”.


34 See the Entrepreneurship Policy Framework and Implementation Guidance developed by UNCTAD for further details.


In contrast to securitization, synthetic securitization is relatively less complex and only transfers the credit risks of a loan portfolio to another investor without the ownership (i.e., the loans remain on the balance sheet of the originating bank).

There have been approximately 150 donor-supported weather index insurance pilots alone but there have not been many pilots maturing into sustainable programmes. World Bank, “What Can Index Insurance Offer to Development?” (10 November 2016).

For example, through UNDP’s Private Sector Alliance for Disaster-resilient Societies (ARISE), over 250 companies in 25 countries have integrated disaster risk reduction and resilience into their business models to guide corporate behavior.


The 2030 Agenda for Sustainable Development will place significant demands on public budgets and capacities that require scaled-up and more effective international support, including both concessional and non-concessional financing. Yet, in 2018, official development assistance (ODA) declined by 4.3 per cent and remains well below the 0.7 per cent commitment in the Addis Agenda. The decline was due in large part to a decrease in financing for refugees in donor countries; however, gross ODA to least developed countries (LDCs) also fell by 2.2 per cent in real terms. The Inter-agency Task Force on Financing for Development calls on ODA providers to reverse the decline in ODA, particularly to LDCs, and strongly reiterates previous calls for ODA providers to step up their efforts to meet commitments made in the Addis Ababa Action Agenda.

South-South cooperation (SSC) continues to expand in scope, volume and geographical reach. As the role of SSC and triangular cooperation deepens, documenting its added value and impact on sustainable development by relevant stakeholders could further support implementation of the Sustainable Development Goals.

The Addis Agenda also recognizes the important role of development banks in implementation of the 2030 Agenda. In 2019, several multilateral development banks (MDBs) completed successful capital replenishments. In addition, some MDBs have taken steps to raise additional resources through innovative mechanisms. Other development financial institutions (DFIs) can learn from innovative efforts to raise additional resources, including risks that need to be managed. MDBs have also increased efforts to align activities with the Addis and 2030 Agendas.

These activities should be continued and stepped up to fully align activities with the 2030 Agenda, including harmonizing gender-equality monitoring indicators.

The recent spread of the coronavirus has also raised questions on whether available resources are sufficient to help countries prevent and respond to epidemics and pandemics. Experience from responses to disasters and other hazards indicate the need for ex ante financing instruments, which are efficient, predictable and quick-dispensing and build incentives for risk reduction into their design. This includes an increased focus on investing in disaster risk reduction, including epidemic and pandemic prevention and preparedness.

This chapter also explores a range of public finance instruments to raise resources for the Sustainable Development Goals (SDGs) in the context of international development cooperation, building on the financial instruments laid out in chapter III.B. Such public finance instruments are not panaceas to fill the investment gap, but can be useful tools to make aid more effective and leverage other types of finance when appropriate.

Blended finance is one instrument that has received significant attention. While blended finance has grown rapidly, the evidence on its development impact is less robust. Most blended finance currently goes to middle-income countries, motivated by the size and ease of transactions, with only a small portion going to LDCs, in part because blended finance is not appropriate for all investments or activities. To increase effectiveness, concessional resources should be allocated where the need and impact are greatest. Blended finance needs to switch from a search for bankability to a search for impact, based on country needs and ownership, with judicious use of blending in circumstances where it is determined to be the best suited tool. Capacity development support towards these efforts can help countries identify and apply appropriate instruments.

In the next 10 years, many developing countries are expected to transition to higher income per capita status. Higher incomes can be translated into tangible SDGs progress. Nonetheless, this positive news comes with challenges, especially for graduates that are highly vulnerable to climatic events and other disasters, as graduating countries may lose access to concessional finance windows. In response, ODA providers are including greater flexibilities for these types of vulnerabilities and for conflict/
The fall in gross ODA disbursements was due in large part to a fall in (INFFs) can be a useful tool to improve the effectiveness of development cooperation by matching plans, strategies and resources. This chapter starts by examining trends in international development cooperation. As requested in the 2019 ECOSOC Financing for Development Forum outcome document, the chapter then takes a more in-depth look into two areas: (i) public finance instruments to strengthen the effectiveness of development cooperation and (ii) challenges countries face in graduation from concessional finance windows. It concludes with an update on development cooperation effectiveness.

2. Trends in international development cooperation

2.1 Official development assistance

In 2018, ODA provided by members of the Organization for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) amounted to $153 billion, as calculated by the new OECD grant-equivalent methodology (box III.C.1). The 2018 figure is equivalent to 0.31 per cent of the combined gross national income (GNI) of the DAC, well below the United Nations target of 0.7 per cent. Five DAC members (Denmark, Luxembourg, Norway, Sweden and the United Kingdom of Great Britain and Northern Ireland) met or exceeded the 0.7 per cent target. Using the previous cash-flow methodology for comparative analysis, total net ODA to developing countries fell by 4.3 per cent in 2018 (figure III.C.1). ODA to LDCs fell by 2.1 per cent and accounted for only 0.09 per cent of DAC members’ GNI, below the 0.15-0.20 per cent DAC target. The same five DAC members that met the 0.7 per cent target also met the target for LDCs. ODA to Africa, landlocked developing countries (LLDCs) and small island developing States (SIDS) all fell by 1.8, 8.9 and 2.1 per cent, respectively (figure III.C.1).

ODA allocation

The fall in gross ODA disbursements was due in large part to a fall in ODA for refugees in donor countries (figure III.C.2). Country programmable aid (CPA), which is provided cross-border to countries and regions just excludes donor refugee costs, humanitarian aid, debt relief, and administrative costs, increased slightly, by 0.3 per cent. However, in LDCs, LLDCs and African countries, CPA fell by 1.1, 7.1 and 2.1 per cent, respectively (figure III.C.2). The allocation of ODA should align with country priorities and plans (see section 4). The slight increase in CPA in 2017 was led by higher disbursements in the social sector versus a decline in production sectors (figure III.C.3). In particular, CPA to the education subsector increased for all country groups.

ODA concessuality

Grants make up the majority of bilateral ODA to developing countries (83 per cent), followed by concessional loans (16 per cent) and equity investment (1 per cent) (figure III.C.4). This composition has been relatively unchanged since 2015, although there have been some changes to the sectoral allocation (figure III.C.5). Since 2015, there has been a slight fall in grant financing to the social sectors, though there are still more than 10 per cent grant financed, with production sectors being about 60 per cent grant financed. There is less grant financing channelled into the economic sectors, which are more often able to generate their own revenue streams and are almost two thirds financed by concessional loans.

ODA to LDCs, SIDS and LLDCs are largely in the form of grants—90, 91 and 99 per cent, respectively. However, since 2015, there has been a decline in concessionality for LDCs and LLDCs (figure III.C.6). For LDCs, concessionality fell across all sectors, although the decline was more pronounced in economic sectors, particularly for projects related to transport and storage. Measuring official development assistance for the Sustainable Development Goals

To better track the contribution of ODA to the SDGs, the OECD is introducing an SDG tracker, which uses artificial intelligence to link ODA and other development flows to the SDGs. For example, according to the tracker, in 2017, 16 per cent of gross ODA disbursements by DAC members were dedicated to the achievement of SDG 10 (reduced inequalities), 11 per cent towards SDG 3 (good health and well-being), and 10 per cent each to SDGs 2 (zero hunger), SDG 16 (peace, justice and strong institutions) and SDG 17 (partnership) (figure III.C.6).

The breakdown of ODA by SDGs is derived from a machine-learning algorithm based on the creditor reporting system (CRS) database. To link the projects to the SDGs, the algorithm “reads” the textual description of each aid project, identifies patterns of text attributed to ODA and links to a project to one, zero or multiple SDGs. The OECD will also continue to measure the SDG alignment of official development finance more broadly,

and also refine the algorithm going forward. Quality checks and verification against other markers are being assessed to fine-tune the results, as this is how the algorithm may underestimate SDGs to cross-cutting areas, such as gender. For example, according to the CRS gender marker on preliminary figures, bilateral aid focused on gender equality and women’s empowerment is increasing, accounting for 46 per cent of total bilateral allocable aid in 2018 (figure III.C.7), well above the SDG tracker’s performance. However, the CRS gender marker found that programmes dedicated to gender equality and women’s empowerment as the principal objective amounted to 4.5 per cent of DAC members’ total aid, which is more in line with the machine-learning algorithm results.

2.2 Humanitarian finance

In 2019, humanitarian response plans and appeals coordinated by the United Nations required $29.7 billion, of which $18 billion (61 per cent) was received. Together with additional funding contributions outside these responder plans and appeals, global humanitarian funding reported was $34.1 billion.2 The 2016 Grand Bargain made by 18 donor countries and 16 aid organizations to improve the efficiency and effectiveness of humanitarian finance has resulted in substantial progress. Improvements were made in cash programming, multi-year collaborative and flexible planning, funding, harmonized reporting, as well as enhanced coordination.4 However, there are remaining challenges to further consolidating efforts and reducing bureaucracy to meet the full potential of the Grand Bargain.5

2.3 Multilateral development banks

The Addis Agenda also calls on MDBs to better leverage their balance sheets to increase lending for sustainable development, as well as to align their policies in support of the 2030 Agenda.

Figure III.C.1: Total Net ODA by DAC members by country group on a cash basis, 2015–2018 (Billions of United States dollars, 2017 constant prices)

Figure III.C.2: Net ODA by DAC donors to least developed countries (LDCs) and landlocked developing countries (LLDCs) by recipient country group, 2015–2018 (Billions of United States dollars, 2017 constant prices)

Source: OECD/DAC data.
Box III.C.1
Official development assistance modernization and total official support for sustainable development

Official development assistance modernization

In 2019, the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee (DAC) introduced a change to the methodology to calculate official development assistance (ODA), based on the 2014 DAC decisions. From 2018, ODA is calculated using a grant-equivalent measure. Under the old cash-flow methodology, the full face value of a loan was counted as ODA and repayments were subtracted when they were paid out. The new grant-equivalent methodology calculates the grant portion of a loan by calculating the amount of lending that is concessional (i.e., below market rates), rather than including the full face value. Future repayments are not subtracted from the ODA total.

The 2018 figures start a new grant-equivalent ODA series, as the new grant-equivalent figure is not comparable with historical ODA data. However, the OECD will continue to publish ODA data on a cash basis to allow analysis of trends over time. The change in the methodology resulted in slightly higher gross ODA levels (by 2.5 per cent).

Total official support for sustainable development

Initiated by the OECD, total official support for sustainable development (TOSSD) is a statistical framework for measuring official external resources and private finance mobilized by official interventions, in support of sustainable development and the Sustainable Development Goals (SDGs). The TOSSD framework aims to capture both cross-border resource flows to recipient countries, as well as data on resources invested to support development enablers, international public goods (e.g., climate change) and to address global challenges.

Following the call by the Addis Ababa Action Agenda to develop TOSSD in an open, inclusive and transparent way, the OECD established an International Task Force in July 2017 to develop the TOSSD statistical methodology. In June 2019, the Task Force finalized the first version of the TOSSD methodology. A TOSSD data survey was also carried out, to which 43 countries and organizations responded, identifying new activities that were not previously reported in OECD statistics.

The Inter-agency and Expert Group on SDG Indicators agreed that it would be beneficial to include an additional indicator in the SDGs global indicator framework to measure development support in the broadest sense that goes beyond ODA. However, the Expert Group was not fully in agreement with the TOSSD data survey was also carried out, to which 43 countries and organizations responded, identifying new activities that were not previously reported in OECD statistics.

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In 2018, total lending by MDBs rose 4.7 per cent to $71.9 billion (figure III.C.8). Concessional lending, primarily from the International Development Association (IDA), accounted for about 18 per cent of the total (figure III.C.8), with the major recipients being LDCs (67 per cent).

In December 2019, IDA was successfully replenished with $82 billion for the fiscal years 2021-2023 (IDA19), with the major recipients being LDCs (67 per cent). Concessional lending, primarily from the International Development Association (IDA), accounted for about 18 per cent of the total (figure III.C.8), with the major recipients being LDCs (67 per cent). In December 2019, IDA was successfully replenished with $82 billion for the 2021-2023 replenishment in 2016. Also, in 2019, shareholders of the AfDB approved a $15 billion capital increase, the largest since its establishment in 1964.7 The African Development Fund, the concessional fund of the AfDB, was also replenished by $7.6 billion for the 2020-2022 period, an increase of 32 percent from the previous cycle.8

Optimization of resources

The Addis Ababa Action Agenda calls on MDBs to make optimal use of their balance sheets to increase lending. In 2019, several MDBs agreed...
to a common “value for money” framework to optimize their resources. MDBs have already taken several actions in this area, including merging concessional windows with ordinary capital; securitizing balance sheets; and insuring or reinsuring risks. For example, the merger of the windows of the Asian Development Bank (ADB) is expected to increase annual loan and grant approvals by over 50 per cent, to over $20 billion by 2020. The AfDB synthetic security (see section 3.2) made space for $650 million more in loans. The AfDB and African Trade Insurance completed a credit insurance deal worth $550 million to cover non-sovereign loans, which made headroom of $400 million. The European Bank for Reconstruction and Development (EBRD) has used unfunded risk participations, where privately owned insurance or reinsurance companies take on the risk exposure of a portion of EBRD loans, signing €1.2 billion worth of deals since 2014, including over €500 million in 2019. Mobilization of private finance is one of the indicators of the common framework. The total amount mobilized by MDBs amounted to $69.4

### Figures

**Figure III.C.4** Gross bilateral ODA disbursements to country groups by instrument on a cash basis, 2018/2015 (Percentage of total)

**Figure III.C.5** Gross bilateral ODA disbursements to country groups by instrument and selected sectors on a cash basis, 2018/2015 (Percentage of total)

**Figure III.C.6** Gross ODA disbursements by SDGs, 2017 (Percentage of total)

**Figure III.C.7** ODA to gender equality and women’s empowerment, 2015–2018 (Billions of United States dollars, 2017 constant prices)

**Figure III.C.8** Lending by multilateral development banks, 2015–2018 (Billions of United States dollars, current)

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**Source:** OECD/DAC data.

**Source:** OECD/DAC financing lab based on OECD/DAC data.

**Source:** OECD/DAC data.

**Source:** World Bank, International Debt Statistics.
billion, which includes direct and indirect mobilization. Direct mobilization totalled $20.2 billion in 2018, similar to 2017, with $2.9 billion for LDCs and other low-income countries.15 (See section 3.1). MOBs also recognize the importance of gender equality as one of the indicators in the common framework, with an MOB Working Group on Gender looking to strengthen harmonization of indicators.16 These efforts are similar to those currently considered by the United Nations system, following recommendations by a High-Level Task Force on Financing for Gender Equality.

Addressing debt risk

Many low-income countries that borrow from MOBs concessional have the dual challenges of managing raising resources and rising debt levels (see chapter B1.5). For example, more than one third of IDA countries are at high risk of or in debt distress. To help countries manage this risk, the World Bank will replace its non-concessional borrowing policy with the Sustainable Development Finance Policy (SDFP).17 The objective of the SDFP is to incentivize countries to borrow sustainably and promote coordination between IDA and other creditors in support of borrowing countries’ efforts. On the demand side, a Debt Sustainability Enabling Environment Program (DSEEP) aims to incentivize countries with elevated debt vulnerabilities to implement concrete policies and performance actions (PPAs) that advance their climate action.18

2.4 Climate finance

According to the Standing Committee on Finance of the United Nations Framework Convention on Climate Change (UNFCCC), climate-specific finance provided through bilateral and multilateral channels reported by developed countries to developing countries amounted to $58 billion in 2016.19 More recent estimates by the OECD signal an increasing trend in both public flows and mobilized private flows for climate action, including to LDCs and SIDS.20 Climate finance remains skewed towards mitigation compared to adaptation activities, except in the case of LDCs and SIDS where financing is more balanced.21 The majority of climate finance is provided through loans, with grant financing making up a quarter of public climate finance (figure III.C.9).

MOB22 climate finance commitments rose by 22 per cent over the year to $54 billion in 2018.23 The MOB recently announced that it would no longer finance coal projects, joining the World Bank Group (WBG), EBIO and European Investment Bank (EBI) that have explicit policies in this area. The ADB and Asian Infrastructure Investment Bank (AIIB) also made statements that they do not intend to finance coal.24 In addition, the EIB announced that it would end all fossil fuel lending by 2022.25 At the United Nations Climate Change Conference (COP25), held in Madrid in December 2019, MOBs indicated that the full implementation of the past framework for aligning activities with the goals of the Paris Agreement would be implemented by 2023-2024.26

In October 2019, 27 countries pledged to replenish the Green Climate Fund (GCF) by $5.78 billion—equivalent to funding for the next four years—up from $3.1 billion in the previous pledging conference in 2017.27 As of November 2019, the GCF had approved total funding of $5.6 billion for 124 projects and programmes, with co-financing of $15 billion.28 LDCs, SIDS and African States accounted for 25 per cent, 18 per cent and 39 per cent of approved projects, respectively.29

MOBs and climate finance funds can also capitalize on the unique role of national development banks, including through the International Development Finance Club, to crowd in the private sector or intermediate funds. Even as climate finance flows increase, enhancing access and improving its effectiveness remain critical. The accreditation process remains complex, time-consuming and disjointed, making it difficult for developing countries to access, especially those with limited technical capacity.30 Despite efforts, a more coordinated and complementary approach by bilateral and multilateral agencies is required to overcome the complex and fragmented climate finance architecture.31 As women are often disproportionately affected by the climate crisis, gender perspectives should be incorporated into operational and policy frameworks, as GCF has demonstrated from the outset.32 More broadly, it is important that development cooperation activities are aligned with climate action and that development financing activities do not undermine sustainable development.33

2.5 Emergency health finance

The spread of the coronavirus (COVID-19) has raised questions of whether resources are sufficient. The World Health Organization (WHO) estimated that it needed $6.75 million to combat COVID-19. By mid-2020, WHO received $1.24 million. WHO also received $1.15 million from the Central Emergency Response Fund (CERF) and $5.9 million from the Contingency Fund for Emergencies (CFE).34 The CERF is a grant-making facility established in 2006 to fund very early responses to humanitarian emergencies and to support humanitarian response activities, while the CFE gives WHO the resources to respond quickly to disease outbreaks and humanitarian crises with health consequences. Other mechanisms to address pandemics include the World Bank Pandemic Emergency Financing Facility (PEF) (section III.1). However, there are concerns over the sustainability of these mechanisms, due to the limited support by donors. For example, only three donors account for most of the funding to the CERF (75 per cent) and PEF (300 per cent).35

The World Bank has made available a $14 billion package of fast-track financing to assist countries and companies in their efforts to respond to COVID-19, as well as a number of other facilities that countries can potentially access during crises, including the Contingent Emergency Response Components (CERCs), the “Catastrophe Defrauded Drawdown Option” (see section III.3), and the Crisis Response Window (CRW) for IDA-eligible countries. The IMF has also made available rapid-disbursing emergency financing of about $10 billion for low-income members and $40 billion for emerging markets. In addition, the IMF is providing eligible countries up-front grants for relief on IMF debt service, but this facility is currently undersubscribed with just over $200 million available against possible needs of over $1 billion.36 Other MOBs have also announced COVID-19 response packages to assist countries—EBIO ($60 billion),37 ADB ($6.5 billion),38 Inter-American Development Bank (IDB) ($2 billion)39 and Islamic Development Bank (IDB) ($2 billion).40

The rapid spread of the COVID-19 outbreak and its impact on global economic activity raises questions about funding in prevention and risk reduction, and also economic costs. Given these challenges, the need for much greater investment in disaster management and early warning is therefore needed, particularly in the form of ODA in LDCs and SIDS, to build technical and governance capacities, share technologies, and strengthen data for an integrated and systems approach to risk reduction.

3. Public finance cooperation

Public finance instruments aim to raise resources for sustainable development and increase the effectiveness of development cooperation. While some of the mechanisms discussed in this section overlap with the trends laid out in section 2 above (e.g., concessional finance from DAC donors used in these instruments is generally included in ODA statistics), these “innovative instruments” are meant to complement existing forms of development cooperation.41 The concept of innovative public finance in development cooperation has evolved considerably since Member States of the United Nations agreed in the Monterrey Consensus in 2002 to explore such measures. While the earlier discussions on innovative finance highlighted solidarity taxes to raise resources, along with measures to better manage aid flows (e.g., ODA securitization), more recent discussions have focused on leveraging private finance (e.g., blended finance) and sustainable investments (e.g., green bonds). Yet, as noted in the Addis Agenda, some earlier innovative instruments still have the potential to be replicated and scaled up.

Figure III.C.9 Climate finance instruments (Percentage)

Source: OECD, Climate Finance Provided and Mobilized by Developed Countries in 2013-17 (Paris, 2019).
Note: SPV – special purpose vehicle.

<table>
<thead>
<tr>
<th>Public climate finance</th>
<th>Mobilized private finance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment in funds</td>
<td>Simple co-financing schemes</td>
</tr>
<tr>
<td>Guaranteed 1%</td>
<td>3%</td>
</tr>
<tr>
<td>Equity 2%</td>
<td>3%</td>
</tr>
<tr>
<td>Unspecified 0%</td>
<td>3%</td>
</tr>
<tr>
<td>Credit line 12%</td>
<td>3%</td>
</tr>
<tr>
<td>Direct investment in SPVs and companies 52%</td>
<td>3%</td>
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31 Blended finance

Blended finance, which uses public funds to crowd in private finance, has been used for decades, although interest in it has grown since the adoption of the Addis Agenda. This type of funding is most relevant for investments necessary for sustainable development (i.e., those that have social returns), which are not attracting private investment but still have a business rationale and potential cash flows to repay the private partner. The objective is to unlock investment that the private sector would not have done on its own in support of national development priorities, and do so with minimum concessionality or subsidy (i.e., just enough to make a difference in risk perceptions).

The Addis Agenda also calls on countries to share risk and returns fairly in blended finance. This implies that if there are deals with high upside potential, the public entity should use instruments with equity-like characteristics that allow it to share in the upside, then use those gains to fund other investment (see chapter III.B for an in-depth discussion on different instruments). Blended finance deals should also be disaster risk informed, clearly defining the risk reducing roles and responsibilities of the public and private sector to attract sufficient private investment, while ensuring the public sector is not overly burdened by stranded assets in the event of a disaster. Yet, even though blended finance has grown rapidly, it has largely bypassed LDCs. Approximately $9.3 billion—or 6 per cent of the $157 billion private finance mobilized between 2012 and 2017—went to LDCs. Blended finance deals in LDCs also tend to mobilize less private finance. The average private finance mobilized in LDCs is $6.1 million per deal, compared to $27 million in lower-middle-income countries and $661 million in upper-middle-income countries. The low proportion of deals in LDCs (as well as in conflict and post-conflict countries) highlights the fact that blended finance, like private finance, is drawn to areas with lower barriers to private capital mobilization. It can also indicate a tendency of blended finance to focus on less costly projects with lower risk profiles, and potentially lower developmental impacts.

The implication could be that, rather than trying to scale up existing types of blended finance transactions, a different approach may be needed. The approach should also be based on understanding where the impediments to investment are, before deals are extended. Integrated national financing frameworks, which include binding constraint analyses—such as the country private sector diagnostics by the International Finance Corporation (IFC)—can be helpful in this process. This approach should be firmly grounded in country ownership. Projects that are aligned with national priorities and plans, and that involve local and national actors, are much more likely to have long-lasting impacts.

Different groups of actors have defined principles for blending for their own activities, which are in line with principles put forward in the Addis Agenda (box III.C.2). These include the 2017 OECD DAC Blended Finance Principles for Unlocking Commerical Finance for the SDGs, which were endorsed by the OECD-DAC, and the 2017 DFID Working Group Enhanced Blended Concession Finance Principles.

Building on these principles, countries and development partners should take a six-stage approach to blending: (i) develop a country blending strategy linked to country needs; (ii) focus on development impact (a search for impact, rather than a search for bankability); (iii) measure the cost of blending versus other financing structures; (iv) account for complementary investment; (v) provide capacity development; and (vi) ensure transparency and impact reporting, participation, and monitoring throughout the life of a project.

For example, while blended finance projects have often mobilized additional finance, they have generally had only a modest impact on poverty. However, even more often, the developmental impact is unknown, due to weak monitoring and reporting and poor transparency. The implication could be that, rather than trying to scale-up existing types of blended finance transactions, a different approach may be needed. The approach should also be based on understanding where the impediments to investment are, before deals are extended. Integrated national financing frameworks, which include binding constraint analyses—such as the country private sector diagnostics by the International Finance Corporation (IFC)—can be helpful in this process. This approach should be firmly grounded in country ownership. Projects that are aligned with national priorities and plans, and that involve local and national actors, are much more likely to have long-lasting impacts.

Box III.C.2 Principles for blended finance, extracted from the Addis Ababa Action Agenda

1. Appropriate use (i.e., financial and developmental additivity)
2. Sharing risks and rewards fairly
3. Alignment with sustainable development
4. Clear accountability mechanisms
5. Transparency
6. Participation, particularly of local communities, in decisions affecting their communities
7. Effective management, accounting, budgeting for contingent liabilities, and debt sustainability
8. Alignment with national priorities, promotion of country ownership and other relevant principles of effective development cooperation


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justification for each project as there were concerns over the way it was providing subsidies to companies under the $2.5 billion IDA Private Sector Window. For blended finance to become more standardized, effective, and sustainable, more work needs to be done, in line with broader efforts to improve impact reporting.

To further efforts in blended finance, the OECD, DFI Working Group, and Indonesia and other Governments are advancing the Inclusive Karuna Roadmap for Blended Finance through five working groups converging good practices, transparency, and inclusive markets and impacts.

3.2 Restructuring cash flows

In the mid-2000s, the Lending Group on Innovative Financing for Development introduced several initiatives that were based on restructuring cash flows, building on innovations in private markets. Most of these mechanisms aim to make development cooperation more effective, rather than simply raise resources (although the most recent effort—MDB securitization—raises additional resources for development). As these instruments engage in some form of what is often referred to as financial engineering, all of them also impact incentives, with some of them (e.g., advanced market commitments) designed for this purpose. The aim should be to ensure that any changes in incentives are aligned with sustainable development.

Securitization

Securitization, which converts illiquid assets into marketable securities, has been used in at least two ways in development cooperation: (i) securitization of MDB loan portfolios to increase the MDB borrowing capacity and (ii) securitization of ODA flows to support investments that have large upfront financing needs. MDB securitization, pioneered by the ADB (see section 2.3) responds to the Addis Ababa call for MDBs to make better use of their balance sheets. Similar to securitization in financial markets (see chapter II.B), this involves an MBD securitizing (and selling) a portion of its loan portfolio to bondholders. While the MDB gets paid upfront, future loan repayments go to repay the bondholders. The MBD offsets some of the risk of default to the bondholders, allowing the MBD to further increase its lending. Although MDB securitization does not have the same characteristics as mortgage or auto-backed securities (which are comprised of diversified portfolios of thousands of small loans), there are still potential risks to this approach. In particular, there are questions as to how a sovereign’s borrowings are treated in the case of default (i.e., who does the bondholder have the same incentives as the development bank to work with the borrower (who could be a sovereign) or to reinstate the loan, when feasible?). (see chapter III.E).

There is also a risk that MDB loan officers, who are sometimes judged by deal volume and performance, will have an incentive to lower credit standards when they know the loans will be sold to a third party.

To address these issues, the ADB created a synthetic securitization, that is, the loans remain on the ADB balance sheet until they reach maturity. The ADB then pays any payment to the creditor to the bondholders. To further align incentives, the ADB retained 10 per cent of every securitized loan. This is similar to auto-backed structures in private markets, where, following the financial crisis, issuers have been required to hold on to a portion of debt to “keep some skin in the game.” In scaling up securitization structures, it will be important to learn from both the successes and

challenges of early experiences, including setting the appropriate retention percentage.

In ODA securitization, future ODA commitments are securitized into tradable bonds to fund development needs today. The financing model of the Global Alliance for Vaccines and Immunization (Gavi) provides the most successful example of securitization of ODA commitments.63 The Gavi International Finance Facility for Immunization (IFFIm) raised $6.1 billion through offerings on vaccine bonds in the capital markets between 2006 and 2019 [figure III.C.11].64 Rather than making annual ODA payments to the Government, 10 sovereign sponsors used their ODA annual commitments to tap the bond markets. While this financing model does not provide additional resources, it front-loads future payments. The nature of immunization campaigns provides a strong rationale for front-loading resources, as immunization campaigns need to reach a threshold level of immunization rates (between 75 and 95 per cent) to effectively curb the transmission of the disease.65

Although the Addis Agenda encourages the replication of instruments such as IFFIm, there has not been much success in this area. In part, this reflects challenges associated with creating IFFIm-type structures, which require legally binding, multi-year aid commitments from donors, which some donors find difficult to accommodate in their budget systems; commitments are normally recorded when they are made rather than when they are due. Yet, the successful example of IFFIm shows that this is possible. In the context of the 2030 Agenda, this type of structure could be useful in areas that need front-loading, such as infrastructure investments, potentially as part of blended finance deals.

Advance market commitments

Advance market commitment (AMC) is another innovation that was pioneered in the health sector in the 2000s. Pharmaceutical companies do not necessarily have incentives to develop drugs for diseases that are predominant in developing countries, where many people cannot afford to buy the drugs. In AMCs, donors agree in advance to purchase drugs at a predetermined price, thus guaranteeing a market, and incentivizing the drugs’ development.

The pilot AMC was established in 2009 for pneumococcal vaccines, with donors agreeing to $1.5 billion in long-term purchase commitments to encourage the development and production of affordable vaccines tailored to the needs of developing countries.66 The programme proved to be extremely successful, with 59 countries introducing pneumococcal vaccines.

Despite this success, AMCs have not replicated in other contexts. This could be due to potentially high research and development (R&D) costs and uncertainty fulfilling product specifications once developed.67 The pneumococcal vaccine, for example, was already in late stages of development in 2001, before the initiation of the AMC. Others have also argued that AMCs favour large multinationals over disease researchers at non-profit and public research organizations, and that AMCs buy vaccines already developed rather than accelerate research.68 Nonetheless, AMCs remain an option to spur R&D, and could be explored in areas of new technologies, for example, in digitalization, agriculture, and water scarcity.69

3.3 Instruments for risk management

Risk pooling instruments are one of several options, which can be part of a broader risk reduction financing strategy. Institutional pooled funds and insurance-like instruments can play complementary roles; and greater provision of international resources to both types of instruments could bring benefits and greater efficiency compared to the current practice of ex post disaster response.

Catastrophe risk pooling

International risk pooling, whether in multiple-country insurance, loans, or grant facilities, is an advantage of international cooperation. By grouping together well-diversified risks into a single risk pool, the cost of insurance (and thus the premiums that participants pay) can be reduced. While the resources provided by insurance after a disaster are not sufficient to address all economic losses, they can provide quick financing for emergency response and be designed to align incentives for disaster risk reduction.

Since 2003, 32 countries, many of which are SIDS, have joined catastrophe risk pools in three regions through the Caribbean Catastrophe Risk
3.4 Pooled funds
A related innovation in development cooperation is funds that pool public and private resources for a specific issue or theme. To date, these funds have been used primarily for health- and climate-related international and global public goods.76 These funds link funding and visible outcomes (results focused), are transparent and appeal to development partners and the public through clear goals.77 They can also attract private donors and are a major mechanism for philantropic flows, such as the Bill and Melinda Gates Foundation (BGF).

In the health sector, the Global Fund for AIDS, Tuberculosis and Malaria (Global Fund) and Gavi accounted for almost a quarter of total ODA for health between 2015 and 2017 (Figure III.C.10). In 2019, the Global Fund was replenished by $14.0 billion for the 2020-2022 period,78 while Gavi is seeking a replenishment of at least $7.4 billion for 2020 in the 2021-2023 period.

In the climate space, there is a proliferation of funds.79 The UNFCCC has several dedicated climate funds, including the Global Environment Facility (GEF), the Adaptation Fund, the Global Environment Facility (GEF), the LDC Fund and Special Climate Change Fund. Outside the UNFCCC financial mechanism, there are many climate-related funds managed by various United Nations agencies and multilateral banks.

Despite their success in mobilizing resources, global funds are criticized for contributing to the fragmentation of the aid architecture.80 These issues are quite apparent in the complex climate finance architecture, given the numerous funds, different implementing agencies, and bureaucratic processes, which make it difficult for countries, especially LDCs and SIDS, to access climate funds. These funds are strongest when they can help build capacity in countries that inherently compiles past events, they might need to be adjusted to address narrowly defined triggers. Because they are based on big data, they can help with premium payments—such as for IDA countries in the case of climate change. Catastrophe bonds (CAT bonds) enable sponsors to transfer catastrophe risk to capital markets.81

Catastrophe bonds (CAT bonds) enable sponsors to transfer catastrophe risk to capital markets through a special purpose vehicle that provides protection like an insurance policy. Since 2006, the World Bank, in collaboration with its partners, has issued several catastrophe bonds, including a pandemic bond of $425 million in 2017.82 The PEF, a catastrophe bond issued by the Caribbean Development Bank (CDB) in 2015, was one of the first to be triggered by a disaster. The PEF, a parametric-based insurance programme funded by the Caribbean Development Bank (CDB), was designed to disburse funding quickly to stop outbreaks of dangerous diseases. However, the PEF was not triggered during the Ebola outbreak in Democratic Republic of Congo in 2018.83

Another mechanism, the World Bank’s “Catastrophe Deferred Drawdown Option,” is a contingent line of credit that provides immediate liquidity to countries upon the declarations of a state of emergency in the aftermath of a disaster. Countries need to be preapproved based on a disaster risk management programme and macroeconomic framework.79

3.5 Additional mechanisms to raise new resources for development cooperation

Solidarity taxes
Coordinated internationally but implemented nationally, a solidarity tax is levied to provide funding towards a public good. Solidarity taxes (e.g., carbon taxes) are often designed to also impact incentives. The most successful international solidarity tax is a levy on airline tickets pioneered and implemented by France, and currently also applied by two other countries, funds UNITAID, a global health initiative that invests in innovations to prevent, diagnose and treat HIV/AIDS, tuberculosis and malaria. Between 2006 and 2018, 62 per cent of the $3.1 billion contributions to UNITAID came from an airline ticket.84

A second initiative, UNFCCC, was launched in 2015 to help finance the fight against malnutrition in sub-Saharan Africa. Initial plans for the initiative to be funded by a micro-levy on the extractive industries were not successful,85 and it is now looking to be funded through micro or small donations through digital platforms.86

Proposals for a financial transaction tax (FTT)—a tiny tax on transactions, such as equity trades, bonds, currencies or derivatives—to finance development have also not materialized. Many countries have imposed FTTS for domestic resource mobilization purposes but generally do not earmark proceeds for international development.87

Innovative bonds instruments
Green bonds and similar instruments, such as SDG-linked bonds, have grown significantly since the IMF and the World Bank issued the first green bond in 2007-2008. The World Bank was also the first to issue an SDGs bond in 2017. MDB issuance of such bonds helped to build a broader green bond market. NDBs and development partners have also supported government issuance (e.g., the Seychelles’ “blue bond”) to support sustainable marine and fisheries projects.88 (A discussion of green bonds and related instruments can be found in chapter III.B.)

4. Graduation and access to concessional finance

As developing countries graduate to higher income per capita status, access to grants and concessional finance windows declines. Terms of finance can become more expensive, including both higher borrowing costs and shorter maturities. The situation is particularly challenging for those graduates that are highly vulnerable to external shocks and disasters, especially extreme weather events, which can cause countries’ development prospects to backslide.89

4.1 Impact of graduation

In the context of international development cooperation, “graduation” can refer to three separate events: graduation from concessional assistance, from ODA status, and from ODA eligibility. A key determining factor of all three contexts is a country’s per capita income, although other factors are also considered (see table III.C.2). Graduation from concessional assistance, especially the concessional windows at MDBs, is based primarily on per capita income, along with creditworthiness. Graduation from ODA status is based on income per capita, vulnerability and the level of human assets. Graduation from ODA eligibility is based on income per capita alone. Countries’ access to concessional finance from bilateral providers and some global funds may also be impacted as income per capita rises.

Impact of income graduation
Recent research indicates that despite the loss of access to some sources of concessional finance, reaching middle-income status does not necessarily
result in countries’ per capita income growing above the low-income threshold, and only falls when countries reach upper-middle-income or high-income country levels.

Nevertheless, ODA falls as a percentage of gross domestic product (GDP) of countries’ incomes grow. Even though tax revenues rise in per capita terms, total public finance as a percentage of GDP declines—the so-called “missing middle challenge.”

The evidence on the depth and breadth of this challenge is mixed in this area, with some countries experiencing this problem, while others appear to have overcome it. Those countries that were able to overcome the financing gap generally did so over time, tax revenues did not necessarily increase consistently, and there were periods when tax revenue and ODA both fell. For some countries, it took tax revenues more than 10 years to rise sufficiently to offset the decline in concessional finance relative to GDP. In addition, countries faced higher interest rates and shorter maturities on new borrowing, and almost a quarter faced debt sustainability issues.

One country studied reported reaching upper-middle-income and high-income levels, they are generally in better positions to withstand declines in ODA, as many have been less dependent on aid for a longer period and their economies have developed considerably since graduation from low-income status.

### Impact of graduation from multi-lateral concessional assistance: the case of IDA graduation

To date, 44 countries have graduated from IDA, the majority of which graduated in the 1970s. Twelve countries have reversed graduation, i.e., they have re-gained access to IDA, with three eventually graduating twice and remaining maintaining access to IDA.

IDA graduation is an important and highly visible signal influencing the action of other donors, excluding other MDBs whose instruments are closely aligned to IDA graduation criteria (see table III.C.2). A multi-stage graduation process is triggered when per capita income exceeds an operational cut-off, currently ≤$1,175, at which point a country is no longer eligible for IDA grants.

Once a country is assessed as being IDA and IDB creditworthy (based on political risk, debt burdens, growth prospects and other factors), IDB financing is phased in. The process typically takes multiple years and is accompanied by a graduation task force that aims to ensure a smooth path of transition. IDA graduates continued receiving ODA well after graduation, albeit with more expensive terms of finance

IDA graduation and transition policy was recently reviewed and strengthened to provide better transitional support to IDA graduates. The small island economies, which has been in place since 1985, allows small island economies (populations less than 1.5 million) continued access to IDA.

In 2017, it was extended to IDA-eleigible small states, which benefited Bhutan, Djibouti, Gambia and Timor-Leste. In 2019, this was further extended to IDA-only small island economies based on income, vulnerability and creditworthiness criteria, which benefited Fiji. An exceptional allowance was also made to Jordan and Lebanon, in response to the Syrian refugee crisis. The World Bank is also exploring providing recent IDA graduates access to the IDA Crisis Response Window (CRW) and regional programme during IDA19. These windows provide additional resources to help eligible countries respond to severe economic crises, as well as major humanitarian and climate disasters.

**Impact of graduation from multilateral concessional assistance: the case of IDA graduation**

To date, five countries have graduated from LDC status: Botswana (1994), Cape Verde (2007), Maldives (2011), Samoa (2014) and Equatorial Guinea (2015). In 2019, this was further extended to remaining old but below cut-off countries.

Graduation from the global health funds was tied to a country’s income level and grew in importance to low- and lower-middle-income countries, although upper-middle-income countries have access to the Global Fund depending on disease burden (see table III.C.2). At the end of 2019, nine countries had graduated from the Global Fund, while 19 countries have graduated from GAVI.

Both health funds have made efforts to review and update their eligibility, transition and graduation policies to account for the challenges that countries face with graduation, including allowing for reverse graduation.

Co-financing requirements that gradually increase with income per capita also support countries’ transition out of support. However, although countries are expected to make up for the loss in concessional funds from public budgets, the mobilization to replace donor funding was relatively minimal (less than 1 per cent of GDP).

For the global health graduates, a major concern is the simultaneous graduation of countries from several global health funds, as well as from IDA (e.g., Cameroon, Nigeria and Pakistan) and LDC status (e.g., Sao Tome and Principe). This underscores the need for a coordinated approach and systematic perspective to graduation plans, aligned with health sector strategies on universal health coverage.

**International Development Cooperation**

When a country graduates from the DAC ODA list, aid receipts are no longer reported in official ODA statistics. However, ODA graduates can and do receive concessional support, albeit to varying degrees. EU members still receive grants from the EU through the Cohesion Fund. Barbados and Timor-Leste have also received grants under the European Development Fund. Few exceptions are indications that ODA graduates may still require support, despite reaching a higher level of income per capita, underscoring that the level of development is not necessarily synonymous with the level of income, as development is a complex, continuous process that can be reversible.

The challenges faced by countries transitioning to upper-middle-income or high-income status and graduating from ODA have led some providers to rethink international cooperation, moving from graduation to graduation.
4.2 Addressing vulnerability and building resilience

The impact of the increased frequency and intensity of climatic events and other hazards can be set back years of progress for some graduating countries. Member States of the United Nations have invited development partners to use LIC indicators, including vulnerability, as criteria for allocating donor support.120 ODA providers have generally been responsive to graduates’ vulnerability to climatic events (and conflict/political instability), albeit in a reactive way. A more proactive and systematic approach in transition support to deal with vulnerability and building the resilience of all graduates can smooth the transition process and help more countries achieve the SDGs. SIDS are considered some of the most vulnerable countries, particularly to natural disasters and climate change.121 and are sensitive to the impact of graduation in all contexts.122 The majority of SIDS are upper-middle-income countries: seven have graduated from ODA, with two more expected to graduate by 2021. Exceptional and targeted concessional support for SIDS has been crucial in their smooth transitions. As noted, IDA and several regional development banks’ concessional facility includes exceptions that allow small island developing States to access concessional funding even if they exceed income thresholds. The World Bank recently used vulnerability criteria among other indicators to extend its IDA small economy exemption and is considering opening access to the CRW to recent ODA graduates.123 SIDS that have graduated from ODA also continue to access the European Development Fund, which uses an economic vulnerability index in its country allocations formula 124. Spurred by the major hurricanes that hit several Caribbean islands in 2017, the OECD/IDA agreed to rules that would make it possible for countries to become renounced for ODA eligibility if their per capita income fell below the World Bank’s high-income threshold for one year. However, the DAC continues to negotiate an agreement on a process to allow temporary access to countries following a catastrophic humanitarian event.

The graduation process is also an opportunity to strengthen support to countries on disaster risk reduction. Graduating countries should have disaster risk reduction strategies in place, supported by disaster risk reduction financing strategies that inform integrated national financing frameworks (INFFs). These lessons inform strategies for graduating countries and partners: First, planning prior to graduation is needed to ensure a holistic and pragmatic approach to transition. Simultaneous graduations underscore the need to plan the sequence and magnitude of the different elements of graduation. This requires a coordinated approach and systemic-wide perspective. It includes a disaster risk strategy and investing in appropriate infrastructure. INFFs,125 including using the OECD transition finance toolkit,126 can help link financing to development/transition strategies and ensure gaps that require transition support.

Second, capacity development prior to graduation is important across sectors. It should be targeted at areas where financing and programmatic gaps might be most critical. This varies by country but would often include strengthening domestic resource mobilization, public financial and debt management, financing for disaster risk reduction, and strengthening governance and institutional capacity, including the enabling business environment for private investment. Countries may benefit from non-traditional modalities of support and technical assistance, including through peer learning, South-South cooperation and triangular cooperation. As countries establish INFFs, associated shifts are likely needed in coordination structures and mutual accountability mechanisms to consider more diverse finance sources and a plurality of partners. Access to reliable information on development finance is important for effective development planning and budgeting, as well as accountability, as maintained through parliamentary oversight. However, most countries currently lack capacity to monitor implementation with only 15 per cent of Governments having data and systems to track implementation of national strategies. A recent survey also indicates that the majority of development finance support to parliamentary scrutiny has fallen.130 Despite considerable strengthening in developing countries’ planning processes, development partners’ alignment to country priorities and country-owned results frameworks is declining.131 In 2018, while 81 per cent of new projects have objectives aligned to country priorities, only 59 per cent of results indicators are drawn from country-owned results frameworks, and only 50 per cent align with their statistics and monitoring systems. Countries also report that medium-term predictability is declining, with limited provision of forward expenditure and implementation plans by development partners.132

While developing-country Governments have strengthened their public financial management systems, including through gender budgeting, development partners increased their use only marginally. In 2018, 51 per cent of new country development cooperation disbursements to the public sector used country systems, compared to 49 per cent in 2010. In addition, while the share of untied ODA increased from 81 per cent in 2015 to 82 per cent in 2018, progress has been uneven across development partners and does not reach all partner countries. However, ODA is not fully untied in practice, with contracts being largely awarded to companies based in DAC countries.133

5. Multi-stakeholder partnerships

Effective multi-stakeholder partnerships can support implementation of the SDGs, including through IFIs, by bringing together different sectors, approaches (public service mandate, people focused or market based), and complementary resources (technological, human, social or economic).134 One challenge is to ensure civil society organisations (CSO) participation, which often faces capacity limitations, as well as limitations on effectiveness.135 Concurrent action by developing countries and development partners can support CSOs as equal partners, bringing knowledge of local development needs and priorities.

The growing interest within the development cooperation community to partner with the private sector to deliver better development solutions places greater focus on the effectiveness and development impact of such engagements (see discussion in section 3.1). The Kampala Principles are a collective effort to promote country ownership, a focus on results and targeted impact, inclusive dialogue, learning, and scaling up successes, as well as recognizing and sharing risks among all partners to ensure greater impact on those furthest behind first.136

Endnotes


4. Ibid.

5. Ibid.


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20 Ibid.

21 Group of MDBs composed of ADB, AFR, EBRD, EIB, IDB, the Islamic Development Bank and WBG.


28 Ibid.


30 Ibid.

31 Laise Schaltke and Smita Rakhsha, “Gender and Climate Finance,” Climate Finance Fundamentals (Overseas Development Institute and Henrik Boll Stiftung, November 2016).


34 World Bank Group, “Pandemic Preparedness Financing, Status Update,” September 2019


103 Ibid.
104 IDA, “IDA18 Post-Mid-Term Review Amendments, Review of the Small Island Economies Exception and IDA18 Exceptional Allocation to Jordan and Lebanon” (World Bank, April 4, 2019).
111 See Katafeso, “The Impact of Graduation on Countries’ Access to Official Development Assistance.”
112 Ibid.
113 Global Fund and Gavi, as well as from the United States’ President’s Emergency Plan for AIDS Relief and Global Polio Eradication Initiative.
116 Although Bahamas does not receive bilateral support from the EDF, it is eligible to draw on EU support for regional and thematic programmes.
118 United Nations Economic Commission for Latin America and the Caribbean (ECLAC) and OECD, “Emerging Challenges and Shifting Paradigms - New Perspectives on International Co-operation for Development” (Santiago, 2018).
120 General Assembly Resolution A/RES/72/213 para 41.
126 Rachael Calleja and Anna Lisa Prizzon, “Moving Away from Aid, The Experience of Chile,” (Overseas Development Institute, December 2019).
130 Ibid.
131 Ibid.
132 Ibid.
International trade as an engine for development

1. Key messages and recommendations

International trade has contributed to economic growth, poverty reduction and private financial flows across countries supported by strong international cooperation, embodied in the multilateral trading system. Recent trade tensions have challenged the way international trade works. Additionally, the COVID-19 crisis will have a significant impact on trade, particularly trade in services. Any response to the crisis that would further advance protectionism will contribute to slow down post-crisis recovery.

Despite its considerable achievements, the multilateral trading system faces challenges today on a scale unseen for decades. Over the past two years, Governments have introduced trade restrictions covering a substantial amount of international trade. This trend needs to be reversed. Governments need to show strong collective leadership and coordination in curbing the imposition of new trade-restrictive measures and reducing the accumulated stock of restrictions.

Another major challenge for the multilateral trading system is the paralysis of the World Trade Organization’s (WTO) Appellate Body, which no longer has enough members to rule on trade disputes. It is important for WTO members to identify potential solutions to the current gridlock. At the same time, some members have agreed to work on interim options to keep a two-stage dispute settlement mechanism operational while a more permanent solution is agreed.

The multilateral response to these formidable challenges will shape the course of the global economy for decades to come. Many members have shown a clear willingness to preserve and strengthen the global trading system under the WTO. They need to turn these words into action.

WTO reform should make the multilateral trading system more reactive to twenty-first century geoeconomic realities so it can continue its important role in delivering the 2030 Agenda for Sustainable Development. For instance, WTO members are working on new trade rules aimed at reducing harmful fishing subsidies that cause overfishing and overcapacity. Agriculture negotiations, which have historically been an important issue for developing countries, have also been reenergized. Groups of WTO members are also exploring potential future rules on investment facilitation, e-commerce and domestic regulations on services trade, as well as on micro, small and medium-sized enterprises, and empowering women in the world economy. The WTO Twelfth Ministerial Conference, to be held in Kazakhstan in June 2020, will be a landmark for these efforts.

To enhance the contribution of international trade to sustainable development, immediate action to address two other issues must be taken by the international community. The first is to put in place measures to address the ongoing challenges faced by least developed countries (LDCs) in international trade. This may include agreeing on possible follow-up to SDG target 17.11, which calls for doubling the LDC share in global trade by 2020. Such follow-up would include building trade and productive capacities so that the provision of preferential market access to LDCs can contribute more to export growth as well as economic diversification. This would require continual supportive mechanisms such as Aid for Trade and the Enhanced Integrated Framework. Countries which graduate from the LDC category in the coming years could also be provided with temporary market access provisions to ensure a smooth transition and reduce the impact of a sudden loss of preferences.

The second is to upscale actions at the national and the international levels to better distribute the gains from trade. For example, the introduction of new technology plays a significant role in helping smaller producers and businesses receive gains from international trade (e.g., through e-commerce). Empowerment through digital technologies can also foster the upward mobility of women beyond the informal sector.
To help small-scale producers and businesses reap opportunities from e-commerce and the digital economy, international support must be increased, including in the form of Aid for Trade, to improve the physical and institutional e-commerce readiness of developing countries. Any comprehensive rules on e-commerce being explored should also effectively address specific needs of developing countries. Making trade more inclusive also requires addressing trade finance gaps that disproportionally affect smaller companies and impede the ability of countries to seize all trade opportunities that would otherwise be available. Multilateral efforts to address trade finance gaps cooperatively need to continue, including helping local banks leverage technology to digitalize paper-intensive products and streamline verification processes. One possible channel to enhance the positive impact of trade upon inclusive and sustainable development is through sustainable bilateral agreements and regional trade agreements (RTAs) and/or international investment agreements (IIAs). Newer generations of such agreements are designed with a sustainable development orientation, such as economic empowerment of women, respect of basic human rights, and environmental sustainability. New or renegotiated agreements should address synergies between trade, investment and socioeconomic and environmental policy, as well as possible negative linkages, and aim to distribute economic gains from trade to those who need it most, including smaller producers and businesses in developing countries.

2. Developments in international trade

2.1 Trends in world trade

The value of international trade in 2018 continued to grow, following a strong rebound in 2017 from the negative growth experienced in the previous years. The total value of trade in goods and services reached $24.5 trillion in 2018, representing about one third of global output. The value of South-South trade in goods reached $5.6 trillion in 2018, its highest level since 2011. As shown in figure III.D.1, the global trade-to-output ratio, an indicator of the degree of globalization of economic activity, also rose, from 27 per cent in 2017 to almost 29 per cent in 2018.1

While most online shoppers buy from domestic suppliers, some 21 per cent, or 277 million people, made a cross-border purchase in 2017, up from 15 per cent in 2015.2 Cross-border B2C e-commerce sales, measured by the value of merchandise exports, is estimated to have reached $412 billion in 2017—about 11 per cent of total B2C e-commerce sales, up from 7 per cent in 2015. E-commerce is expected to spread widely in the coming years, due partly to the increasing use of mobile money, particularly in developing countries (see chapter III.B).

By reducing the trade costs associated with distance, e-commerce allows businesses, big and small, to reach a broader network of buyers; access the most competitive suppliers; tap into global markets; and participate in global value chains (GVCs). But, transforming this potential into reality is not automatic. Currently, wide variations in e-commerce readiness between and within countries enhance the risk of benefits from e-commerce being unequally distributed.4 In particular, Internet access costs, combined with network reliability and quality of e-commerce related service, continue to be a major barrier for e-commerce in many developing countries.

2.2 Least developed countries in international trade

The share of LDC exports in global merchandise trade remained marginal, at just above 1 per cent in 2018 (figure III.D.3). As regards services trade, LDCs recorded significant year-on-year growth, reaching a global share of 6 per cent at the end of December 2018. Yet, the speed of growth falls short of achieving SDG target 17.11—that is, doubling the share of LDCs in global exports by 2020. Using the year 2011

Note:

1. Preliminary data for 2019, however, suggests that the value of total trade contracted by 1 per cent from the previous year, with initial forecasts for 2020 and 2021 indicating moderate growth if ongoing trade tensions among major economies are contained and the international trading environment regains stability. However, these forecasts require a downward revision considering the impact of COVID-19 crisis upon international trade flows. The crisis could result in at least a 55 billion decrease in merchandise exports across global value chains according to preliminary estimates.2 Trade in services, particularly those involving the physical movement of persons such as tourism and transport, will also be significantly affected. Prior to the crisis, the trade tensions between China and the United States of America have been a significant trigger of the global trade decline. Trade between the world’s two largest economies fell sharply in 2019 (figure III.D.2). Bilateral export growth turned negative at the end of 2018 and shrank by more than 10 per cent during the first nine months of 2019.

2. Other economies’ export growth showed a much more moderate decline. This pattern contrasts with that of the trade slowdown in 2015 and 2016, when bilateral trade between China and the United States fared better, on average, than trade in the rest of the world.

3. Commodity prices also impact the value of merchandise trade and showed a mixed pattern in 2018. For example, food prices fell on average by 6.5 per cent from 2017, while fuel prices rose by 21.5 per cent.3 In the first half of 2019, commodity prices were quite volatile.4 Although modest compared to the $19 trillion value of world trade in goods, the value of world trade in services reached $5.5 trillion in 2018, more than doubling its 2015 value. The categories of services exports that increased most included travel, transport, and information and communications technology (ICT). Developing countries are becoming important suppliers of goods-related services, business services and ICT services.

4. Global exports of ICT services and digitally deliverable services—services delivered remotely through ICT networks—have grown particularly quickly. In 2018, exports of digitally deliverable services, at $2.9 trillion, accounted for 10 per cent of global services exports. Among LDCs, such services more than tripled between 2005 and 2018, to reach an estimated 16 per cent of total services exports.5

5. The spread of ICT services also enhances the rapid growth of e-commerce (i.e., in-country and cross-border buying and selling of goods and services using the Internet). The United Nations Conference on Trade and Development (UNCTAD) estimates that the global value of e-commerce grew by 13 per cent in 2017, to reach $2.3 trillion, corresponding to 7.1 per cent of the world gross domestic product (GDP).6 Global business-to-business (B2B) e-commerce represents 87 per cent of this amount, while business-to-consumers (B2C) e-commerce accounts for the rest. The top three countries in B2C e-commerce sales were China, the United States, and the United Kingdom of Great Britain and Northern Ireland. While most online shoppers buy from domestic suppliers, some 21 per cent, or 277 million people, made a cross-border purchase in 2017, up from 15 per cent in 2015. Cross-border B2C e-commerce sales, measured by the value of merchandise exports, is estimated to have reached $412 billion in 2017—about 11 per cent of total B2C e-commerce sales, up from 7 per cent in 2015. E-commerce is expected to spread widely in the coming years, due partly to the increasing use of mobile money, particularly in developing countries (see chapter III.B).

6. By reducing the trade costs associated with distance, e-commerce allows businesses, big and small, to reach a broader network of buyers; access the most competitive suppliers; tap into global markets; and participate in global value chains (GVCs). But, transforming this potential into reality is not automatic. Currently, wide variations in e-commerce readiness between and within countries enhance the risk of benefits from e-commerce being unequally distributed.4 In particular, Internet access costs, combined with network reliability and quality of e-commerce related service, continue to be a major barrier for e-commerce in many developing countries.

7. LDCs recorded significant year-on-year growth, reaching a global share of 6 per cent at the end of December 2018. Yet, the speed of growth falls short of achieving SDG target 17.11—that is, doubling the share of LDCs in global exports by 2020. Using the year 2011
Trade restrictions and facilitation continue to affect trade prospects and could significantly change the structure of GVCs. WTO members implemented 102 new trade-restrictive measures from mid-October 2018 to mid-October 2019. While this represents a decrease in the number of trade-restrictive measures from the previous year, the trade coverage of import-restrictive measures is estimated at $746.9 billion, a 27 per cent increase from the 2017-2018 period and the highest recorded figure since October 2012 (figure III.D.4). Measures included tariff increases, bans, quantitative restrictions, stricter customs procedures, import taxes and export duties.

The stockpile of import restrictions implemented since 2009, and still in force, suggests that 7.5 per cent of world imports are affected by import restrictions implemented over the last decade. Although WTO members implemented 120 measures aimed at facilitating trade, the trade coverage of export-restrictive measures implemented is estimated at $544.7 billion, approximately $200 billion less than the coverage of new trade-restrictive measures. These measures largely reduced or eliminated tariffs, export duties and import taxes.

Non-tariff measures (NTMs), which include technical and regulatory requirements, can also be trade-distorting and substantially increase trade costs. Trade costs of NTMs are estimated to be more than double that of ordinary customs tariffs, estimated to be up to 1.4 per cent of global GPF or $1.4 trillion. At the firm level, business surveys conducted by the International Trade Centre show that 56 per cent of the exporters in Asia and the Pacific and 44 per cent in the Middle East and North Africa regions are affected by NTMs.15 Sanitary and phytosanitary (SPS) measures and technical barriers to trade account for the bulk of NTMs. The difficulties for companies do not originate solely from the strictness of regulatory requirements, but also from related administrative procedures. Common issues include unharmonized product standards among close regional partners, inability to prove compliance due to insufficient laboratory facilities in the country, and lack of information on market requirements. The added costs of complying with NTMs are disproportionately higher for small and medium-sized enterprises (SMEs), who lack the financial and human resources to overcome them.

NTMs have become a key concern for traders as well as for trade policymakers aiming to ensure that trade continues to support sustainable development. Capacity-building support is critical to helping developing countries address challenges emerging from such NTMs. For example, the Standards and Trade Development Facility helps developing countries gain and maintain access to markets by building SPS capacity. This facility promotes global collaboration on electronic SPS certification, which aims to improve efficiency and scrutiny, as well as to reduce time and costs to trade.16 As shown in figure III.D.5, animal, vegetable and food sectors are particularly affected by NTMs. These sectors face, on average, 11 NTMs per tariff line, compared to 6 or less in other product sectors. Prevalence of NTMs in agrifood sectors is particularly high among developing economies (figure III.D.6). The effect of NTMs is thus often harsher for low-income countries, particularly those whose export basket is tilted towards agricultural products, and for small firms.17

Second, support measures to help LDCs accelerate horizontal and vertical diversification, including into service sectors, must be upscale. The provision of preferential market access to LDCs on a transparent, stable and predictable basis remains essential for this purpose. In this context, it would be useful if there were an internationally agreed guideline for appropriate transitory market access provisions for countries that graduate from the LDC category (see chapter III.C).

2.3 Trade restriction and facilitation

Trade tension and uncertainty continue to affect trade prospects and could significantly change the structure of GVCs. WTO members implemented 102 new trade-restrictive measures from mid-October 2018 to mid-October 2019. While this represents a decrease in the number of trade-restrictive measures from the previous year, the trade coverage of import-restrictive measures is estimated at $746.9 billion, a 27 per cent increase from the 2017-2018 period and the highest recorded figure since October 2012 (figure III.D.4). Measures included tariff increases, bans, quantitative restrictions, stricter customs procedures, import taxes and export duties.

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3. The multilateral trading system

The multilateral trading system overseen by the WTO has contributed significantly to the unprecedented economic development that has taken place over the last decades. Greater certainty over trade policies creates predictability that allows long-term business planning and investment. The recent erosion of predictability and certainty has made the system’s value more evident. However, the system is now in jeopardy.

### 3.1 Progress on multilateral trade negotiations and WTO reform

WTO rules are an important means for pursuing inclusive trade and economic growth. One of the core principles that underpin the functioning of the multilateral trading system is that of non-discrimination. The most favoured nation and national treatment provisions of the WTO prohibit arbitrary discrimination among trading partners and promote an inclusive approach to the sharing of benefits from government trade concessions.

These benefits should not be taken for granted. For the WTO to keep working and delivering on development goals, the system needs to be supported and strengthened.

There are several challenges to the system’s ability to keep on functioning as it has in the past. These include the marked increase in trade-restrictive measures—often referred to as trade wars—and the impasse over the Appellate Body, which is weakening the ability of WTO to resolve trade disputes among members.

To address these challenges, WTO members have already started working on strengthening mechanisms of cooperation and building confidence in the trading system, through reforms aimed at updating the WTO rulebook and the ways the organization operates. These efforts for reform cover all the main functions of the organization.

The first is the dispute settlement and addressing the impasse in the appointments to the Appellate Body. This is of utmost importance in preserving the rules-based trading system which protects all WTO members, and makes sure that the rules remain enforceable. A well-functioning dispute settlement mechanism benefits all members that rely on the rule of law to defend their trade interests.

The dispute settlement mechanism suffered a setback at the end of 2019 when members could not agree on reforms for the Appellate Body. Since then, consultative meetings with members have started to identify potential solutions. At the same time, many members are weighing an array of creative interim options to keep two-stage dispute settlement operational while a permanent arrangement is found. In particular, a group of WTO members had agreed in January 2020 to work together to put in place a transitional mechanism for appeals of WTO panel reports in disputes among themselves.

The second area of focus is on improving the regular work of the WTO councils and committees. These bodies monitor how members observe the WTO rules. This is of the utmost importance in preserving the rules-based trading system which protects all WTO members, and makes sure that the rules remain enforceable. A well-functioning dispute settlement mechanism benefits all members that rely on the rule of law to defend their trade interests.

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The international community beyond the WTO also needs to consider how to enhance cooperation and coordination in this area to effectively enforce competition rules and regulations for digital platforms—such as interoperability, data sharing, open standards, and the global economy. Negotiations will continue in 2020 with the aim of reaching a consolidated text by MC12.

Outside the multilateral trading system, ensuring a truly inclusive digital revolution that facilitates the participation of smaller players in the global economy will require providing support to small business owners to take advantage of digital technologies. It also requires tackling complex and sensitive issues, such as privacy, Internet neutrality, consumer protection and data flows. The lack of clear legal and regulatory frameworks on these issues can undermine confidence in online trade and erode consumer trust. The international community beyond the WTO also needs to consider how competition policies can be used to prevent trade gains from being disproportionately captured by big businesses, such as online marketplace platforms. It is important to ensure not only free but also fair competition in digital markets, where small firms face challenges in their contractual relationship with big platforms. Competition law provisions on unfair trade practices and abuse of superior bargaining position would empower national competition authorities in protecting the interests of smaller firms vis-à-vis big businesses. Pro-competition rules and regulations for digital markets platforms—such as interoperability, data sharing, open standards and data portability frameworks—would promote competition in these markets. There is a clear need for regional and/or international cooperation and coordination in this area to effectively enforce competition rules in support of smaller firms.

### 4. Bilateral and regional trade and investment agreements

#### 4.1 Bilateral and regional trade agreements

According to the WTO Regional Trade Agreements Database, 304 regional trade agreements (RTAs) are in force as of February 2020, as compared to 291 in January 2019.

Among developed economies, the European Union (EU) has formed large-scale bilateral free trade agreements (FTAs) with developed-country partners, which include the Canada–EU Comprehensive Economic and Trade Agreement (provisional application started in September 2017) and the EU–Japan Economic Partnership Agreement (entered into force in February 2019). The United States renegotiated its existing RTAs, such as the US-Korea Free Trade Agreement (September 2016), the US-Mexico-Canada Agreement (previously NAFTA) (USMCA, 30 November 2018), and signed new ones such as the US-Japan Trade Agreement (September 2019). While the United States withdrew from the Trans-Pacific Partnership (TPP) Agreement, it has been revived to become the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) by the other original TPP signatories. The CPTPP entered into force on 30 December 2018.

RTA negotiations have intensified through South-South and South-North configurations as well. The members of the Association of Southeast Asian Nations (ASEAN) along with six regional partners have been negotiating the Regional Comprehensive Economic Partnership Agreement (RCEP) since 2012. In November 2019, India suggested it would stay out of RCEP. If India decides to remain in RCEP, it would create a game in terms of population, combined GDP and trade. Meanwhile, the negotiations on the African Continental Free Trade Area (AfCFTA) were concluded in March 2018. The AfCFTA creates a market comprising more than 1.3 billion people and a combined national income of $2.5 trillion (see box III.D.2). To facilitate the monitoring of AfCFTA implementation and address data gaps, the development of the African Trade Observatory was agreed in 2019.

The African Continental Free Trade Area (AfCFTA) entered into force on 30 May 2019, following the deposit of the instrument of ratification by the twenty-seven African Union member states. The Agreement has been ambitious from the start, with negotiations launched in July 2017. In terms of content, the Agreement is the largest since the establishment of the World Trade Organization. The AfCFTA is also ambitious in scope: in addition to trade in goods, negotiations covered trade in services, with investment, competition policy, and intellectual property rights being tackled in the second phase of the negotiations. It has also been agreed that a third phase of negotiations will be carried out, focusing on e-commerce.

The liberalization of trade in goods covers 90 per cent of tariff lines to be liberalized over 5 years (10 years for LDCs). Three per cent of goods can be liberalized over 5 years (10 for LDCs), with an additional 7 per cent liberalization beyond trade in goods.

#### Box III.D.2

**African Continental Free Trade Area entering operational phase**

The African Continental Free Trade Area (AfCFTA) entered into force on 30 May 2019, following the deposit of the instrument of ratification by the twenty-seven African Union member states. The Agreement has been ambitious from the start, with negotiations launched in July 2017. In terms of content, the Agreement is the largest since the establishment of the World Trade Organization. The AfCFTA is also ambitious in scope: in addition to trade in goods, negotiations covered trade in services, with investment, competition policy, and intellectual property rights being tackled in the second phase of the negotiations. It has also been agreed that a third phase of negotiations will be carried out, focusing on e-commerce.

The liberalization of trade in goods covers 90 per cent of tariff lines to be liberalized over 5 years (10 for LDCs), with an additional 7 per cent of goods indicated as sensitive and subject to a longer transition period (15 years for LDCs). Per cent of goods can be excluded from liberalization. The Economic Commission for Africa has estimated that, at this level, the liberalization of trade in goods will increase the value of intra-African trade by 15 to 25 per cent (compared to the baseline scenario of no AfCFTA). The share of intra-African trade would also rise, between 40 and 50 per cent compared to the start of implementation. Most importantly, the free trade area would largely impact trade in industrial goods, increasing its value by 25 to 30 per cent, providing a boost to Africa’s industrialization agenda. Substantial additional gains are also expected from liberalization beyond trade in goods.

At the same time, the member states are preparing their tariff schedules for trade in goods and the rules of origin, as well as their commitments on trade in services in the free prior sectors: transport, telecommunications, financial services, tourism and business services. Implementation is planned to start on 1 July 2020, supported by a dedicated AfCFTA secretariat to be established in Addis. The second phase of the negotiations is also expected to start in 2020. The AfCFTA is a centrepiece of Agenda 2063: the Africa We Want, agreed in 2013 by the members of the African Union.

The Second High-Level United Nations Conference on South-South Coopera- tion (BANEF-48, held in Buenos Aires in March 2019), also reaffirmed the importance of strengthening South-South trade cooperation, including through the Global System of Trade Preferences among Developing Countries (GSTP). Established in 1989, the GSTP agreement provides a framework for preferential tariff reductions among 43 developing coun- tries. The São Paulo Round (SPR) of negotiations on GSTP was concluded in 2019, which had not yet entered into force. UNCTAD preliminary research finds a welfare gain of $14 billion from the implementation of the SPR by just eleven signatory countries. Recent RTAs aim at deeper economic integration of member countries covering issues that are important for the achievement of sustainable development in the environmental and social dimensions, particularly economic empowerment of women (see section 6.2).

### 4.2 Bilateral and regional investment agreements

International investment policymaking remains highly dynamic. In 2018, 40 new international investment agreements (IIAs) were signed. The new treaties included 30 bilateral investment treaties (BITs) and 10 treaties with investment indicators (TIIs). In 2017, the number of active BITs concluding IIAs was Turkey with eight BITs, followed by the United Arab Emirates with six BITs and Singapore with five treaties (two BITs and three TIIs). Some of the new treaties are megaregional, having novel features and involving key investor countries. The new treaties brought the number of IIAs to 3,317 (3,922 BITs and 385 TIIs). By the end of the year, 2,658 IIAs were in force (figure III.2.7).

At the same time, the number of IIAs terminations continued to rise. In 2018, 24 treaties terminated into effect (“effective terminations”), 20 of which were unilateral and 4 of which were due to replacements (through the entry into force of a newer treaty). This included 12 BITs terminated by Ecuador and 3 by India. By the end of the year, the total number of effective terminations reached 309 (67 per cent having occurred since 2010).

Many countries are developing new model treaties and guiding principles to shape future treaty making. This will have a significant impact on the global IIA regime. Many of these developments have benefited from the work of UNCITRAL on IIA-related technical assistance and capacity building. The situation in investor-state dispute settlement (ISDS) cases continues. In 2018, investors initiated 71 publicly known ISDS cases pursuant to IIAs, nearly as many as in each of the previous three years. As of 1 January 2019, the total number of publicly known ISDS claims had reached 942 (figure III.2.8).

Almost all known ISDS cases have thus far been based on old generation investment treaties. To date, 117 countries have been respondents to one or more ISDS claims. As some arbitrations can be kept confidential, the actual number of disputes filed in 2018 and previous years is likely to be higher.

The coming year will see that 20 countries and (iv) clauses that contain exceptions to transfer-of-funds obligations that aim more broadly than ever at preserving regulatory space, and improvements to or omissions of investment arbitration. The number of ISDS reform element, and many contain several. Most of the reform

**Investor-State arbitration.** Investor-State arbitration is also a central focus of IIA reform. It continues to be controversial, spurring debate in the investment and development community and the public at large. About 75 per cent of known ISDS claims in 2018 were based on at least one ISDS reform element, and many contain several.
elements related to ISDS are in line with the options identified by UNCTAD in the Investment Policy Framework for Sustainable Development. Five principal approaches emerge from IIAs signed in 2018 (used alone or in combination): (i) no ISDS, (ii) ISDS entirely omit ISDS, (iii) a standing ISDS tribunal (1 IIA), (iv) limited ISDS (19 IIAs), and (v) improved ISDS procedures (15 IIAs), and (vi) an unformed ISDS mechanism (2 IIAs). Some of the reform approaches have more far-reaching implications than others. ISDS reform is being pursued across various regions and by countries at different levels of development. In parallel, multilateral engagement on ISDS reform is gaining prominence, involving several institutions such as UNCITRAL and the International Centre for Settlement of Investment Disputes.

But comprehensive reform is only just beginning. IIA reform is progressing, but much remains to be done. UNCTAD policy tools, including the Reform Package for the Global Investment Regime, have spurred initial action to modernize old-generation treaties. Increasingly, countries interpret, amend, replace or terminate outdated treaties. However, the stock of old-generation treaties is 10 times larger than the number of modern, reform-oriented treaties. IIA reform actions are also creating new challenges. New treaties aim to improve balance and flexibility, but they also make the IIA regime less homogenous. Moreover, innovative clauses in new treaties have not yet been tested in arbitral proceedings. Different approaches to ISDS reform — ranging from traditional ad hoc tribunals to a standing court, or to no ISDS — add to broader systemic complexity. Moreover, reform efforts are occurring in parallel and often in isolation. Effectively harmonizing international investment relations for the pursuit of sustainable development requires holistic and synchronized reform through an inclusive and transparent process that can be supported by the United Nations system.

5. Facilitating international trade

5.1 Trade finance gaps and instruments

Access to affordable trade finance is a condition for successful international trade, similar to rapid clearance of customs and efficient transportation. Without access to trade finance, many entrepreneurs cannot trade and compete. Yet, the lack of local access to trade finance was cited as an obstacle to economic diversification by 60 developing WTO members and by 14 donor respondents in a recent survey.\textsuperscript{27} Trade finance is normally a high-volume, low-cost source of finance. The risk of default is small, with a global average of 0.2 per cent, and with little difference across countries. However, underdeveloped financial sectors in some countries have not been able to provide sufficient and affordable trade finance services.

As a result, there are significant gaps between supply and demand, estimated at $1.5 trillion in 2018 (stable compared to 2017) in an industry survey by the Asian Development Bank (ADB).\textsuperscript{28} SMEs are particularly affected, since 45 per cent of their trade finance proposals were rejected by surveyed banks. Half of the rejected SMEs abandoned trade transactions, as they were unable to find appropriate alternative financing. Rejections are explained by a variety of factors, including lack of collateral, lack of proper information available during the application process, and lack of profitability for banks. The survey is rather pessimistic about short-term prospects for reducing trade finance gaps: 60 per cent of respondent banks expect the global trade finance gap to increase in the next two years.

Trade finance gaps have been compounded by the decline in correspondent banking. Following the global financial crisis in 2008-2009, about 20 per cent of the correspondent banking relationships have disappeared, with Africa, the Caribbean, Central and Eastern Europe and the Pacific Islands the most affected regions. Such declines negatively impact trade finance since local banks need international correspondent banks to confirm their letters of credit, engage with them in supply chain finance, and clear trade-related payments in foreign currency. The adoption of new anti-money-laundering and countering the financing of terrorism (AML/CFT) regulations have increased the cost and the perceived risk of operating in some developing countries, and led some international banks to terminate their correspondent banking relationships.\textsuperscript{29} To help address these risks, the ADB “scorecard” project has aimed at developing trade finance tools such as the joint “suspicious activity report”.

The complexity of trade finance also results from the continuous use of paper-intensive products, such as paper letters of credit. Digitalization can help reduce the operational costs for trade finance providers. By reducing the need for multiple record-keeping infrastructures, technology solutions, such as distributed ledgers, can also increase market transparency and decrease the need for verification and reconciliation of multiple records held by different intermediaries (see chapter III.G). In several test-cases, processing times have been reduced from more than a week to just a few hours.\textsuperscript{30} At present, these successful pilot cases involve proprietary and limited closed-loop solutions among small groups of certified partners. In order to implement such technologies at a global scale, there will be a need for harmonized standards and interoperability between different systems. Capacity development for financial institutions in developing countries will also need to increase digitalization. To date, these institutions have been slow to adopt new technologies, with those actors surveyed complaining about the high cost and the lack of global standards for digital finance (lack of “interoperability” of digital platforms).

Given the large gaps in commercial trade finance for SMEs, especially in the poorest countries, MDBs are an important source of trade finance in developing countries, under so-called trade finance facilitation programmes. For example, in the last two years, ADB doubled the number of trade transactions it supported involving SMEs, with 3,500 SMEs supported in 2018.

Capacity-building is key to helping local banks comply with new financial regulations, as well as for adopting new regulations. The WTO, International Finance Corporation, and Financial Stability Board (FSB) are working together to reform trade finance providers about relevant regulatory requirements, promote tools to make compliance more effective and less costly for local banks, and help them attract new correspondents.\textsuperscript{31} For example, the WTO and FSB have been encouraging the development of synergies between legal identifiers provided by the Global Legal Entity Identifier Foundation and the World Customs Organization.

Country diagnoses are necessary if capacity-building and country advice are to be well targeted and effective. WTO currently examines the possibility of more systematically integrating trade finance in its diagnostic trade
integration studies of the Enhanced Integrated Framework, which is a multilateral partnership dedicated to assisting LDCs.

5.2 Aid for trade
SDG target 8.1 calls for increased Aid for Trade support for developing countries, particularly LDCs. The objective of the Aid for Trade initiative is to help these countries build the supply-side capacity and trade-related infrastructure they need to implement and benefit from WTO agreements, and to expand their trade. In 2017, the most recent year for which data is available, global disbursements of Aid for Trade reached $43.1 billion. This represents a yearly increase of $4.2 billion (11 per cent) compared to 2016, and $23.8 billion (56 per cent) compared to the 2006 baseline recorded following launch of the Aid for Trade initiative. Commitments have also been on a steady increase. Overall, global Aid for Trade disbursed in 2006-2017 has amounted to an overall $409 billion, 27 per cent ($108.5 billion) has gone to LDCs. The Seventh Global Review of Aid for Trade was organized in 2019 by the SDG target 8.a calls for increased Aid for Trade support for developing (136 per cent) compared to the 2006 baseline recorded following launch can play to facilitate this process as well as benefit from it. Overall, Aid for Trade disbursed in 2006-2017 has amounted to an overall $409 billion, 27 per cent ($108.5 billion) has gone to LDCs. The Seventh Global Review of Aid for Trade was organized in 2019 by the WTO on the theme “Supporting Economic Diversification and Empowerment”. The report underscoring the review highlights the continuing centrality of economic and export diversification as a policy objective among developing countries, and the role that economic empowerment can play to facilitate this process as well as benefit from it. 5.3 Trade facilitation
Since the entry into force of the WTO Trade Facilitation Agreement (TFA) on 22 February 2017, 148 of 164 WTO members, representing 90 per cent, have ratified the TFA. Significant progress has also been achieved in its implementation. An estimated 64.7 per cent of notifiable commitments are being implemented, based on members’ notifications to the WTO Trade Facilitation Committee (TFC) (see also box III.D.3 for updates on the implementation of trade facilitation measures).

In addition to those members that are already implementing the TFA in full, all developing countries now have roadmaps for the implementation of the Agreement. These members had to notify the committee of their individual plans for full implementation of the TFA, based on the unique flexibilities provided by the Agreement, by August 2019. To support developing-country implementation efforts, the WTO has established the Trade Facilitation Agreement Facility (TFAF), funded by WTO members on a voluntary basis. Its main goals are to assist developing-country and LDC members in submitting notifications to the WTO Trade Facilitation Committee in a timely fashion, and to establish and reinforce national trade facilitation committees to coordinate implementation of the Agreement. For example, TFAF supported WTO developing-country and LDC members to submit a total of more than fifty notifications to the WTO TFC within six weeks of the respective TFAF event.

6. Promoting international trade that is consistent with the Sustainable Development Goals in an era of disruptive technologies
To fully reap the benefits of trade, countries must mainstream trade into their national sustainable development strategies and integrated national financing frameworks. This is because trade has cross-cutting effects in

Source: OECD Aid for Trade Database.

Box III.D.3
United Nations Global Survey on Digital and Sustainable Trade Facilitation: 2019 Results
The United Nations Global Survey on Digital and Sustainable Trade Facilitation, conducted jointly by the five United Nations Regional Commissions with the support of a wide range of global and regional partners, provides a comprehensive picture of the state of implementation of trade facilitation and paperless trade. The most recent Survey was conducted in 2019 and covers 128 economies. The Survey’s scope is not limited to World Trade Organization (WTO) Trade Facilitation Agreement (TFA) provisions but also includes many TFA+ measures, including:

- Digital trade facilitation measures to enable the use and exchange of electronic trade data and documents;
- Sustainable trade facilitation measures specifically targeted at small and medium-sized enterprises (SMEs), the agricultural sector and women.

As shown in the figure below, the global average implementation of an ambitious and forward-looking subset of the WTO TFA+ measures included in the Survey stands at 62.7 per cent. Implementation in sub-Saharan Africa, which includes some of the poorest countries in the world, is only 42.8 per cent, second only to the Pacific Islands. Countries with special needs (least developed economies, landlocked developing countries and small island developing States) achieve implementation rates ranging between 43 and 55 per cent, which is significantly below the global average implementation rate.


Progress has been made in essentially all the countries covered by the Survey between 2017 and 2019. Implementation at the global level has, on average, increased by approximately 6 percentage points over the last two years. The survey reveals that countries have made particularly good progress on implementing TFA measures—for example, transparency measures such as publishing regulations on the Internet or organizing consultations prior to issuing new regulations. Many countries have also started to implement paperless trade measures, including development of electronic single window facilities. However, little attention has been given so far to implementation targeted at women and SMEs. In addition, cross-border paperless trade (i.e. the exchange of electronic trade data and documents across borders) remains essentially at the pilot stage, often limited to bilateral exchange of a specific document. Accelerating progress in this area could help reduce trade costs significantly, but requires more intensive intergovernmental cooperation. Recognizing this, members of the Economic and Social Commission for Asia and the Pacific (ESCAP) have adopted a Framework Agreement on Facilitation of Cross-Border Paperless Trade in Asia and the Pacific, aimed at building capacity and cooperation on paperless trade.

Technological change, such as digitalization, is opening new channels for firms in developed countries to “reshore” the manufacturing and assembly sectors that control the data, while firms in the manufacturing and assembly segments.

Chapter II and its box II.4 on the data economy). From the perspective of where they are well developed.

Trade as a proactive tool in achieving poverty reduction and economic trade policies, some measures can also be very specific. These include gender-equality or wage-equality policies.

Women as producers and traders

as the FTA between Canada and MERCOSUR is under negotiation, the final text will allow countries to conduct ex ante assessments of their potential impact on women and formulate the provisions of the agreement according to the results of the assessment, with a view to making trade agreements more gender responsive. In March 2018, negotiations started between Canada and the four members of Mercosur (Argentina, Brazil, Paraguay and Uruguay) for a possible FTA.

Trade reforms have contributed to reducing income inequality between countries as well as significantly reducing poverty. Trade can also have a pro-poor bias within countries by disproportionately reducing the prices faced by poorer households. More generally, it is important to note that trade is not a main factor behind increased inequality within countries, as technological change has played a key role. At the same time, the realization of resources necessary to reap the benefits from trade can also have a direct effect on education, and adverse effects on certain individuals and communities can be large and long-lasting if not addressed properly and promptly.

Concerning the issue of more equitable share of trade gains to all types of workers, there is evidence that including labour rights in trade agreements will benefit workers in developing countries, investment in education and training of poor households. With regard to providing equal opportunities to firms: e-commerce, ICT services, export promotion initiatives, and promoting the inclusion of technical assistance and Aid for trade programmes in bilateral and regional agreements all have great potential for leveling the playing field between small and large firms in accessing global markets.

Trade policy should also provide equal opportunities to all countries. A key policy issue is safeguarding the open, transparent and predictable multilateral trading system (target of SDG 10). It is also important, inter alia, to ensure that any reform process is inclusive of lower-income countries through, inter alia, updating and modernizing special and differentiated treatment (SDG targets 10.11, 11.12 and 11.13) and (ii) provide meaningful market access opportunities that address tariff escalation and trade-distorting subsidies in agriculture.

6.6 Addressing challenges related to illegal wildlife trade and illegal unreported and unregulated fishing

While legal, sustainable, and traceable trade in wildlife can have great benefits in terms of conservation and sustainable development, illegal wildlife trade undermines conservation efforts and has devastating economic, social and environmental impacts. Illegal wildlife trade is a big business, often run by international criminal networks that traffic wildlife and animal parts much like illegal drugs and arms. By its very nature, it is extremely difficult to obtain reliable figures for the volume and value of illegal wildlife trade. Data collected through the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) currently amounts to roughly 41,500 seizure records covering the period.

Box III.D.4 Gender in bilateral and regional trade agreements

A number of regional trade agreements (RTAs), especially those negotiated in recent years, include provisions explicitly referring to gender or gender-related issues. These gender-related provisions are highly heterogeneous and differ in terms of their language, scope and location in the RTAs and in their commitments. In most cases, gender provisions in RTAs aim to increase cooperation between the RTA partners to improve training and entrepreneurship opportunities for women, as well as to promote women’s workforce participation; women’s empowerment; women’s capacity to access education and training; and equal opportunities to firms: e-commerce, ICT services, export promotion initiatives, and promoting the inclusion of technical assistance and Aid for trade programmes in bilateral and regional agreements all have great potential for leveling the playing field between small and large firms in accessing global markets.

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The SDGs specifically address tackling illegal trade in wildlife through specific targets under Goal 15, and the first ever United Nations General Assembly resolution adopted in 2015 in this issue calls for firm and strengthened national measures and an enhanced regional and global response. The subsequent General Assembly resolution adopted in 2017 reinforces the focus on key areas in the fight against illicit trafficking in wildlife, and places strong emphasis on the role of CITES and the importance of implementing the decisions and resolutions adopted by its governing bodies.

Regarding illegal, unreported and unregulated (IUU) fishing, this issue is addressed in the SDGs through targets under Goal 14. According to the Food and Agriculture Organization (FAO), about 33 per cent of fish stocks today have reached overfished status. Overfishing is the consequence of increasing commercial interest on targeted species and enlarged fishing capacity of contemporary fishing fleets. This is evidenced by IUU fishing and harmful subsidies. IUU fishing across the world’s oceans is estimated to catch about 11 million to 26 million tonnes of fish annually, with a value of $26 billion to $35 billion. This suggests that in each 5 dollars of globally traded seafood, 1 dollar could be of illegal origin. IUU fishing has detrimental impacts not only on global fisheries but also on marine biodiversity and ecosystems, in addition to its criminal, labour rights violations, and human rights abuse aspects.

In 2014, the General Assembly declared IUU fishing as one of the biggest threats to sustaining fish stocks globally. IUU fishing causes significant losses of resources, income, jobs and livelihoods. As an example, estimates indicate that West Africa loses more than $1.3 billion a year due to IUU fishing.

There are global regulatory tools such as the IMO International Plan of Action, the Global Record of Fishing Vessels, and the Agreement on Port State Measures to combat and deter IUU fishing. Nevertheless, most developing countries, and particularly LDCs and small island developing States lack the capacities or the resources to set effective fishery management systems and mechanisms to enforce anti-IUU tools and regulations. The most sensible action is to transfer resources from harmful fisheries subsidies to management activities. According to the World Bank, investing in fish stocks management will increase global gains by $56 billion. In June 2019, three United Nations agencies—FAO, UNCTAD and the United Nations Environment Programme—proposed an Inter-Agency Plan of Action to support the implementation of several SDG targets, such as 14.4 (restraining fish stock through regulating overfishing and IUU fishing) and 14.6 (eliminating fisheries subsidies contributing to IUU fishing), in selected developing countries over the next 5 years. An essential requirement for an effective management of fish resources is the timely acquisition of information on stocks and catches and the exchange of such information between stakeholders. The United Nations Economic Commission for Europe, through its United Nations Centre for Trade Facilitation and e-Business (UN/CEFACT), has developed a global data exchange standard, which helps improve fisheries information management, thus contributing to the prevention of overfishing and the collapse of global fish stocks. A prohibition on subsidies on IUU fishing is also being discussed in the context of WTO Fisheries Subsidies negotiations.

Endnotes
1 Key statistics and trends in international trade 2019 (United Nations publication, Sales No. E.19.II.D.5).
2 UNCTAD, “Coronavirus outbreak has cost global value chains $50 billion in exports” (Geneva: UNCTAD, 4 March 2020).
3 Calculation based on the UNCTAD Free Market Commodity Price Index (FMCP). Available at https://unctadstat.unctad.org/EIN.
4 For example, the monthly average spot price of Brent crude oil increased by 20.1 per cent from January 2019 to $71.2 per barrel in April 2019, before falling back to $59.3 per barrel in August 2019.
6 Ibid.
7 UNCTAD, “Global e-commerce sales surged to $29 trillion” (29 March 2019).
12 This is based on the University of Notre Dame’s Global Adaptation Initiative (ND-GAIN) Index.

14 The product concentration index shows to which degree exports and imports of individual economies or of groups of economies are concentrated on a few products rather than being distributed in a more homogenous manner among several products. The diversification index indicates to what extent the structure of exports or imports by product of a given economy or group of economies differs from the world pattern (UNCTAD, Product Concentration and Diversification Indices).
15 The ITC NTM Business survey series covers already 75 countries across the World, for more information, see https://ntmsurvey.iatronam.org/home.
16 Find out more and get in touch: www.standardfidelityfacility.com/STDFSecurity/iotm.
20 The member countries of the CFPPP are Australia, Brazil, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. The CFPPP entered into force for the first six countries that ratified the agreement, which were Canada, Australia, Japan, Mexico, New Zealand, and Singapore, then for Vietnam on 14 January 2019.
21 At the ASEAN+3 Summit on 4 November 2019, India announced that it would opt out of RCEP. The other RCEP members suggest they would work to resolve “outstanding issues” with India.
27 The survey was part of the OECD-WTO monitoring and evaluation exercise conducted in preparation to the 2019 Aid for Trade Global Review.
36 International Federation of Robotics, World Robotics Industrial Robotics 2019 (Frankfurt, IFR, 2019).
40 With respect to gender mainstreaming in trade policy, the EAC treated gender issues as part of its regional integration process in the founding treaty and through the 2017 East African Gender Equality and Development Bill, AFRICOM, on the other hand, did not have gender provisions in its foundational treaty; gender mainstreaming in regional integration policies was mainly driven by the mobilization of civil society groups, especially women’s organizations.
42 To this end, UNCTAD has launched a new eTrade for Women initiative.
43 The ITC eTrade Initiative works closely with over 350 institutions and stakeholders across the globe, with a database of over 1.5 million women entrepreneurs. The initiative has leveraged technology to close the gender gap by connecting women entrepreneurs and trade partners on an online platform, SheTrades.com, which has currently 25,000 users from 90 countries.
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47 See for example: ITC, “Turning export potential into employment: A case study for Jordan” (December 2018).

48 Trade Policy for Combating Inequality (United Nations publication, Sales No. E.19.II.D.21).


50 World Bank and Global Wildlife Program, “Illegal logging, fishing, and wildlife trade: the costs and how to combat it” (October 2019).


53 FAO, The State of World Fisheries and Aquaculture 2016: Contributing to food security and nutrition for all (Rome, 2016).

54 UNCTAD, Trade and Environment Review 2016: Fish Trade (United Nations publication); OECD, “Combating Illegal, Unreported and Unregulated Fishing: Where countries stand and where efforts should concentrate in the future” (November 2018).


57 Regulatory measures such as catch documentation, fishing vessel monitoring (VSM), traceability, electronic logging, GPS location and block chain systems for fishers and seafood producers as well as more traditional ones such as observers and on-board and port inspections are also useful tools implemented at national, regional and international levels to combat IUU fishing.


62 To ensure meaningful liberalization, 90 per cent of import value have to be classified as non-sensitive.

63 By 2040, comparing to a scenario where no AfCFTA is in place. See ECA (2018). African Continental Free Trade Area: Towards the finalization of Modalities on Goods.

64 Assumed in 2020.

Debt and debt sustainability

Chapter III.E

1. Key messages and recommendations

The debt of developing countries continued to rise in 2019—albeit at a slower pace—and, with it, the risks to debt sustainability. Forty-four per cent of low-income and least developed countries (LDCs) are currently assessed as being at high risk of external debt distress or already in debt distress. COVID-19 and related global economic and commodity price shocks could significantly increase this number. For example, several African countries reliant on oil exports could find themselves in debt distress.

As noted in chapter I, the long period of unusually low international interest rates and unprecedented levels of global liquidity associated with quantitative easing facilitated the growth in borrowing. Developing countries, including LDCs, increased access to commercial financing. Lending by non-Paris Club official creditors has increased, opening new opportunities for borrowers to finance development. However, the shifting creditor landscape has also changed the structure of the debt of borrowing countries, increasing their exposure to interest rate, exchange rate and rollover risks. With commercial debt accounting for a growing share of sovereign borrowing, debt-service burdens are increasing. Steep increases in private sector debt, particularly non-financial corporate debt in emerging markets, have further increased countries’ vulnerabilities to external shocks and capital flow reversals.

Rising debt-service costs diminish fiscal space for countercyclical measures and for investments in long-term structural transformation and the Sustainable Development Goals (SDGs). This is a major concern in light of large, unmet SDG investment needs. This calls for a range of national and global actions in three areas: (i) creating additional fiscal space; (ii) preventing debt crises; and (iii) advancing the policy agenda on debt restructuring.

Increased domestic revenue mobilization and more effective spending, along with official development assistance (ODA), can help countries scale up public investment to meet the SDGs while containing debt vulnerabilities. But the fundamental tension will likely remain in many, if not most, developing economies, especially those with high debt burdens. Debt swaps—such as the Economic Commission for Latin American and the Caribbean (ECLAC) proposal to swap some of the Caribbean’s external debt for annual payments into a resilience fund—can be a source of funding for additional SDG investments. Piloting of the ECLAC and similar initiatives should be considered.

Debt sustainability also depends on the effective use of borrowed resources. There is merit to exploring options that better identify fiscal space for productive SDG investments. A balance sheet approach that clarifies how borrowed resources are used, taking into account public assets created, can lead to better understanding of the impact of investment on fiscal revenue and gross domestic product (GDP). SDG investments that boost productive capacity in countries can help generate revenue to meet debt service requirements when investment projects are carefully selected, sustainably financed and effectively executed.

The Financing for Sustainable Development Report 2019 also looked at the role that well-managed, fiscally sustainable and transparent national and regional development banks can play, building on the call for strengthening them in the Addis Ababa Action Agenda.

Effective debt management is essential to mitigating risks. Strengthening debt management through technical assistance and capacity building will help countries manage debt more effectively. Despite some progress, debt management capacity and transparency need to be continually enhanced in light of the growing complexity of the creditor landscape and debt instruments. While the primary responsibility for debt transparency lies with debtors, creditors share the responsibility for making the terms and conditions of lending public, straightforward, and easy to track. To help borrowers avoid debt traps, official creditors should pay appropriate attention.
to not adversely affect debt sustainability in borrower countries, including by providing financing on more concessional terms and ensuring that lending practices are fully in line with sustainable, responsible financing practices.

Debt vulnerabilities have increased in many cases due to climate and environmental shocks. Innovative mechanisms, such as state-contingent debt instruments, would allow debtor countries to postpone payments in the event of specified shocks. Despite a measure of analytical work on such state-contingent loans, there has been limited uptake on the part of public or official creditors. Official creditors can take the lead in using such instruments and promoting their uptake, which is essentially a contractual approach to creating “breathing space” for a borrowing country in periods of stress.

Experience in recent years indicates that the new landscape has complicated and lengthened the process of debt restructuring. This raises the social cost of debt crises, including on the poorest citizens. Further work in the international community is thus warranted in order to revisit and revitalize existing mechanisms and arrive at a fair, effective and timely international process for debt resolution. Progress in all these areas is needed if countries are to achieve the SDGs by 2030. The United Nations can provide a forum for referral and inclusive dialogue among all stakeholders that considers policy options for financing SDG investments while maintaining sustainable debt.

This chapter first examines debt trends at the global level and in developing countries, exploring developments of debt risk assessments, and the underlying changes to public and private debt levels and the composition of debt. The remainder of the chapter explores policy options to mobilize existing mechanisms and arrive at a fair, effective and timely international process for debt resolution. Progress in all these areas is needed if countries are to achieve the SDGs by 2030. The United Nations can provide a forum for refinement, and inclusive dialogue among all stakeholders that considers policy options for financing SDG investments while maintaining sustainable debt.

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2. Recent trends in debt burdens

2.1 Global debt trends

Global debt continues to rise. Total global debt stocks grew over 5 per cent in 2018 to reach $229 trillion (or 267 per cent of global GDP), compared to $152 trillion (239 per cent of global GDP) at the onset of the global financial crisis in 2008 (figure III.E.1A). The growth in global indebtedness has been driven by an explosion of private sector debt since the 1980s. In developed countries, the growth rate for debt decelerated after the initial increase in public debt in the wake of the global financial crisis. In developing countries, however, both public and private debt increased, with private debt accelerating particularly sharply following the crisis (figure III.E.1B). Global factors have been a significant driver of debt flows to developing countries. As noted in chapter 1, quantitative easing in developed economies in the aftermath of the 2008 crisis (with interest rates close to zero or negative) fuelled investors’ search for yield, which allowed a growing number of developing countries to borrow from commercial sources. Quantitative easing also reached corporate balance sheets in middle-income countries, as emerging market corporate bonds provided high-yielding investment opportunities.

At the same time, global economic growth remains sluggish. Softer growth rates in low-income and least developed countries have coincided with rising interest costs associated with the growing share of commercial debt over the last decade. This has contributed to worsening underlying debt dynamics in these countries.

2.2 Development of debt risk assessments

Overall, and prior to the COVID-19 outbreak, International Monetary Fund (IMF) projections pointed to stabilizing debt-to-GDP ratios for low-income developing countries going forward, after several years of upward revisions. Nonetheless, debt sustainability assessment stress tests suggested that many countries remain exposed to a downgrade in the event of global shocks. COVID-19, along with the sudden and dramatic drop in oil prices, has significantly increased the likelihood that such shocks — particularly widespread and expected global growth and a decline in commodity prices — materialize. About 44 per cent of low-income developing countries eligible for the IMF Poverty Reduction and Growth Trust (PRGT) were assessed at high risk of external debt distress or already in debt distress before COVID-19 (figure III.E.2). Nineteen of them are LDCs. Ten countries, including six LDCs, were assessed to be in debt distress as of end-2019 (Eritrea, the Gambia, Grenada, Mozambique, the Republic of the Congo, Sao Tome and Principe, Somalia, South Sudan, Sudan and Zimbabwe).

2.3 Public debt in developing countries

Median public debt in developing countries continued to grow in 2019, albeit at a slower pace. After growing as a share of GDP for most of the past decade (from 35 per cent in 2012 to 49 per cent in 2019) the ratio of public debt to GDP is estimated to have stabilized across country groups (figure III.E.3). In LDCs and small island developing States, median public debt was 47 and 58 per cent of GDP, respectively. Nonetheless, the debt-service burden (debt service relative to government revenue) continued to rise, primarily due to changes in the composition of developing-country debt.

Figure III.E.1
A. Total debt, global, 1960–2018 (Trillions of United States dollars)

Source: UNCTAD Secretariat calculations, based on the IMF Global Debt Database.

Figure III.E.2
IMF-World Bank ratings resulting from low-income-country debt sustainability assessments (Percentage of PDG of eligible low-income developing countries)

Source: IMF-World Bank IDA DSG Database.
Among commercial sources of credit, bond borrowing on international capital markets continued to grow over the past two years. Foreign-currency denominated bonds have been the fastest growing source of financing for frontier economies (low-income and least developed countries with international bond issuance as well as other non-investment-grade, infrequent sovereign bond issuers). Non-resident holdings continued to grow in a handful of countries. In Latin America, for example, foreign holdings have reached one third accounting for a larger share versus a decade ago (figure III.E.4).

Foreign currency debt redemptions represent a high proportion of foreign exchange reserves (figure III.E.5).

At the same time, average maturities on new external commitments continued to fall, further increasing rollover risk. Between 2017 and 2018, the average maturity on external debt decreased from 21.6 to 20.6 years, extending a declining trend that began in 2010. The increased rollover risk particularly affects frontier economies with access to international debt markets. These countries’ Eurobond refinancing needs will rise over the next 5 years to an annual average of almost $3 billion, up from less than $2 billion in 2017-2018. Of particular concern are countries where debt redemptions represent a high proportion of foreign exchange reserves (figure III.E.5).

2.5 Private debt trends in developing countries

The growth of private sector debt remains a major driver of total debt growth in developing countries. At the end of 2018, it accounted for 159 per cent of their GDP (see figure III.E.1B above). Lending to non-financial corporations in emerging markets and China in particular accounts for the bulk of this increase (figure III.E.6). But even in low-income countries with shallow financial systems, private sector debt now stands at around 18 per cent of GDP, up from about 12 per cent just before the start of the global financial crisis. Growing private sector debt raises debt sustainability concerns. As noted above, low global interest rates and a search for yield by international investors facilitated the growth in private credit. Outside of China, where corporate bonds are primarily domestically owned, external creditors hold a significant share of large developing countries’ corporate debt (about one third of non-financial sector corporate debt, or about $1.8 trillion, in 26 emerging-market countries excluding China). The build-up in external foreign currency borrowing makes countries vulnerable to capital flow reversals and currency crises, and endangers financial stability and ultimately public debt sustainability (see chapter III.F).

Of particular concern is that this proliferation of private debt does not appear to have boosted productive investment: the growth of corporate debt has outpaced the speed of capital formation in many developing countries.

Funding from international and domestic capital markets allowed countries to finance new investments, but not without consequence. Such funding embodies higher cost and greater risk than traditional official financing, and the relative decline in ODA has raised the average interest rates on external debt. Total public debt servicing is expected to amount to 13 per cent of fiscal revenues in low-income developing countries in 2019, up from about 12 per cent in 2013. Before the crisis, the debt servicing burden of the frontier economies was particularly high, absorbing over 25 per cent of their fiscal revenues in 2019, compared to under 15 per cent before 2015. In addition, foreign investment in local capital markets, while bringing additional sources of capital to domestic firms, can also create vulnerabilities in the form of volatile capital flows when investors have short-term horizons and when global risk perceptions change (see chapter III.F for policy options to address capital flow volatility).

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3. Sustainable and responsible borrowing and lending for the SDGs

3.1 Debt sustainability and SDG investments

Debt is a key source of financing for sustainable development and the SDGs. Indeed, many SDG investments can generate the resources to repay debt. Yet, the size of SDG financing gaps puts into question developing countries’ ability to mobilize sufficient public debt financing to achieve the SDGs while maintaining sustainable debt levels—particularly since debt levels are already elevated in many low-income and least developed countries. For example, the IMF estimates that investments in SDGs in five areas that typically require public spending (education, health, roads, electricity, water and sanitation) would require additional annual spending of about 15 percentage points of GDP in the poorest countries. Under realistic assumptions about revenue mobilization, ODA, and FDI, the additional spending needed could only be achieved by borrowing on a large scale on commercial terms that would lead to a sharp increase in interest burdens and debt vulnerabilities. The United Nations Conference on Trade and Development (UNCTAD) estimates that, if financed from additional borrowing, meeting SDGs 1-4 by 2030 would lead to dramatic increases in developing countries’ public debt (see box III.E.5, increasing vulnerabilities. The challenge for countries is how to create fiscal space for additional public investment in the SDGs, particularly for heavily indebted countries. The solution goes beyond this chapter to include policies across the Addis Agenda, including strengthened fiscal management (increased domestic public resource mobilization and efficient spending) (chapter III.A), access to concessional financing (chapter III.C), domestic and international macroeconomic and capital account management (chapter III.F), and other measures discussed throughout this report. There is also a need for efforts, discussed

Box III.E.1 Developing-country debt sustainability and the Sustainable Development Goals

The debt sustainability analysis presented here operationalizes the debt sustainability definition proposed by former Secretary-General Kofi Annan in 2005. Updating this definition to meet the 2030 Agenda for Sustainable Development, debt sustainability is defined as the set of policies that allow a country to achieve the Sustainable Development Goals (SDGs) and to reach 2030 without an increase in debt ratios. The analysis focuses on the impact that meeting only the first four of the 17 SDGs (poverty alleviation, nutrition, general health and quality education) would have on developing-country debt sustainability. Most investments in these SDGs do not offer competitive financial returns and are expected to be met by the public sector. The analysis is based on a sample of 36 developing countries across developing regions and consists of three components:

The first component (figure III.E.1.1A) projects the impact of the investment required to meet SDGs 1-4 on the evolution of developing-country public gross central government debt until 2030. It compares a business-as-usual or baseline scenario, which assumes that countries maintain current expenditure patterns and that short-term debt sustainability requirements remain in place, with an “SDG public debt scenario” in the baseline scenario, average public debt is expected to increase from 47 per cent of gross domestic product (GDP) in 2018 to 51 per cent by 2030. The second scenario assumes that Governments depart from business-as-usual practices to meet SDGs 1-4 on time and without external assistance other than current official development assistance grants. Reaching the investment requirements of these SDGs would have a major impact on public debt, with the ratio of public debt to GDP increasing to 118.7 per cent of GDP by 2030, an average. The sharpest increase would, unsurprisingly, be experienced in low-income countries. Unless alternative sources of funding became available, the most vulnerable countries and those in most need of urgent investments to meet the SDGs would thus be least likely to afford SDG investments without triggering a debt crisis.

The second component (figure III.E.1.1B) estimates the SDG debt sustainability gap—that is, the difference between the primary fiscal balance consistent with achieving SDGs 1-4 by 2030 and the balance required to maintain stable public debt ratios. Developing countries would, on average, require 11.9 per cent of their GDP in additional annual resources. The third component (figure III.E.1.1C) considers domestic and external financing options. Even under potentially optimistic assumptions about fast improvements to domestic resource mobilization, meeting investment requirements for the first four SDGs would require significant external assistance, in particular for least developed countries and other low-income countries.
2.3 Identifying opportunities: a balance sheet approach

Productive investments, while increasing debt ratios in the short run, can generate future revenue and higher growth, leading to lower debt ratios over time and creating a positive feedback loop. It is important for heavily indebted countries to analyze the impact of investment and overall risks presented by assets and liabilities in order to better understand where they could have fiscal space. A balance sheet analysis can help in this regard.

For instance, El Rayess and others demonstrate that better managed infrastructure investment could improve long-term balance sheet impact by almost half in some countries. Another example is the Gambia, where balance sheet analysis brought out the interlinkages of fiscal risks in the public sector, allowing the authorities and donors to assess where to best intervene to reduce these risks. And managing public assets better opens up the potential to raise considerable additional revenue, which in turn can be invested in achieving the SDGs.

At the same time, predicting the impact of borrowing for investment on growth rates—especially in the context of debt sustainability assessments (DSAs)—is extremely challenging, due to uncertainties around investment efficiencies and growth feedback. To address the potential feedback, the IMF and World Bank included a “realism tool” in their July 2018 update to the low-income countries’ debt sustainability framework (LIC-DSF). The realism tool uses a simple growth accounting framework and decomposes projected growth rates into contributions from changes in the government capital stock (due to public investment) and all other sources. It shows projections for public and private investment, and historical and projected contributions of public investment to growth.

3.3 Debt sustainability assessments: improving analytical tools

Correctly picking up investment growth linkages—as encouraged by the realism tool in the new LIC-DSF—is one element of a robust debt sustainability framework (LIC-DSF). The realism tool uses a simple growth accounting framework and decomposes projected growth rates into contributions from changes in the government capital stock (due to public investment) and all other sources. It shows projections for public and private investment, and historical and projected contributions of public investment to growth.

3.4 Public debt management

Strengthened debt management is important because it can both free up resources for investment and reduce the risk of debt crises. Developing countries have, in most cases, been making progress with strengthening debt management. The results from 39 countries that have more than one debt management performance assessment (DeMPA) evaluation over the period 2008-2018 reveal improvements for 11 out of 14 dimensions (Figure III.E.8). However, gaps in debt management remain. For example, frontier economies failed to make progress in debt reporting and auditing and in the formulation of debt management strategies. Of particular concern is the fact that debt management capacity may not be keeping up with the increasing complexity of debt instruments where it is most needed (i.e., frontier markets). A related concern is that debt management might not always be sufficiently long-term focused. For example, during the period of extremely low interest rate levels, many countries have been taking on loans using floating rate debt instruments, which tend to benefit lenders, even when longer-term debt may be available at a reasonable cost. Other areas of concern include suboptimal borrowing frameworks; insufficient audits; lack of operational risk management; poor cash flow forecasting and management; insufficient staff capacity in debt management offices; partial debt coverage; and limited reports. Indeed, developments in 2019 underscored the continued need to enhance downstream debt management capacity (debt data recording and valuation, debt operations, and debt reporting and statistics) as part of international efforts to address ongoing problems with debt data transparency.

3.5 Debt data, reporting and transparency

Timely and comprehensive data on the level and composition of debt are a prerequisite not only for the effective management of public liabilities, but also for identifying risks of debt crises and limiting their impact. Indicators of debt transparency have improved over time. For the 39 countries with more than one DeMPA during 2008-2018, all but one data transparency indicator improved between the last two DeMPAs. One third of low-income developing countries also regularly publish statistical debt bulletins, including two thirds of frontier markets. Nonetheless, significant problems remain in many countries with both the quality of public debt data and the level of reporting. Faced with increasingly complex portfolios and the growing importance of domestic financing, many countries have yet to match the minimum standards in some key areas. High staff turnover continues to be a common and recurrent problem. Limited coverage of total public debt is another common problem, with specific difficulties relating to subnational debt and contingent liabilities. For example, three quarters of countries that have used the new LIC-DSF have debt coverage of at most, public and publicly guaranteed central government debt (including central bank debt only).

In response, international organizations have continued to step up their capacity development efforts. The Multi-Pronged Approach (MPA) of the IMF and the World Bank provides a framework to help address debt vulnerabilities and close debt management gaps where they exist. UNCTAD, through its Debt Management and Financial Analysis System (DMFAS) Programme, launched the debt data quality assessment (Debt DQA) framework to assess and monitor the quality of the data recorded in countries’ debt databases in November 2019, jointly with the Commonwealth Secretariat. In response to increasing demand, DMFAS expanded its support in 2019, supporting 85 institutions in 58 countries, and organizing 79 capacity-building events. DMFAS also launched a new initiative to respond to a more complex debt landscape (box III.E.2).

To address the increasing complexity of the debt landscape, the United Nations Conference on Trade and Development (UNCTAD) Debt Management and Financial Analysis System (DMFAS) Programme has launched a new four-year strategy. Focusing on the delivery of technical assistance in the programme’s areas of comparative advantage (i.e., “the downstream” areas of debt management), this strategy complements the work of the World Bank and the International Monetary Fund (IMF), whose focus is primarily on data sustainability analysis and medium-term debt strategies (“upstream” debt management).

Additional challenges and risks for transparency arise from new creditors working outside current structures (the Paris Club, for instance). New and more complex debt instruments and practices, the increased prevalence of domestic debt and private non-guaranteed external debt, and the increasing importance of monitoring contingent liabilities, public private partnerships (PPP), extrabudgetary debt and subnational debt.

To ensure debt data transparency in this new context, coverage will be expanded to include all central, state and local government debt, contingent liabilities, extrabudgetary debt, state-owned-enterprise debt and private non-guaranteed external debt. As a growing number of governments are moving from pure cash accounting towards accrual accounting, the strategy will support the application of accrual-based international standards for government fiscal and financial reporting, including the Government Finance Statistics Manual 2016 and the International Public Sector Accounting Standards (IPSAS). Extensive capacity development will be provided through a framework of traditional training and online courses. A new version of the software, DMFAS 5, will respond directly to the requirement to improve debt transparency by expanding data coverage, enhancing reporting functions and implementing necessary major technical updates. Effectiveness of delivery will improve through establishing regional offices and cooperation with other relevant international organizations and debt management, including the World Bank, the IMF and regional organizations.

Source: UNCTAD

Box III.E.2 Debt Management and Financial Analysis System: a new four-year strategy

To address the increasing complexity of the debt landscape, the United Nations Conference on Trade and Development (UNCTAD) Debt Management and Financial Analysis System (DMFAS) Programme has launched a new four-year strategy. Focusing on the delivery of technical assistance in the programme’s areas of comparative advantage (i.e., “the downstream” areas of debt management), this strategy complements the work of the World Bank and the International Monetary Fund (IMF), whose focus is primarily on data sustainability analysis and medium-term debt strategies (“upstream” debt management).

Additional challenges and risks for transparency arise from new creditors working outside current structures (the Paris Club, for instance).
3.6 Responsible borrowing and lending

As rising debt risks threaten achievement of the SDGs in the context of a more complex debt landscape, renewed attention is warranted to the com-
mitment, made in the Addis Agenda, to work towards a global consensus on
guidelines for debtor and creditor responsibilities, building on existing initiatives. Multiple complementary sustainable financing initiatives are
currently underway to promote responsible borrowing and lending.

The IMF’s revised Debt Limits Policy, and the World Bank’s new Sustainable
Development Financing Policy are both expected to take effect during the
second half of 2020. Both policies apply a new framework to the existing
borrowing landscape, including allowing opportunities to borrow (subject
to safeguards), creating better targeting conditions at vulnerabilities; and
supporting strengthened transparency and debt management. The International
Institute of Finance has articulated Voluntary Principles
covering debt data disclosures by private creditors. Given the potential
for agency problems in borrowers—where borrowing may not always be
duly authorized—disclosure by lenders is an important avenue to achieving
accountability. The initiative is expected to come into fruition during 2020,
on identification of a host for the data, which would need to be acces-
sible by the public.

The Group of Twenty (G20) articulated their Operational Guidelines for
Sustainable Financing in 2017. Their aim is to “enhance access to sound
financing for development while ensuring that sovereign debt remains
on a sustainable path by fostering information sharing and cooperation
among borrowers and creditors, sovereigns and financial institutions,
as well as learning through capacity building.”1 The G20 has made use of
da diagnostic tool developed with the assistance of IMF and World Bank
staff in 2019 to help creditors diagnose their level of compliance with the
17 practices underlying the G20 operational guidelines.1 To date, 15 G20
members and 5 non-members have completed the self-diagnostic, with 12
following up on their results with IMF and World Bank staff.

The G20 approach is operationally oriented, giving the close link to
the operations of IMF and the World Bank, and the supporting self-diagnostic
tool. The UNCAD principles on promoting responsible sovereign lending
and borrowing provide a conceptual framework to guide best practices in
sovereign lending and borrowing. They aim to establish a balance between
responsibilities of lenders and borrowers, focus on safeguarding the public
interest in sovereigns debt financing and contracting, and call for a holistic
approach to the evaluation of public investment projects and adequate
management and monitoring to maximize incidences of over-borrowing
and avoid restructuring.

While these ‘quasi-legai (‘soft-law’) initiatives are voluntary and
non-binding, they nonetheless can make an important contribution to
promoting responsible borrowing and lending. By enhancing transpar-
ency and promoting cooperation between debtors and creditors, they can
help address (albeit not remove) collective action problems and mitigate
information asymmetries that arise in the area of sovereign debt. Soft-law
initiatives will be most effective if information provided is comprehensive
(i.e., covering all types of debt and debt instruments) and accessible, and if
compliance is further incentivised through mechanisms to promote ac-
countability or other complementary measures.

Adjudicative bodies—national courts, for example—could use such
principles to guide their actions and decision-making. Jurisdictions could
also legislate that sovereign debt transactions are not collectible if certain
transparency conditions have not been met. Soft-law mechanisms could
thus form a foundation for eventual legal initiatives.

4. Innovation debt instruments

Different types of innovative debt instruments have been proposed, and
some implemented on a small-scale or pilot basis. One main aim is to
either (i) create room for additional investment in (ii) better manage shocks and risks. For example, debt swaps and related mecha-
nisms generally do not reduce a country’s debt burden; rather they swap a
country’s debt-servicing payments for investments in sustainable develop-
ment. State-contingent debt instruments can also create additional fiscal
space, but their primary objective is to help countries better respond
to shocks by preserving fiscal space in times of crises.

4.1 Debt swaps and related innovative mechanisms

Debt swaps allow countries to use funds otherwise tied up in debt serv-
ing for a social or environmental initiative. There are several examples of
debt swaps that sprung up during the 1990s debt crisis.4 In debt-for-
nature swaps, an international non-governmental organization (NGO) would
purchase external debt and offer the debt for cancellation in
exchange for a conservation commitment. Alternatively, debt would be exchanged for local conservation initiatives. Some private
governments underwrite share of the debt to be paid in local currency. This spread
the debt burden over a longer time and lowered the cost of repayment for
the Nature Conservancy.

Debt swaps have also been used for social objectives, such as the Debt-
relief initiative, facilitated by the Global Fund to Fight AIDS, Tuberculosis
and Malaria, where creditors waive repayment of a portion of that loan to
a country that, in return, invests an agreed amount in health. In the latest
swap under this initiative, in 2017, Spain cancelled €36 million in outstand-
ing debts owed by Cameroon, the Democratic Republic of Congo and
Ethiopia, in exchange for €15.5 million in investments in domestic
health programmes supported by the Global Fund. Debts swapped under
this initiative amounted to €200 million until 2017.5 More recently, ECLAC
proposed a debt for climate swap where the Green Climate Fund would
buy some of the external debt of participating countries and, instead of
making debt-service payments, countries would make payments into a
resilience fund, which would finance green investments (see box II.3.3).

Similar to the ECLAC initiative, an SDG debt swap programme could support
SDG-related investments in developing countries. The international
community and/or NGOs could make an initial contribution to the
programme that would be used to purchase external public debt (from
either private or public creditors). The beneficiary countries would commit
to pay into an SDG investment fund, or invest directly in projects of
programmers, in the amount that they would have paid to their former
creditors as debt service.6 A global SDG-related contingent lending
programme would be another option. Such a lending facility could include
a refinancing facility to allow participating countries to borrow on a
concessional terms in order to progressively recapitalize the outstanding
stack of public external debt issued on commercial terms. The principal
benefit would be a reduced interest rate and an extension on the
maturities of the debt swapped. While not a debt workout mechanism per se,
its could help countries avoid a debt crisis.10 On risk with debt
buy-backs of market debt is that bond prices will rise once the programme
is in place and it is clear that the sovereign would pay the bond
price. The terms of reference can help overcome this issue.

Box II.3.3

The Debt for Climate Adaptation Swap Initiative

The Economic Commission for Latin America and the Caribbean (ECLAC) has proposed a swap of some of the region’s external debt
for debt-servicing payments to make annual payments into the
new Caribbean Resilience Fund. In the proposal, the Green Climate
Fund would buy up some of the external private debt of participating
countries at a discount. For that purpose, the Caribbean countries would
commit to pay into the new Caribbean Resilience Fund the amount that
they would have paid as debt servicing to its former creditors
(see Financing for Sustainable Development 2019).

Three “Phase One” countries (Antigua and Barbuda, Saint Lucia, and
Saint Vincent and the Grenadines) are moving ahead. Antigua and
Barbuda has proposed the use of its Pan Caribbean debt to pilot the
scheme, which collectively totals of over $130 million in debt. At the
same time, ECLAC is in discussions with the Caribbean Development
Bank and the Caribbean Development Fund about housing and
management of the Caribbean Resilience Fund.

Source: ECLAC.

4.2 State-contingent debt instruments

State-contingent debt instruments contain a trigger mechanism that
automatically defers debt-service payments that fall due during a crisis
of specified type. A number of bonds with state-contingent clauses in their
contracts have been issued, notably for countries in the Caribbean where
the trigger is the advent of a hurricane of specified severity. To date, these
bonds have not been introduced except by Governments restructuring
their debt (Barbados being the most recent example).

At the request of the Eastern Caribbean Central Bank, the IMF and
World Bank jointly examined possible structures for such instruments, which
were translated into draft “term sheets” by the International Capital
Markets Association, in collaboration with the law firm Clifford Chance. A
version of these term sheets has also been used as a reference on a voluntary
basis by Pan Caribbean creditors. So far, the only significant lending with
state-contingent clauses by an official creditor was by Agence Francaise de
Développement, which provided state-contingent loans for project financ-
ing to Haiti, Mozambique, Senegal, and the United Republic of Tanzania
between 2008 and 2010 for a total amount of $29 million, of which €125
millions were disbursed by end 2018. The French loan allows the borrower
to postpone the last five years of an otherwise ten-year grace period and
use it at any time during the remaining maturity of the loan to meet a pay-
ment exigency. This flexibility, however, comes at a cost and may explain
why the model has not been emulated by others.

Other types of state-contingent bonds have been conceived—in particular,
bonds with a link to the borrowing country’s GDP (i.e., GDP-linked bonds),
including the drafting of a term sheet by the Global Fund. In such bonds,
interest obligations grow larger when economies experience strong growth and shrink
when economic conditions deteriorate. While bonds have been issued that
pay additional interest if an economy’s growth is greater than expected, no
bonds have yet been issued to more generalize state-contingent bonds
beyond baseline interest in the event of a negative turn of economic events.

Official creditors could consider using such instruments, which essentially
create “breathing space” for a borrowing country in economic downturns as part of the debt contract, and can thus help prevent debt distress.

Islamic sukuk instruments also share risk between borrower and lender.
In the sukuk bond issued by the British Government in 2014, for example,
income payments to the investors are paid from profits based on the rental
payments from government-owned properties. In Governments that have
issued sukuk bonds structured in different ways include Indonesia, Luxembourg, Malaysia, South Africa, Turkey, and Hong Kong SAR. Sukuk
have been backed by revenues from infrastructure projects or exports.7

There are additional potential sukuk and other Islamic financial instru-
ments that could inspire the development of financial instruments with
risk-sharing aspects attractive to lenders and borrowers.

5. When sovereign debt relief is warranted

The international community has struggled to devise better processes and
standards for resolving sovereign debt crises. In the absence of a
coherent systemic and multidimensional solution, the current focus on policymaking to
resolve sovereign insolvencies has been on contractual solutions, such as the
inclusion of enhanced collective action mechanisms (ECAMS) in bond contracts.

The new standard is a “single-limb” aggregated voting mechanism, which allows a qualified majority of bondholders across all bond series to debt
an unaccompany majority in any of the bond series to the terms of a proposed
restructuring. According to the most recent IMF progress report on sovereign debt, published in March 2020, almost 60 percent of
bonds issued under New and English law since these classes were first
introduced now include them. While the clauses will restrict the ability of
disgruntled bondholders to seek reorders in courts, research has demon-
strated that there is no observable impact of including the new voting
mechanism on the prices of the bonds at the time of issuance. Inclusion
of these clauses may even lower borrowing costs, as they reduce the ability of
a minority of bondholders to disrupt restructuring agreement. Euro
area finance ministers also recently announced broad support for requir-
ing single-limb ECAMS in all bonds issued by euro area sovereigns as of 1 January 2022.

Despite this progress, the current framework has some limitations. While
uptake of enhanced ECAMS is high in bonds governed by New York and
They may also raise transparency concerns, as their terms are often not disclosed publicly.

The increased use of loans collateralized with a country’s assets (such as oil-related payment streams or stock in a state enterprise) or future tax revenue streams may also pose challenges. This may trigger negative pledge clauses in other creditors loan contracts, requiring provision of equivalent collateral to them. Creditors holding access to collateral can also use their bargaining position to extract more favourable terms, complicating the restructuring process. Excluding project finance, collateralized borrowing represented, on average, 20 per cent of commercial borrowing undertaken over the last five years (down from an average of 32 per cent in the previous five years). But the averages conceal some large differences across countries, with commodity producers in low-income developing countries often heavily relying on this type of financing. With regard to public creditors, the established mechanism for resolving defaults, the Paris Club, represents a diminishing share of the stock of lending. The single-limb voting procedure has also not yet been tested in a sovereign debt restructuring. The debt of SOEs in some countries could represent a growing complication, as most foreign-law banks would not have collective voting procedures (unlike syndications). They may also raise transparency concerns, as their terms are often not disclosed publicly.

With the efficacy of existing processes to resolve debt crises in question, urgent attention by the international community is warranted. Improvements to market-based approaches can be considered, including greater use of innovations introduced by practitioners (e.g., trust structures), and potential extension of CACs to sub-sovereign debt. At the same time, proposals have been made to introduce basic practical steps for sovereign debt restructurings. They include enforcement of a temporary standstill on creditor litigation while debt-servicing payments are suspended by the debtor government on its own initiative, requiring approval by an independent panel; and creditors providing “debtor-in-possession” financing, granting a seniority status to debt after the imposition of the standstill, which would give the debtor additional resources for financing imports and other vital current-account transactions.
Addressing systemic issues

1. Key messages and recommendations

The international monetary system remains vulnerable to volatility and contagion, such as the recent financial volatility as a result of COVID-19, as well as risks from increased leverage (see chapters I and III.E). Whether these have systemic stability implications depends on the nature of international financial linkages and the timeliness and effectiveness of policy responses.

The financial reforms undertaken in response to the 2008 financial crisis have been instrumental in bolstering the safety of the banking system and addressing the risks, channels and mechanisms related to the crisis. Regulatory and supervisory bodies should lead by example in promoting the timely, full and consistent implementation of remaining reforms. This will support a level playing field and avoid regulatory arbitrage.

Yet, as is normally the case, changes to the financial regulatory system after a crisis tend to focus on preventing a recurrence of past problems, while future shocks may have different causes and transmission channels. Yet, a retreat from multilateralism by some makes coordinated responses to global crises more challenging.

Non-bank financial intermediaries are undertaking an increasing share of financial intermediation, potentially generating new risks that should be understood and addressed. Countries should continue to step up efforts to track and regulate financial intermediation based on the function it performs rather than the type of institution involved, including in regards to fintech. The financial instruments described in chapter III.B, while helping to finance the 2030 Agenda for Sustainable Development, can also create pockets of leverage that present economic and social risks. The Inter-agency Task Force on Financing for Development (Task Force) will aim to explore these relationships and ways to address the risks in future reports.

Financial technology is contributing to the growth of non-bank financial intermediation and is blurring the lines between settlements, software and credit intermediation/risk-taking. A challenge for policymakers is to manage growing risks without imped ing innovation. There is growing experience with regulating fintech, and policymakers can build on the experiences of their peers to inform their decision-making.

One area of rapid innovation is in digital payments and currencies. Cashless economies are on the horizon. Digital payments, such as mobile money, can reduce costs and promote financial inclusion. Both the private sector and central banks are also proposing digital currencies. These could have efficiency benefits, but also have the potential to fundamentally alter the balance of risks and incentives in domestic financial systems, including financial integrity, financial stability, and sustainable development risks. Regulations on the operation of private digital currencies should be carefully considered in each jurisdiction, or regional currency zone, with policymakers considering financial stability, financial integrity, consumer protection, privacy, and broader impacts on sustainable development. Central banks considering the issuance of their own digital currencies should design systems that are well adapted to national contexts, and that contribute to sustainable development outcomes.

Policymakers are also beginning to pay more attention to the interaction of climate change and the financial system. There is increasing recognition that climate risk is financial risk, and these risks need to be incorporated in risk-based regulatory frameworks, building on the advances made in voluntary disclosures. Policymakers should adopt global mandatory financial disclosures on climate-related financial risk to support long-term stability of financial systems. Some countries are also reforming their financial systems and regulation to ensure both financial stability and alignment with all aspects of the 2030 Agenda. Policymakers should also consider developing further policy frameworks and regulatory efforts to promote sustainable financial systems.
2020 FINANCING FOR SUSTAINABLE DEVELOPMENT REPORT

The international community has brought together combinations of national and international policies to mitigate risk and cushion financial shocks when they do occur. These policies need constant adjustment if they are to provide sufficient protection against the most devastating kinds of financial crises. New stresses on financial systems can arise from unexpected sources, much as the spread of COVID-19 in the first quarter of 2020 resulted in a flight to safety and widening spreads on bond yields of developing countries. Countries should explore coherent, integrated policy frameworks that bring together monetary, exchange rate, macroprudential, capital flow management, and other policies as part of integrated national financing frameworks (INFFUs) to manage excess leverage and volatility in domestic and cross-border finance. Effective use of these policies can increase policy space and reduce the need of countries to resort to emergency financing from the global financial safety net. Meanwhile, Member States of the United Nations need to work to fill gaps in the global financial safety net, with stronger regional financial arrangements where they are insufficient.

Finally, Member States should consider whether governance arrangements at various international institutions need further reform, especially those that have not undertaken reforms in many years. The ambitious 2030 Agenda requires institutions that allow careful consideration of coherence and coordination. This Task Force has become a mechanism to improve inter-agency coherence.

This chapter is divided into three sections: the first discusses international standards of financial regulation, including the implementation and impact of regulatory reforms taken after the 2008 world financial and economic crisis; the next section discusses macroeconomic management and cross-border flows; and the final section discusses how to strengthen global governance.

2. International standards of financial regulation

Although financial regulation is generally a national responsibility, as the world has become increasingly integrated financially, regulation is best performed in an internationally coordinated manner to prevent regulatory arbitrage. Since the 1970s, an increasing number of national regulators have met to agree common regulatory standards, which individual countries then implement to a greater or lesser degree. Banking regulation has been strengthened since the 2008 world financial and economic crisis. Achieving the Sustainable Development Goals will require a shift towards long-term investment and sustainability as a central concern of investment decisions (see chapter III.B). Such a shift demands aligning private and public incentives with sustainable development. Traditionally, financial regulation focused on safety and soundness of the financial sector. In the Addis Ababa Action Agenda, Member States agreed to “work to ensure that our policy and regulatory environment supports financial market stability and promotes financial inclusion in a balanced manner”. Financial regulation must still aim at reducing systemic financial risk; however, all regulation affects incentives, and there has been growing attention to the impact of financial regulation on incentives for investment in sustainable development.

2.1 Implementation of agreed reforms

The Group of Twenty (G20) agreed to a number of financial regulatory reforms through the Financial Stability Board (FSB) in the wake of the 2008 world financial and economic crisis, with the final major policy reforms adopted by the global body of bank regulators—the Basel Committee on Banking Supervision—in late 2017. Some additional policy work remains, but most attention has now turned towards implementation of the reforms. Despite progress, implementation of the reforms is not complete and remains uneven.

Large banks are better capitalized, less leveraged and hold more liquidity (figure II.F.3). Implementation of two standards—the leverage ratio and net stable funding ratio—were late in a limited number of jurisdictions, as both were to be implemented in 2019 (figure II.F.3). The supervisory framework for measuring and controlling large exposures, which took effect in January 2019, has been adopted by 10 FSB member jurisdictions, with the remaining 14 not having final rules in place.

Steps have been taken to address financial institutions that are considered too big to fail (TBTF). All developed countries now require that systemically important banks (SIBs) meet targets for external total loss-absorbing capacity (TLAC). Nevertheless, TLAC is just one part of the regulatory and supervisory framework that contributes to preventing insolvency. More work is still needed to operationalize resolution plans for TBTF institutions for when they fail.

Insurance industry supervisory reforms, such as creating effective resolution regimes, are less advanced, while the sector is also facing new challenges from climate change. The majority of FSB jurisdictions do not have in place comprehensive insurance resolution regimes. The identification of globally systemically important insurers (G-SIIs) has remained suspended since 2019 while the International Association of Insurance Supervisors develops a comprehensive framework to try to mitigate systemic risk in the insurance sector.

Derivatives markets have been another focus of regulators. The markets are now simpler and more transparent, although additional progress since 2016 has been limited. Standardization of over the counter derivatives transactions through central counterparties (CCPs) is a pillar of the reform. It important to further strengthen the resilience and resolvability of CCPs. There has also been progress on reporting of derivatives trading to trade repositories (TRs), though challenges include a lack of globally harmonized data, uneven data access, and quality of TR data.

Regulation of non-bank financial intermediaries (NBFI), including structured finance vehicles, investment funds, money market funds, hedge funds, broker dealers, trust companies, and other non-bank and non-insurance lenders, has also been on the FSB agenda. These entities currently bear a greater share of financial risk (see chapter I) and can be important connectors that spread risk and volatility to other parts of the financial system.

FSB members have adopted an internationally agreed NORT framework and have advanced regulatory standards on two components

### Figure II.F.1

#### Bank capital and liquidity provisions, 2012–2018

<table>
<thead>
<tr>
<th>Year</th>
<th>CET1 Capital ratios (a)</th>
<th>Liquidity coverage ratio (c)</th>
<th>Net stable funding ratio (d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2 2012</td>
<td>20%</td>
<td>80%</td>
<td>60%</td>
</tr>
<tr>
<td>H1 2013</td>
<td>22%</td>
<td>85%</td>
<td>65%</td>
</tr>
<tr>
<td>H2 2013</td>
<td>24%</td>
<td>90%</td>
<td>70%</td>
</tr>
<tr>
<td>H1 2014</td>
<td>26%</td>
<td>95%</td>
<td>75%</td>
</tr>
<tr>
<td>H2 2014</td>
<td>28%</td>
<td>100%</td>
<td>80%</td>
</tr>
<tr>
<td>H1 2015</td>
<td>30%</td>
<td>105%</td>
<td>85%</td>
</tr>
<tr>
<td>H2 2015</td>
<td>32%</td>
<td>110%</td>
<td>90%</td>
</tr>
<tr>
<td>H1 2016</td>
<td>34%</td>
<td>115%</td>
<td>95%</td>
</tr>
<tr>
<td>H2 2016</td>
<td>36%</td>
<td>120%</td>
<td>100%</td>
</tr>
<tr>
<td>H1 2017</td>
<td>38%</td>
<td>125%</td>
<td>105%</td>
</tr>
<tr>
<td>H2 2017</td>
<td>40%</td>
<td>130%</td>
<td>110%</td>
</tr>
<tr>
<td>H1 2018</td>
<td>42%</td>
<td>135%</td>
<td>115%</td>
</tr>
</tbody>
</table>

**Source:** BCBS.

**Note:** (a) 81 banks, (b) 63 banks, (c) 69 banks and (d) 85 banks

### Figure II.F.2

#### Progress of regulatory reform implementation, 2019

<table>
<thead>
<tr>
<th>Category</th>
<th>Progress of regulatory implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Securitization</td>
<td>100%</td>
</tr>
<tr>
<td>Money market fund regulation</td>
<td>95%</td>
</tr>
<tr>
<td>Resolution powers</td>
<td>90%</td>
</tr>
<tr>
<td>Recovery planning for SIBs</td>
<td>85%</td>
</tr>
<tr>
<td>Basel III implementation</td>
<td>80%</td>
</tr>
<tr>
<td>Net stable funding ratio</td>
<td>75%</td>
</tr>
</tbody>
</table>

**Source:** FSB.

**Note:** For systemically important banks (SIBs), the six European Union members of the FSB are presented as separate jurisdictions.

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incentives, and can encourage positive change in behaviours, such as promoting financial inclusion and reducing investment in climate-change-inducing or other environmentally risky activities.

Financial regulation affects incentives, and there has been growing attention to the impact of financial regulation on incentives for investment in sustainable development.
2.2 Impacts of reforms and risk factors
Total global financial assets have continued to increase since the global financial crisis (figure III.F.3). As noted in chapter I, the risk in the financial sector has declined since the global financial crisis, while risk may have increased in NBFIs during the period of high global liquidity. Within the banking system, large banks are better capitalized, less leveraged and hold more liquidity than prior to the crisis. A remaining risk factor in the banking sector is the growth of systemically important banks’ share of global banking assets, which has increased in recent years as the large banks continue to become even larger and more complex. This reemphasizes the importance of work to operationalize resolution plans (see section 2.2). The FSB is in the process of evaluating the effects of TBTF reforms for systemically important banks, and will launch a public consultation in June 2020.

**Box III.F.1**

**Impact of regulatory reform on small and medium-sized enterprise financing**

In November 2019, the Financial Stability Board (FSB) published an evaluation of the effects of financial regulatory reforms on financing of small and medium-sized enterprises (SMEs) in FSB jurisdictions. The evaluation was motivated by the need to better understand the effects of the reforms on the financing of real economic activity and their contribution to the objectives of timely, strategic, sustainable, balanced and inclusive economic growth. Given that banks are the primary providers of external SME financing, the most relevant reforms implemented to date are the initial capital and liquidity requirements agreed in 2010 (Basel III). These have been evaluated using both qualitative and quantitative analysis; other relevant reforms that are at an earlier implementation stage or that are national or regional regulations were only analyzed qualitatively, consistent with the FSB evaluation framework.

The evaluation found no material or persistent negative effects on SME financing in general, although there was a degree of differentiation across jurisdictions. Some evidence showed that the more stringent risk-based capital requirements under Basel III slowed the pace and, in some jurisdictions, tightened the conditions of SME lending at those banks that were least capitalized or ran relative to other banks. These effects were not homogeneous across jurisdictions and they were generally found to be temporary. The evaluation also provided some evidence for a reallocation of bank lending towards more creditworthy firms after the introduction of reforms, but this effect is not specific to SMEs. SME lending has grown in recent years, although volumes remain below the pre-crisis level in some jurisdictions. Access to external finance for SMEs also applies to have improved, particularly in advanced economies. Stakeholder feedback suggests that SME financing trends appear to be driven by factors other than financial regulation, such as public policies to address SME financing constraints and macroeconomic conditions. Any potential costs found in this evaluation need to be framed against the wider financial stability benefits of the G20 reforms evaluated in the ex ante impact assessments. These studies generally found significant net overall benefits in terms of reducing the likelihood and severity (lost output) of financial crises.

The FSB is continuing to conduct evaluations on different aspects of the reforms. The next evaluation, to be completed by end-2021, will be on the effects of money market fund reforms. These studies are intended not only to monitor the impact of FSB reforms, but also to identify any unintended effects of the reforms. One such evaluation was completed in 2019 on the impact of the reforms on the access to finance of small and medium-sized enterprises (SMEs) (Box III.F.3).

**2.3 The growth of digital currencies**

Digital currencies have thus far been a minor phenomenon in global finance, despite being a source of significant hype and media attention. There are three types of digital currencies: crypto-assets, so-called “stablecoins”, and central bank digital currencies. Chapter II discusses their benefits but also notes that these technologies advance, their application has the potential to be a source of systemic risk. Yet the risks and benefits differ significantly based on the type of instrument, backers and design.

**Crypto-assets**

Currencies are typically defined as having three functions: a store of value, a unit of account, and a medium of exchange. While proponents argue that crypto-assets can substitute for currencies issued by central banks, no crypto-asset serves these three functions reliably to date. Extensive

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**Figure III.F.3**

**Assets of financial intermediaries, 2004–2018**

<table>
<thead>
<tr>
<th>Year</th>
<th>NBFIs</th>
<th>Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>400</td>
<td>600</td>
</tr>
<tr>
<td>2006</td>
<td>450</td>
<td>650</td>
</tr>
<tr>
<td>2008</td>
<td>500</td>
<td>700</td>
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<td>850</td>
</tr>
<tr>
<td>2016</td>
<td>700</td>
<td>900</td>
</tr>
<tr>
<td>2018</td>
<td>750</td>
<td>950</td>
</tr>
</tbody>
</table>

**Source:** FSB

**Note:** Based on 27 jurisdictions plus the euro area; banks include all deposit-taking corporations; share of total calculated as a weighted average based on total national financial assets.
These payments systems are bank-based and thus integrated with the financial system. Some crypto-asset promoters suggest that decentralized payment processes could bring greater efficiency and speed to international transactions, which would be a welcome development in a world of increasingly complex and interdependent relationships. Yet, this decentralized nature of crypto-assets, combined with anonymity and cross-border reach, also raises concerns around illicit finance. Currently, bitcoins and other crypto-asset transactions cannot be authoritatively traced to real identities due to anonymizing service providers, and there is evidence that crypto-assets have proven fertile ground for financial crimes (see chapter III.A). Crypto-assets have also facilitated the retail trade in illicit drugs through anonymous marketplaces.

In October 2018, the Financial Action Task Force (FATF) updated its standards and recommendations regarding crypto-assets. It defined a new group of ‘virtual asset service providers’ and called on jurisdictions to include these providers in anti-money laundering and countering the financing of terrorism (AML/CFT) regulations. This challenges their suitability to replace correspondent banking, where the loss of relationships is often due to the costs of compliance with AML/CFT regulations.

To date, most crypto-assets have been traded on underregulated exchanges and used as speculative assets. The 2019 Financing for Sustainable Development Report highlighted evidence on the high frequency of money-laundering and tax-avoidance activities related to crypto-assets, and that crypto-assets have also facilitated the retail trade in illicit drugs through anonymous marketplaces. Due to their limited reach, they do not currently represent a material risk to financial stability.

Payment services and stablecoins

As noted in chapter 8, payment systems and the ability to send and receive payments and move value is a backbone of the financial system. Recognising the importance of efficient and inclusive payment services for global growth, the G20 will coordinate the development of a roadmap for improving cross-border payments to be delivered to the G20 in October 2020. A number of interbank and payments processing systems have existed for decades (e.g., interbank electronic domestic and cross-border payment systems operated by companies such as Visa and Mastercard, which dominate the developed-country market). Interbank (or wholesale) payments are more frequently handled by correspondent banks, and require a range of legal, regulatory, technical and operational arrangements between banks that do not necessarily connect to the retail side of the financial system. Recognising the importance of efficient and inclusive payment services for global growth, the G20 is working on a roadmap for improving cross-border payments to be delivered to the G20 in October 2020. A number of interbank and payments processing systems have existed for decades, and while cross-border payments are handled by correspondent banks, these systems are bank-based and thus integrated with the well-regulated parts of the financial system.

Some private actors have argued that these systems are too slow or outdated. New technology innovations on the retail side are bringing more speed and efficiency to consumers by allowing payment with text messages, so-called mobile money, or via mobile phone apps or mobile wallets, such as Apple Pay or Alipay. Mobile money is still usually backed by cash, meaning it is available to consumers without bank accounts, while apps and wallets are tied either to card-based payment networks or directly to bank accounts. These innovations can bring benefits in the form of financial inclusion and faster, cheaper payments operations.

A new proposal, which has not yet been implemented, is issuance of private digital tokens that could replace digital or other ledger technologies under- gird other crypto-assets. This is the design of the libra, a global stablecoin, proposed in June 2019 (see chapter III.F.2). Unlike earlier efforts, which facilitated payments through the banking system, this new type of network would be outside the well-regulated parts of the financial system. As the proponents plan to use the token as a form of a fiat currency (or as a basket of currencies) backed by a reserve fund of liquid assets, they have given the token the name “stablecoin”. Such a global stablecoin could come much closer to fulfilling the functions of a currency.

In addition to the efficiency and potential inclusion benefits of the electronic systems discussed above, stablecoins could provide lower cost and faster cross-border payments. Moreover, payments could be easier because they could be embedded into digital applications that many people already use. There are, however, a plethora of operational and consumer protection risks associated with stablecoin proposals that should be addressed by regulators.9 First, distributed ledger technology uses significantly more energy in the processing of transactions, creating potential climate risks. Second, similar to crypto-assets discussed above, stablecoins could facilitate greater illicit financial flows, evade taxes, and money-laundering regulations are not implemented. Third, private stablecoins, if successful, could have implications for macroeconomic policies and financial stability in both developed and developing countries.10 The reserve backing could retain large volumes of the world’s supply, with potential implications for the reserve currency issuers. Developing countries could face a particular challenge, given the potential ease with which these residents could store their financial assets in stablecoins, rather than in the local banking system. Stablecoins could severely hamper the ability of central banks to effectively transmit monetary policy changes to the economy, increase capital flow volatility and facilitate instantaneous capital flight whenever confidence begins to erode in the domestic economy. Proponents say that this would put pressure on Governments to enact better policies, but as with any herdbehaviour of investors, this could cause self-fulfilling prophecies and wild swings in exchange rates, which can precipitate financial crises, which impact the real economy.

An effective regulatory and supervisory approach to stable coins needs to be able to identify, monitor and address potential risks in a reasonable range of scenarios and users. The United Nations General Assembly has already urged regulators to carefully consider the potential implications for the international and domestic financial system. In the case of the G20, researchers have assessed the risks of different models of financial intermediation.

Central bank digital currencies

Central banks representing a fifth of the world’s population say they are likely to issue the first central bank digital currency (CBDC) in a few years, with greater interest from developing countries.12 CBDCs would be a digital form of national fiat money, intended to be used as legal tender similar to cash, and that could possibly completely replace cash in the future. One of the main benefits of a CBDC, or any cash-free system, would be to reduce the costs of producing cash. Estimates of the costs of maintaining the cash system range from 0.3 to 0.7 per cent of gross domestic product for developed countries,13 although these costs can only be eliminated if an economy goes entirely cashless. Another benefit of a CBDC could be greater traceability of transactions, which can assist in combating illicit financial flows and tax evasion.14 A potential consideration for central banks should be financial inclusion, as public interventions may be needed to assist those without access to the requisite technology.

Two main types of CBDC are being explored: token-based (similar to cash) and account-based (similar to commercial bank accounts). The difference hinges on the method of authenticating the validity of payment.15 Other CBDC design choices include (i) how open the payment network is; (ii) the degree of anonymity of users and traceability of transactions; (iii) the ability to earn interest; and (iv) the immediacy of settlement.

A CBDC has similarities to private stablecoins, but has unique characteristics because it is tied to the central bank.16 For example, a central bank designed its CBDC to provide account-based digital currencies directly to individuals, those people may have lower incentives to use a private system for fear of risking the value of their digital currency. Individuals may use digital CBDCs in financial intermediation, which would likely stimulate banks’ funding costs. This disintermediation could impact the availability of capital for productive investment and could incentivize a shift from debt-based financing to equity-financing, fundamentally changing the finance system.

Some have argued that crypto-asset-based banks might emerge, but also warned that they would not authorize use of the libra.17 The International Monetary Fund (IMF) and other major international organizations are likely to work closely with other central banks and authorities to ensure that the emerging CBDCs are robust and can be implemented in a way that adds value to the existing system.

But there are also concerns. We should not expect the CBDC to replace the entire payments system. Other financial innovations have not been able to do so—yet. The CBDC is likely to coexist with existing payment systems. In the United States, for example, about 85 per cent of payments are still made in cash, with banks’ checking accounts serving as substantially the only form of digital money.18 The CBDC is likely to target areas that are underbanked and underdeveloped, such as uses that need low transaction costs, strong anti-money laundering and anti-terrorism controls, and greater privacy guarantees.

The design of the CBDC should reflect the role and expected uses of the CBDC. As part of a financial system, the CBDC will need to work in step with the CBDCs of other central banks. One of the key features of such a CBDC is the speed of dispersal of the CBDC. The CBDC needs to be accessible 24/7, and all financial transactions must be processed in near real time. The CBDC must also meet standards for security, privacy, and operational resilience. The CBDC’s design must be flexible enough to accommodate the needs of different countries and users. The CBDC must also ensure financial stability and systemic risk. The CBDC must also be compatible with existing financial systems and regulations.

2.4 Financial policy interaction with climate change

The Addis Agenda brought environmental and social issues into the discussion on the coherence and consistency of international policies and institutions. Since 2015, discussions on how climate and the nature of financial intermediation interact have intensified, as evidence shows increased climate instability and frequency of weather-related disasters, as well as rising economic losses from them. In 2019, the Task Force highlighted the need for the regulatory system to be congruent with measures to mitigate the sustainability of the private financial system. Since then, there has been increased focus on macroeco- nomic and financial risks posed by climate change, and the potential role of central banks and financial regulators.19 As discussed in chapter II, the relationship between climate risk and finance is defined by two related issues: (i) the impact of climate risks on financial stability; and (ii) the impact of financial investments on climate risks.

Climate risk is a financial and macroeconomic risk.

Markets are beginning to recognize climate risk as a financial risk. The risks stem both from physical risks to assets and operations, and transition risks related to changes of policies to address climate change. Indeed, in 2019 the first S&P 500 firms (1% of listed firms) declared bankruptcy due to the effects of climate change. As risks grow from impacts on individual firms to risks to the broader economy and financial system, a critical question is how central banks and financial regulators should react. The FATF announced that it will examine the financial stability implications of climate change in 2020.
Generally, central banks and regulators have two avenues to explore. First, they can continue to work with voluntary approaches and industry-promoted good practice standards. The Taskforce on Climate-related Financial Disclosures (TCFD) was established by the FSB in December 2015 to develop a set of voluntary, consistent disclosure recommendations for use by companies in providing information (see chapter III.B). However, a June 2019 TCFD survey found that while disclosure is increasing, it is insufficient. In particular, the majority of companies do not disclose sufficient clear information on the potential financial impact of climate-related risks or the resilience of their strategies. The FSB asked the TCFD to clarify guidance for reporting on business-related climate-related scenarios and to deliver another status report to the FSB in November 2020.

Second, central banks, financial regulators and other policymakers are considering other measures beyond voluntary disclosures of private firms. This may be needed, for example, to reflect the increased risk of non-performing loans due to stranded assets (see chapter II.B). The Network for Greening the Financial System (NGFS)—an association of 55 central banks and supervisors including those from almost all G20 countries—seeks steps in that direction, starting with support for better assessment of risks and opportunities associated with climate change. It recommends including climate risk in stress tests for the banking sector or, at a minimum, lengthening the timeframe of existing stress tests to include long-term risks. Similarly, the IMF is working on incorporating climate risk in macro-financial stress testing.21

In April 2019, the NGFS published its first comprehensive report, proposing four recommendations to central banks, supervisors and the financial sector: (i) integrate monitoring of climate-related financial risks into day-to-day supervisory work, financial stability monitoring and risk management by banks; (ii) encourage central banks to lead by example and integrate sustainability into their own portfolio management; (iii) collaborate to bridge data gaps to enhance the assessment of climate-related risks; and (iv) build in-house capacity and share knowledge with other stakeholders on the management of climate-related financial risks.22 Important streams of work, as discussed in chapter III.B, are harmonizing corporate disclosures on climate-related issues and agreeing on standards for defining the “greenness” of business activities.

Climate-related risks can be particularly acute for the insurance sector due to the increasing frequency and intensity of disasters, particularly if insurers have concentrated risk in certain economic sectors or regions. Indeed, some insurance companies have been in the lead on efforts to price climate-related risks.23 At the same time, big data is helping insurance companies better understand risk probabilities and price risk. This is leading to the development of new insurance products, but is also leading to concerns of financial exclusion, where those that need insurance might be priced out of the market (see chapters II and III.B), raising the need for public support. Efforts to develop a comprehensive framework to try to mitigate systemic risk in the insurance sector will need to pay attention to the financial risks from climate change.

Financial policies to slow climate change Central bank monetary policy mandates generally focus either solely on price stability or on price stability and other socio-economic factors, such as employment. Thus, for many central banks, the primary question with regard to climate change is the extent to which it will ultimately impact these objectives. As a further step beyond monitoring and assessing risk, it is possible for central banks and financial regulators to take a more active role. Indeed, the second recommendation of the NGFS calls to action mentioned above, on integrating sustainability into central banks’ own portfolio management, begins to go in this direction. Since the 2008 financial crisis, developing and central banks have accumulated large portfolios of assets through quantitative easing. Some central banks have sufficiently large asset bases that concerted efforts to price climate risk in their own portfolios can potentially induce market-wide shifts in asset pricing. To address this, the NGFS has asked regulators to develop a classification system to identify which economic activities contribute to the transition to a green and low-carbon economy.

Financial authorities have many options at their disposal, some more tested than others.24 Policies that have been proposed include: green quantitative easing; collateral frameworks; and credit allocation policies that take climate change into account, and direct financial incentives. In the realm of unconventional monetary policy interventions, such as the quantitative easing programme, central banks could either screen their brown or carbon-intensive assets from bond purchases, or directly subsidize specific sectors of the economy by directing bond purchases to assets with certain environmental standards. Sustainable development, including climate risk, could also be integrated into financial regulations beyond addressing the climate-related risk discussed above. International standard-setting bodies set minimum prudential standards commensurate to risk, aiming to promote global financial stability and avoid financial regulatory competition. Higher standards than the minimum can be applied, per national (or regional) discretion. In 2018, the EU High-level Expert Group on Sustainable Finance suggested that sustainability be incorporated directly into the capital requirements of regulated financial institutions. Some countries have also taken measures to encourage financial institutions to increase credit availability to green sectors and promote the growth of sustainable finance. As an alternative to unilateral changes in prudential standards, climate change-related standards could be incorporated into the Basel capital adequacy framework, or in parallel green asset minimums,25 so that in the absence of weakening of prudential regulation, analytical work on defining “green” and “brown” assets according to climate-related financial indicators, and quantifying the impact these might have on loan quality and financial stability, could support this effort (see chapter III.B).

Macropolicy measures, a policy tool to mitigate system-wide risks, could also be adapted for use in this area. An example of a financial-stability-oriented, macroprudential tool is loan-to-value requirement on mortgages based on system-wide indicators on housing prices. Similarly, supervisors could adopt loan-to-energy efficiency benchmarks or requirements for mortgage portfolios, which could be used to incentivize banks to include energy efficiency retrofit requirements into mortgages. Some countries have already issued guidelines for greening their financial systems which include combinations of guarantees, subsidies, environmental risk management rules, green standards for credit rating, and macroprudential measures.26 To fully incorporate climate change in financial policies, policymakers may consider further clarifying the mandates provided to regulators and central banks so that they cover all dimensions of sustainable development.

3. Macroeconomic management and crisis response

Chapter 3 describes how international financial spillovers—a consequence of unconventional monetary policies and prolonged low interest rates in major developed economies—raise concerns, including on capital flow instability. Prior to the onset of the crisis, net capital flows to developing countries, in aggregate, were already expected to return to negative territory in 2019 (figure III.F.4), although this is due to the effects of just one region (East Asia) (figure III.E.5). However, higher demand for dollar liquidity following the global slowdowns as a response to the 2008 global financial crisis, including the largest capital outflows ever recorded. According to latest figures by the IMF, investors have removed around $80 billion from emerging markets since the start of the crisis.

International capital markets can transmit volatility and instability across borders, even when countries have sound national frameworks. In this context, countries should approach strengthening policymaking in a risk-informed and integrated manner. Integrated policy frameworks, which bring together appropriate combinations of different macroeconomic management policies, can be part of broader country development strategies. The international community has created and periodically updated a global financial safety net (GFSN) to assist countries with supplementary financing when national frameworks are insufficient.

Figure III.F.4 Net financial flows to developing countries, regions, 2008–2019 (Billions of United States dollars)

Source: IMF, World Economic Outlook (October 2019).

Note: Positive values denote a net inflow of capital and an increase in reserves. A negative value indicates a net outflow of capital and a decline in reserves. 2019 value is a projection.
Governments also use measures from another class of policy tools known as capital account management (CAM). These measures can focus exclusively on smoothing the domestic business cycle, while use of monetary policy can stimulate or dampen capital inflows. Overall, these policy options aim to target vulnerabilities and complements other policies. The policies considered in the IMF’s toolkit of components of a country-owned strategy within an integrated national financial framework (INF), as laid out in the 2019 Financing for Sustainable Development Report. The country plans would aim to provide a more systematic approach to designing an effective macroeconomic policy mix to pursue growth and stability objectives, attuned to country-specific circumstances. This rich variety of policy options points to the importance of national planning in this area. The IMF has put forward the concept of an integrated policy framework (IPF) that draws on the best of alternatives to formulate the best policy mix to meet different countries’ needs. An IPF would consider the role of monetary, exchange rate, macroprudential and capital flow management policies, and their interactions with each other and other policies. The policies considered in the IPF should be components of a country-owned strategy within an integrated national financial framework (INF), as laid out in the 2019 Financing for Sustainable Development Report. This rich variety of policy options points to the importance of national planning in this area. The IMF has put forward the concept of an integrated policy framework (IPF) that draws on the best of alternatives to formulate the best policy mix to meet different countries’ needs. An IPF would consider the role of monetary, exchange rate, macroprudential and capital flow management policies, and their interactions with each other and other policies. The policies considered in the IPF should be components of a country-owned strategy within an integrated national financial framework (INF), as laid out in the 2019 Financing for Sustainable Development Report. The country plans would aim to provide a more systematic approach to designing an effective macroeconomic policy mix to pursue growth and stability objectives, attuned to country-specific circumstances. The IMF is working to develop tools to provide more nuanced guidance and advice to Member States on how to design integrated policies, using modelling, empirical work, and case studies. The case studies seek to identify patterns in country behaviour. Cross-country empirical analysis explores whether these insights generalize, helping to select key features and parameters for models that closely match country conditions on the ground. Ultimately, the work should also result in the IMF having a more nuanced approach in its own assessments in its annual Article IV consultations with member countries. 30

3.2 Global financial safety net

At a time of high uncertainty and many downside global risks, it is critical that Member States take action to strengthen the permanent international financial safety net, as committed in the Addis Agenda. Member States have called for a strong, quota-based, and adequately resourced IMF at the centre of the GFSN. Taking account of the challenges posed by higher interconnectivity and uncertainty in the global economy, all layers of the GFSN—countries’ own international reserve buffers, bilateral swap arrangements (BSAs), regional financial arrangements (RFAs) and the IMF—have expanded substantially since the 2008 global financial crisis. Nevertheless, gaps in the GFSN remain, including the need to strengthen collaboration between the IMF and RFAs and the availability of appropriate financing instruments. The IMF Executive Board has also noted “many countries do not have reliable access to BSAs or RFAs.” 31

Regional financial arrangements

RFAs have become an important component of the GFSN, prominently in Europe, Asia and Latin America. The IMF is enhancing cooperation with RFAs to increase the effectiveness of the GFSN and ensure a timely and coordinated deployment of resources, as called for in the 2017 IMF Executive Board paper on collaboration between RFAs and the Fund. The framework looks at models for collaboration across capacity development, surveillance, lending and, for negotiation, and operational principles to help guide co-lending by the Fund and RFAs so as to ensure it is done cohesively. These principles include seeking early and evolving engagement, the benefit of exploiting complementarities, the criticality of a single programme framework, and the need for mutual respect of institutional independence and capacity. In 2018, the IMF also amended its policy framework for the exchange of documents, allowing greater exchanges between the Fund and RFAs to help ensure timely information sharing. In line with its framework, the IMF has participated in several “test runs” with the Chiang Mai Initiative Multilateralization (CMIIM) since 2017. These exercises improved the operating procedures of the CMIIM and its coordination with the IMF, which will facilitate future co-financing operations should they become necessary. The IMF is also working to deepen collaboration with other RFAs and refine the modalities of how best to work together, including via similar test-run exercises.

IMF resources and facilities

The Fund is currently adequately resourced, with an overall lending capacity of about $1 trillion. Almost half of this capacity consists of permanent IMF quota resources. Quotas are the building blocks of the IMF financial and governance structure and have four roles: resource contributions, voting power, access to financing, and special drawing rights (SDR) allocations. The remainder of IMF lending capacity consists of borrowed resources that the Fund may draw upon from member countries in case of need. Under the new Arrangements to Borrow (NAB) and Bilateral Borrowing Arrangements (BBA), IMF members endorsed a package on IMF Resources and Governance that will maintain the Fund’s current $1 trillion resource envelope. 32 In the absence of an agreement on a quota increase under the Fifteenth General Review of Quotas (further discussion below), members committed to reach $1 trillion target through a doubling of the NAB and a further temporary round of bilateral borrowing beyond 2020. The IMF membership also committed to resist the adequacy of quotas under the Sixteenth General Review of Quotas, which should be concluded no later than 15 December 2022.

The Fund has also reviewed the policy conditions to which countries agree for IMF loans as part of its 2018-2019 review of “conditionality.” The review found that three quarters of IMF-supported programmes undertaken between September 2011 and December 2017 were successful or partially successful in achieving their objectives, such as resolving balance-of-payments problems and fostering economic growth. With a view to raising the rate of success, the Fund agreed its staff would bring “more realism, granularity, and parsimony in programmes, as well as sharper debt sustainability analyses to mitigate any bias in judgment and ensure more balanced consideration of debt (and debt restructuring) operations, where warranted.” 33

IMF loans to low-income countries (LICs) are provided on concessional terms and are financed by member governments. The IMF lends to LICs through three facilities—loans which are currently provided at zero interest and subsidized through the Poverty Reduction and Growth Trust (PRGT), which is financially self-sustainable as income from investments of the trust covers the subsidy costs of the concessional lending. To maintain the viability of the trust fund, there are limits on the size of PRGT-subsidized loans. Debt relief for the poorest and most vulnerable countries hit by catastrophic natural or public health disasters is financed by the Catastrophe Containment and Relief Trust. The IMF reviewed its facilities for LICs in 2018 and in May 2019 its Board endorsed a set of reforms, beginning with a one-third across-the-board increase in LIC borrowing limits from the Fund, with a further increase in some cases to better support countries affected by conflict or disasters. In the light of limits to available subsidy funds, access to subsidized loans was tilted towards the poorest countries, with expanded blending of concessional and non-concessional financing for higher-income LICs that enjoy access to international financial markets. In addition, the key lending instrument (the Extended Credit Facility) was modified to allow for longer programmes in countries seeking support for medium- and longer-term structural reform, and to make clearer that the use of concessional finance in countries with high uncertainty and low capacity should focus initially on a streamlined set of near-term reforms that support economic and political stabilization. Finally, the reforms placed heightened attention to debt sustainability and transparency through strengthened safeguards for countries warranting “high” and “exceptional” loan access. 34

4. Strengthening global governance

Global governance has changed significantly since the turn of the century, as the 2008 global financial crisis prompted multilateral coordination on a scale not previously witnessed. Yet, recently there has been some retreat from multilateralism as multilateral organizations have made responses to global financial and economic crisis more challenging. The international community has struggled with how to strengthen global governance and make it more inclusive for decades, not least in the Financing for Development process.

4.1 Governance reform at international institutions

The Addis Agenda recommended Member States to broaden and strengthening the voice and participation of developing countries in international economic decision-making, and reiterated the commitment to further governance reform in both the IMF and the World Bank. While decision-making at any international institution is multifaceted, the formal rights to vote on policy frameworks and institutional design matters.

Figure III. F.6

Net financial flows, by region, 2007-2018

(Billions of United States dollars)

Source: IMF, World Economic Outlook (October 2019).

Note: Positive values denote a net inflow of capital and an increase in reserves. A negative value indicates a net outflow of capital and a decline in reserves. 2019 value is a projection.
The African Development Bank concluded negotiations on a capital Group, the International Bank for Recovery and Development and the Inter-
sures that will slowly increase the share of votes of developing countries by
shareholders of the World Bank agreed in principle in April 2018 to mea-
concluding the Fifteenth General Review of Quotas with no increase in IMF
change the distribution of voting rights at the bank but will allow the bank
results in increases in the quota shares of dynamic economies in line with
resolution requests the Executive Board to revisit the adequacy of quotas
and providing guidance on the Sixteenth Review of Quotas.

4.2 Financial standard-setting bodies

As discussed earlier in this chapter, a number of public and private bodies
which countries may adopt into national frameworks. Members of these
which countries in norm-setting processes, although reforms since 2015 have
the work and agenda of the FSB and further strengthens the effectiveness
of RCG meetings.

measures will encourage greater input from non-member authorities into
the FSB. The FSB referred to the work of new non-member authorities on
enhancing the effectiveness of its six Regional Consultative Groups.

international institutions were generally set up by developed countries, but following
the Addis Agenda, Member States called for the main international SSBs to further increase the voice of developing
countries in norm-setting processes, although reforms since 2015 have been minimal (figure III.F.7). Some SSBs have regional consultative com-
mittees or other mechanisms for taking input from developing countries to feed into norm-setting and/or implementation discussions, which are
often held at an executive committee.

International policy coherence can also be advanced when senior leaders
take up an issue and raise its visibility. For example, the increased attention on central banks and regulatory authorities taking account of environmen-
tal risks (see above) may have been driven by executive vision. The issue
was first raised at the international level in 2015 when the FSB, at the
quest of the G20, created the TCFD. While the TCFD has been successful, few
would claim that the financial sector fully integrates climate risk. To raise
the issue, the FSB organized a high-profile panel during its 2019 Annual
Meetings, followed by a speech by the Chairman of the Board of the FSB
for International Settlements at a major financial conference two weeks
later. The need for financial policy to pay attention to the lack of sufficient
progress on slowing climate change exemplifies the interrelatedness of the
financial and climate issues and the need for stronger policy measures.
That the former Chair of the FSB will now serve as the United Nations
Secretary-General’s Special Envoy on Climate Action and Finance is
a sign that coherence can be advanced, albeit sometimes only slowly.

The approach of the Seventy-sixth Anniversary of the United Nations
presents an opportunity to consider the Organization’s role in positive
change. The Charter of the United Nations gives it formal responsibility
for overall coordination of international cooperation in the economic and
social field, mainly through preparation of global analyses and intergov-
ernmental negotiation of agreed recommendations. Indeed, the Task Force
has helped to strengthen coherence of analytical work across the system.
The United Nations General Assembly and the United Nations Economic and Social Council (ECOSOC) serve as the main forums for forging a global consensus around key economic and social policy norms and targets, most recently in the 2030 Agenda for Sustainable Development and its Sustainable Development Goals and the Addis Ababa Action Agenda on Financing for Development. The discussions—in particular in the ECOSOC Forum on Financing for Development Follow-up—of the full range of policies to advance financing of sustainable development illustrates how the United Nations can contribute to coherence by bringing different institutions, Governments and other stakeholders together through its convening authority.

The United Nations forum is not empowered to force coherence on the policy choices of the global family of institutions and bodies, which are, ultimately, independent entities. To meet the needs of the 2030 Agenda, this system needs to be both set rules that allow predictability and promote long-term thinking, while at the same time being flexible enough to respond to emerging opportunities and challenges and adjust to new realities, such as technological change. It needs to work with a measure of humility, often outside the timelapse, quietly building consensus on the essential challenges of our day.

Endnotes


2 Ibid.

3 Ibid.

4 In 2018, the FSB renamed its work stream from “transform shadow banking into resilient market-based finance” to “enhancing the resilience of non-bank financial intermediation.” The change in terminology does not affect the substance or coverage of the agreed monitoring framework and policy recommendations, which aim to address bank-like financial stability risks arising from non-bank financial intermediation.


8 Ibid.


10 Ibid.


13 Malte Kröger, Franz Sietz, and Hintze Herwinzinger Wieg. “Costs and Benefits of Cash and Cashless Payment Instruments” (Bundesbank, 15 December 2014). There is little systematic research on the costs of cash systems for developing countries.


15 In a token-based system, payment verification is conducted by examining the validity of the token, much as is done with cash currently. In an account-based system, payment verification is based on whether the person is the true account holder, which usually relies on an intermediary.


17 Committee on Payments and Market Infrastructures, “Central Bank Digital/Currencies.”


Science, technology, innovation and capacity-building

1. Key messages and recommendations

To achieve the Sustainable Development Goals (SDGs), countries at all stages of development must increase their capacities in science, technology and innovation (STI). New practices and technologies need to be developed and transferred where they are most needed in order to strengthen productivity growth, lower the environmental impact, and reduce inequalities between and within countries. Governments, companies and civil society organizations need to ensure that technological discoveries are transformed into innovations that respond to society’s needs and contribute to sustainable development.

This chapter complements the analysis of the thematic chapter (chapter II)—which addresses the role of digital technologies—by reviewing the progress in implementing the commitments and calls for action on and capacity-building in the Addis Ababa Action Agenda.

While there has been important progress in most STI indicators, large gaps remain between developed and developing countries, particularly in least developed countries (LDCs); for instance, the gap in research and development (R&D) spending between developed and developing countries has increased in most regions. While the gender gap has shrunk in most countries with respect to tertiary education, it remains large in terms of Internet access and has increased in LDCs overall. Knowledge-sharing and collaboration should be strengthened to ensure that no one is left behind, including by supporting education systems, improving affordable access to the Internet and further increasing international cooperation in science, technology and innovation.

New and emerging technologies have spread rapidly, supporting SDG progress and spurring financial innovation and inclusion in particular. Over time, the impact of these technologies will affect all sectors and countries. All countries need to develop and strengthen their capacities for technological adaptation and innovation, in line with the development of national innovation systems and regulatory frameworks, supported by an enabling international environment.

Both the Technology Facilitation Mechanism (TFM) and the Technology Bank—two key outcomes of the Addis Agenda in support of STI—have been set up and operationalized over the past few years. Continued joint efforts of Member States of the United Nations, supported by the United Nations system, can help these mechanisms deliver on their mandates, to support developing countries’ adaptation of new technologies for sustainable development.

The next section reviews a comprehensive set of STI indicators, highlighting progress and areas for further action. Section 3 analyzes major trends in new and emerging technologies and their impact on sustainable development, while section 4 reviews their effect on the financial sector and financial inclusion. Section 5 takes stock of United Nations actions on STI, including support for the TFM and the Technology Bank.

2. Measuring progress towards the Addis Agenda in science, technology and innovation

While the Addis Agenda does not provide quantitative targets, this section reviews indicators that can help assess progress in the area of STI. It highlights areas of progress and those where additional policy action is needed. It also reveals a lack of comparable information across countries for many relevant commitments.

The commitments are clustered around three areas: (i) providing an enabling environment, by improving connectivity and promoting entrepreneurship; (ii) increasing training and innovation by public and private actors, including by raising enrolment in tertiary education, employing more researchers and investing more in R&D; and (iii) transferring knowledge across borders, by increasing foreign direct investment (FDI).
in R&D activities, encouraging the movement of students, strengthening online learning and increasing international cooperation.

2.1 Providing an enabling environment

People are more connected

To raise capabilities in STI, people need to be connected. Globally, the number of broadband subscriptions is on the rise, although with a different pattern between developed and developing countries. While in developed countries, there are now 16 fixed broadband connections for every 100 persons, developing countries only reach 11 connections per 100 inhabitants, and LDCs only 2. On the other hand, mobile broadband connections are rising faster in developing countries, reaching 75 connections per 100 inhabitants.1

As a result, the number of people using the Internet continues to grow, reaching 54 per cent of the global population in 2019. The gap between developed and developing countries has narrowed considerably, especially for Latin America and the Caribbean, Western Asia, and East and Southeast Asia (figure III.G.1), almost half the world is not connected. Internet use in Africa and South Asia is still much lower but has been growing at a faster pace. Growth was slower in LDCs, causing them to fall further behind in terms of connectivity. Affordability of services is a major barrier for expanding usage, almost a third of the world’s people live in countries where broadband plans are unaffordable for average incomes. While in almost all developed countries, a mobile broadband subscription with a 15 GB-data package costs less than 2 per cent of gross national income (GNI) per capita, in most LDCs it costs more than 5 per cent, as an extreme example, in the Democratic Republic of the Congo, at 20 dollars per month, the cost reaches 53 per cent of GNI per capita. Poor and marginalized groups continue to face barriers to Internet access, and all the opportunities that come with it. Women are still 16 per cent less likely than men to access the Internet in developing countries (33 per cent less in LDCs), and the gender gap is widening in the Asia-Pacific region, Africa and Western Asia as men are gaining access at a faster rate than women.2

Entrepreneurship is rising

New ideas need to be put into action, and while large companies have more capacity for R&D, it is often newer, more agile firms that can implement the most innovative ideas. Markets with many new companies also tend to be more competitive, which can spur innovations from all companies, both new and old. Available data shows that new business registrations of private, formal sector companies grew over the past decade across the world (figure III.G.2). On average there are more new business registrations in developed economies, but with large variations among countries, reflecting institutional differences. All 29 African and Asian countries with available data registered an increase over the previous decade.

2.2 Increasing learning and innovation by public and private actors

More people are getting tertiary education

In the Addis Agenda, Member States pledged to enhance vocational and tertiary education and to scale up investments in science, technology, engineering and mathematics education.3 While enrolment rates in tertiary education are growing across the world, disparities between countries persist, and enrolment rates in LDCs (while doubling since 2006) are only a fraction of those in developing countries overall. Regionally, enrolment rates have doubled in Asia and grown by a third in Latin America and the Caribbean since 2006 (figure III.G.3.A).4

Women have higher enrolment rates in tertiary education than men overall, but with large disparities between regions. Women have higher enrolment rates in developed countries and in Latin America and the Caribbean, but in Africa and South Asia they only recently reached parity (figure III.G.3.B). Enrolment rates in LDCs are one third lower for women than men, but the gap has narrowed over the past decade.

More resources are devoted to R&D

The Addis Agenda calls for more resources devoted to STI. Indeed, investment in research and development increased from 1.55 to 1.68 per cent of world gross domestic product (GDP) from 2006 to 2016. Outside East and Southeast Asia, however, the gap between developed and developing economies was not reduced (figure III.G.6). In South Asia, R&D spending as a share of GDP declined. The share of total R&D investment that comes from Governments (as a percentage of GDP), which historically has been an important driver of innovation, dropped slightly over the past ten years.5

The number of researchers worldwide is growing, and developing countries as a group have been catching up, albeit from a low base. In all regions, except in Central Asia, the R&D gap between developing and developed countries has narrowed, although progress in Africa and the LDCs has been modest and differences are still large. While in developed countries there are 3,915 researchers per million inhabitants in 2017, there are only 280 in South Asia and 103 in Africa.

2.3 Transferring knowledge across borders

Despite some positive developments discussed above, large disparities between countries persist. Strengthening tertiary education systems, increasing access to online education in areas related to sustainable development, and stepping up international cooperation to STI can help develop countries harness STI for the sustainable development agenda.

More people are moving abroad to study

Giving students the opportunity to pursue their tertiary education abroad widens the possibilities for individuals and helps upscale scientific capabilities for home countries, especially for small and developing countries. In the short to medium term, study abroad can be an opportunity to complement the capacities of national education systems, although it needs to be well-managed to avoid increasing brain drain.

The share of tertiary students studying abroad grew significantly over the last decade. The share is highest in developed countries, but it also increased in most developing regions — except in Africa, where an exceptionally high rate of students studied abroad in 2006 and domestic university enrollment significantly expanded in the following decade (figure III.G.5). Official development assistance (ODA) for education grew by 10 per cent in real terms between 2006 to 2017 and, within that, ODA to tertiary education grew by 7 per cent. Nonetheless, this lagged the overall growth of ODA of 21 per cent.6

Source: UNCTAD, based on ITU.

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Figure III.G.1 Percentage of individuals using the Internet, 2006 and 2017 (Percentage)

<table>
<thead>
<tr>
<th>Region</th>
<th>2006</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>East and South East Asia</td>
<td>35</td>
<td>45</td>
</tr>
<tr>
<td>South Asia</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Western Asia</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Developed countries</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>LDCs</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: UNCTAD, based on ITU.

Figure III.G.2 New business registrations per 1,000 people, 2006 and 2017

<table>
<thead>
<tr>
<th>Region</th>
<th>2006</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Latin America and the Caribbean</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>East and South East Asia</td>
<td>1.5</td>
<td>2</td>
</tr>
<tr>
<td>South Asia</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>Western Asia</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>LDCs</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Developed countries</td>
<td>0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Source: UNCTAD, based on World Bank.
Figure III.G.4
Research and development spending as a percentage of GDP, 2006 and 2017
(Percentage)

Source: UNCTAD, based on UNESCO.

Figure III.G.5
Percentage of tertiary students abroad, by region of origin, 2006 and 2017
(Percentage)

Source: UNCTAD, based on UNESCO.
More people enrol in online education

Online education is another opportunity to upgrade skills beyond the possibilities offered by national education systems. The number of massive online open courses (MOOCs), one of the most popular methods of online education, has increased dramatically in the past few years. Nonetheless, there are important barriers for enrolment in developing countries related to connectivity, skills (most MOOC participants already have some university education) and language (most courses are offered in English and a few other international languages). There is no official data on the use of online education, but enrolment figures from Coursera, the world’s leading online learning platform for higher education, show that, while enrolments are more common in developed countries, developing countries are catching up fast (figure III.G.6). The high level of adoption of Coursera in Latin America reflects in part the availability of courses in Spanish (registrations from Brazil are well below the regional average) and partnerships with local universities that tailor the content to local needs.

Foreign direct investment flows to developing countries are not growing

The Addis Agenda also calls for the international community to “foster linkages between multinational companies and the domestic private sector to facilitate technology development and transfer”7. While overall flows of FDI to developing countries have been relatively constant in nominal terms, FDI to developing countries has grown. This increase in multinational corporations’ productive capacities in developing countries implies greater possibilities offered by national education systems. The number of massive online open courses (MOOCs) and partnerships with local universities that tailor the content to local needs.

FDI can also contribute to STI capacities in a more direct way, when multinational corporations locate R&D facilities in developing countries—which they do partly to access the growing set of skilled workers and partly to access policy advantages targeting this type of investment. However, companies locate R&D facilities only in places with strong innovation capacities, which only a handful of developing countries have. Data from FDI Markets8 show that multinational corporations concentrate most of their R&D projects in developed countries,9 and that this proportion has been stable over the past decade. Moreover, projects that do go into developing countries are highly concentrated in China (17 per cent of the total between 2006 and 2018) and a few other countries in East Asia (11 per cent) and Latin America and the Caribbean (4 per cent). Africa receives only 1 per cent of the total, and there has been no single project registered in an LDC.

2.4 International collaboration

Beyond education (reviewed above), ODA also directly targets STI activities. While there is no internationally agreed measure of ODA for STI,10 estimates show a sharp increase in such funds since 2014 (figure III.G.7). ODA for STI has spurred outpaced ODA growth since 2014, indicating increased donor commitment to this area. ODA for STI to LDCs also increased in recent years, doubling between 2016 and 2018, albeit from low levels. Medical research is one of the areas receiving increased ODA in the past few years. There are several important initiatives that are also supported by private companies and donors, such as the Vaccine Alliance, The Pool for Open Innovation Against Neglected Tropical Diseases or the Drugs for Neglected Disease Initiative.11

Within the United Nations Framework Convention on Climate Change (UNFCCC), the Clean Development Mechanism was designed to allow technology transfer to developing countries, but relatively few projects have achieved this aim so far. Currently, the UNFCCC Technology Mechanism—hosted by the United Nations Environment Programme and the United Nations Industrial Development Organization—promotes this type of technology transfer. Since 2014, it has received 264 requests for technical assistance and started 180 technology transfer projects, from supporting e-mobility transition in Jakarta to assessing geothermal resources in Kenya.12

3. New and emerging technologies and the Sustainable Development Goals

Chapter II analysed the impact of digital technologies on financing policies and institutions. This section reviews trends in nine relevant new and emerging technologies—some in the digital domain and discussed in chapter II, others going beyond the digital field (table III.G.1). It then explores the potential impact of these technologies on the SDGs.
3.1 Technology trends and key players

Artificial intelligence (AI) is the technology that has received the most attention from researchers, as measured by the number of publications, which totalled over 400,000 between 1996 and 2018. Robotics followed, with over 250,000 publications in the same period. AI also accounts for the largest number of patents filed during those years, followed by the Internet of Things (IoT).

China and the United States of America are the most active countries in research across the AI technologies, respectively accounting for 16 and 24 per cent of publications and 46 and 16 per cent of patents.

Other technologies with the potential for wide applications, such as gene editing or DLT, have a relatively small market size, as mass applications are still in the early stages of expansion. For example, the global market size of gene editing was valued at $1 billion in 2018, with the largest number of patents filed during those years, followed by the Internet of Things (IoT).

Deployment of new technologies could be transformative for the sustainable development agenda, as they offer solutions that are better, cheaper, more scalable and faster to deploy. They can help prevent biodiversity loss, improve environmental sustainability (see box 3.1 in chapter II) and improve the delivery of basic services. For example, during the COVID-19 crisis, open government data has helped some countries rapidly map the outbreak, thus helping contain transmission. Nonetheless, without strong regulatory and policy frameworks, they can also lead to rising inequality within and between countries (see chapter 8), although new technologies (driven by the technological and market leadership of China and the United States) no longer display a traditional developing-country divide.

Policymakers can guide new technological solutions towards the most pressing problems, as defined by the sustainable development agenda, and also use regulatory and policy frameworks to prevent the rise in inequality within countries that may come with technological change. Even if national innovation systems are weaker in developing countries, new technologies can create opportunities for leapfrogging, allowing countries to bypass intermediate stages of technology without neglecting traditional and more labour-intensive development pathways (see chapter 5 for a discussion of such a two-pronged approach). To tap the full benefits, developing countries need to increase the capacity of their regulatory institutions to absorb and adapt foreign technologies and to generate local innovations (box III.G.3).

3.2 Impact on the sustainable development agenda

4. Fintech trends and financial inclusion

New and emerging technologies have already begun to transform the financial sector (see chapter I), and fintech has been an important driver of financial inclusion. Developments in financial technology have been shaped by country-specific conditions, including differences in the availability and quality of necessary infrastructure and complementary technology, as well as financial sector characteristics and regulations. As a result, fintech growth has been uneven among countries and regions.

The benefits of fintech do not materialize automatically, and country authorities need to provide the appropriate enabling environment while mitigating associated risks, including excessive borrowing, fraud, loss of financial integrity (i.e., use of fintech tools for money laundering and terrorism financing purposes), new forms of exclusion and data privacy concerns.

While global fintech activities have grown rapidly in recent years, their exact scope is difficult to assess, given the fast-paced innovation cycle and lack of internationally agreed definitions. Only limited data is available, mainly from research organizations and consultancies, focusing on sector indicators and data sources. Nevertheless, it is possible to identify some key trends, at both the global and regional levels.
4.1 The evolving fintech landscape

Investment in fintech companies

Annual investment trends in fintech companies show a slowdown after several years of strong growth, amid some signs that the sector is beginning to mature. Total investment in fintech through venture capital (VC), private equity (PE) and mergers and acquisitions (M&A) rose from $18.9 billion in 2013 to $53.7 billion in 2019. The average deal size more than tripled, from $16.7 million to $50.4 million over this time, suggesting that firms getting funded or acquired have become more mature over the years. Fintech investments continue to be highest in the Americas, although growth rates there have moderated, while investment in European fintech has increased steadily since 2016 (figure III.G.8). The slight decline in total investments in 2019 followed a spike in 2018 that was driven by a few megadeals, including a record late-stage VC financing round for Ant Financial and a very large private equity investment in Revolut in the second and fourth quarters, respectively.

In 2018 and 2019, M&A was a main driver of fintech investment in the Americas and in Europe, in an early sign of consolidation in more mature fintech categories, such as payments, as well as an increase in the purchase of fintech start-ups by incumbents. In the Asia-Pacific region, VC was the dominant source of investment in 2018, but M&A has become more important in 2019.

Big tech in finance

Big tech companies are increasingly entering the market for financial services, using the comparative advantages provided by their large number of established users, wealth of data, and analytical capacity. Financial services can also create synergies with existing big tech activities and strengthen the dynamic feedback loop between data analysis, network externalization and other activities. For example, payment services are a natural extension for e-commerce platforms that facilitate a smooth customer experience and guarantee the settlement of transactions in a fully integrated system, while providing the platforms with additional information about users’ payment behaviour.

All major big tech companies are now offering integrated payment systems, accounting for about 11 per cent of their revenues in 2018. Some use third-party infrastructure to process and settle payments while others have developed their own proprietary systems. Like other fintech services, big tech’s proprietary payment systems have expanded more in places and areas less served by the traditional financial sector (such as Africa’s M-Pesa, and Tencent’s WeChat Pay). This, in addition to the large size of their user base, could explain the importance role big tech companies play in the Chinese mobile payment sector (figure III.G.8). Interestingly, some big tech companies are also offering other types of services, such as cross-border payments (including remittances), money market funds, credit provision and insurance products.

Owing to their large-scale and growth potential, big tech participation in fintech presents challenges that go beyond the risks associated with smaller-scale fintech providers, including the risk of market dominance and questions about the extent of personal data collection and use (see chapter II).

Digital payments

Being able to access and use digital payment services through mobile devices (mobile money) has benefited unbanked and underbanked populations—including through lower fees, time savings and reductions in travel costs—as traditional banking services are expensive, and often unavailable in remote locations. It is also a useful tool for MSMEs, as it permits fast and frictionless settlement of accounts, and the ease to access agent networks facilitates transfers between cash and digital money.

Over the past ten years, mobile money has become an integral part of the payments system in a growing number of countries. As of December 2018, 866 million mobile money accounts were registered globally, and transaction values reached $40.8 billion. This translates to average monthly transaction values worth $206 per active mobile money consumer. A total of 46 per cent of registered mobile money customers worldwide were located in sub-Saharan Africa, 33 per cent in South Asia and 11 per cent in East Asia and the Pacific.

While most mobile money transactions in 2018 were still cash-in and cash-out operations, the values of digital transactions have been growing quickly, at 24 per cent per year on year. The main drivers of this digital growth were bill payments and bulk disbursements, 64 per cent of which were originated by businesses. Cash-in transactions in two sub-Saharan African countries shows that 80 per cent of MSMEs have a mobile money account, 83 per cent of which use it for business purposes.

Digital payment of government transfers can also play an important role in increasing access to the formal financial sector. While enhancing the efficiency of government service provision and reducing leakages, such
In 2017, business funding accounted for 31 per cent in 2016 and 39 per cent in 2017. Of these policies, 39 per cent were for life insurance, 26 per cent were for health insurance, and 18 per cent for bundles comprising different combinations of health, life and accident insurance. Where savings are channelled into P2P lending, higher expected returns also go hand-in-hand with higher risks (see chapter II).

Digital microinsurance
Mobile services can also contribute to the growth of microinsurance schemes, which can help vulnerable populations protect themselves from unexpected emergencies and shocks for very low premiums. As of June 2017, at least 61 million policies had been issued by mobile-enabled microinsurance providers across 27 countries, up from 31 million in 2015. Of these policies, 39 per cent were for life insurance, 36 per cent were for health insurance, and 18 per cent for bundles comprising different combinations of health, life and accident insurance. By drawing on alternative sources of data and new data processing technologies, risks can be more precisely estimated. While this allows for lower insurance premiums and wider coverage, there is also a risk of excluding certain individuals or groups (see chapter VI). 43

Box III.G.2 Enabling fintech for refinancing in the Pacific small island developing States

Enabling fintech to small island developing States (SDS) in the Pacific account for about 9.7 per cent of gross domestic product (GDP) and are an important source of household income. Yet, the cost of sending $200 of remittances to Pacific SDS is among the highest in the world, at an average of 11.4 per cent during 2015-2017. These countries’ geographical constraints (isolation, remoteness and population dispersion) provoke severe infrastructure gaps that, in turn, contribute to the high operational costs of traditional financial services, including remittance.

In recent years, fintech services have entered the remittance markets in most Pacific SDS, offering competitive services at consistently lower prices. Nonetheless, the uptake of fintech services for remittance transfers remains low in the region, with 72 per cent of Fijians, 92 per cent of Samuans and at least 81 per cent of Tongans who receive money from abroad relying on traditional money transfer operators. This is likely due to a lack of necessary enabling factors: in addition to the non-availability and accessibility of such services, there is also a need for awareness on the side of consumers, as well as enhanced literacy and trust.

As countries find themselves in different categories, policy recommendations vary. Some countries (like Kiribati, Marshall Islands, Micronesia (Federated States of) Nauru, Palau and Tuvalu) could start by encouraging the availability of fintech services, while the more pressing issue for countries like Papua New Guinea, Solomon Islands and Vanuatu is an increase in accessibility to such services, by improving infrastructure coverage and quality. For countries that are more advanced in terms of fintech adoption, such as Samoa and Tonga, policy emphasis should be geared towards awareness, financial education and consumer confidence. Where fintech is already well established as a tool for financial inclusion in the urban areas, as in Fiji, a focus should be placed on promoting inclusivity for those who live in rural and more isolated regions.

5. United Nations actions on science, technology, and innovation
Various United Nations entities contribute to ongoing efforts to enhance Member States’ capacity to achieve the SDGs. This section discusses two key outcomes of the Addis Agenda: the United Nations Technology Facilitation Mechanism (TFM), and the United Nations Technology Bank for LDCs.

5.1 The Technology Facilitation Mechanism: an overview

Despite limited resources, significant progress has been made towards operationalization of the TFM. The mechanism comprises four components: (i) the United Nations Interagency Task Team on Science, Technology and Innovation for the SDGs (IATT), which has 42 United Nations entities as members; (ii) the 10-Member Group of representatives from civil society, the private sector and the academic community, who work together with the IATT to develop and operationalize TIM workstreams; (iii) the annual Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum), and (iv) the TIM online platform as a gateway for information on existing science, technology and innovation initiatives, and as a platform for building partnerships and matchmaking. 39

Interim results of the start-up phase (2016-19)
Key areas of work of the IATT include:
- STI road maps and action plans to help the SDGs have been among the central topics addressed in the first four STI Forums. The Group of Twenty (G20) outcome package (Shenzhen Declaration, 2019) also contains guiding principles on STI for SDGs road maps. The United Nations IATT subgroup for STI road maps has developed a joint guidebook 40 which is pilot-ed in five countries: Ethiopia, Ghana, India, Kenya and Serbia;
- The new and emerging technologies subgroup has collected and synthesized inputs—from both within the United Nations system and external expert communities—on the impacts of rapid technological change on the SDGs in the form of an informal document that continues to grow, 41 and has coordinated United Nations work on this topic; 42
- The subgroup on gender and STI has mapped relevant United Nations initiatives aimed at empowering women and girls in the field of STI through capacity-building, information sharing, policy setting and awareness-raising (see also box III.G.3).
The IATT also conducts joint training workshops (see boxes III.G.3 and III.G.4 for other examples of United Nations entities’ capacity-building work).32

Box III.G.3 Knowledge-sharing and capacity-building for technology development and innovation

Through its global patent database, PATENTSCOPE, the World Intellectual Property Organization (WIPO) provides access to international Patent Cooperation Treaty applications as well as patent documents of participating national and regional offices. These contain key information for researchers to support technological development and innovation, and facilitate technology transfer. Other services include a dedicated programme of work for least developed countries (LDCs) to support efforts in building or strengthening their innovation capacity. As part of this work programme, the Transfer of Appropriate Technology Program is designed to help beneficiary countries build an appropriate technology base in support of nationally identified development needs.

Access to Research for Development and Innovation (ARDI), a programme coordinated by WIPO together with its partners in the publishing industry, aims to increase the availability of scientific and technical information in developing countries and LDCs. Through the Access to Specialized Patent Information, an initiative with leading patent information providers, eligible patent offices and academic and research institutions in developing countries receive free or low-cost access to sophisticated tools and services for retrieving and analysing patent data.

Source: WIPO.

Box III.G.4 Development and transfer of the sterile insect technique

Sterile insect technique (SIT) is an environmentally friendly insect pest-control method involving the mass rearing and sterilization of a target pest, ultimately leading to a diminished wild population or to its eradication without the use of chemical insecticides. Over the past decades, the use of SIT has contributed to the cost-effectiveness of area-wide integrated pest management programmes. Following the significant progress made on the development of SIT to control disease-transmitting mosquitoes—which are vectors for dengue, chikungunya, Zika and yellow fever—the International Atomic Energy Agency (IAEA) has expanded the use of this technology to a variety of pests that have major economic impact. The transfer of the technology package to countries for field trials has allowed for increased plant, animal and human health, cleaner environments, increased crop and animal production, and accelerated economic development. Integrated with other control methods, SIT has been successful in controlling fruit flies, screwworms and moths. Pilot projects are being implemented to suppress vector populations in countries like Greece, Malaysia and Mexico.

Source: IAEA.

Box III.G.5 The EQUALS Global Partnership for Gender Equality in the Digital Age

EQUALS is a multi-stakeholder partnership bringing together international organizations, private sector companies, Governments, NGOs, regulatory agencies and academic institutions to bridge the gender digital divide. It aims to ensure that women and girls are given access, equipped with skills, and supported in developing the leadership potential to work in the information and communications technology sector. Founded by GSMA, the International Trade Commission, the International Telecommunications Union, United Nations University, and UN Women, the partnership counts on more than 90 partners to address the multiple facets of the gender divide in technology across four areas (Access, Skills, Leadership and Research). Through its Leadership Coalition and Skills Coalition, partners work together to identify and deliver tailored workshops and e-learning courses on both hard tech skills and leadership skills. For example, the Business and Enterprise for Women in the Technology Sector course series focused on topics such as strategic management and how to digitalize your business. The Digital Skills Fund supports local initiatives providing gender-sensitive skills training across countries in the Global South. Other projects, such as the EQUALS Badges coordinated by EF, will help women develop future-focused skills.

Endnotes

2. Ibid.
4. 97 countries have data on STEM enrolment, but only 16 have sufficient data for a comparison with ten years ago. In 2018, about a quarter of tertiary education students were enrolled at STEM subjects, albeit with large variations by country, which are unrelated to levels of development. Shares were as low as 15 per cent of total students in Ghana or the Netherlands and as high as 49 per cent in Myanmar or Tanzania.
5. Only 64 countries report on this indicator.
8. FDI Markets is a database that registers FDI announcements from companies and classifies them on several criteria, including the purpose of the investment. Available at https://www.fidmarkets.com/.
9. Including Hong Kong (SAR of China), Korea, Singapore and Taiwan (POC).
12. Ibid.
14. China particularly dominates the number of patents in big data, 3D printing and Internet of things (all of them over 50 per cent of the total), with a much lower presence in blockchain, gene editing or 5G.
17. KPMG, “Pulse of fintech H2 2019.”
22. An active consumer conducts at least one mobile money transaction during a 90-day period.
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23 The Middle East and North Africa accounted for 6 per cent, while Latin America and the Caribbean and Europe and Central Asia accounted for 3 per cent and 1 per cent, respectively.


25 Ibid, p. 32.


27 The Cambridge Centre for Alternative Finance defines alternative finance as “…technology-enabled online channels or models that act as intermediaries in the demand and supply of funding (e.g. capital formation and allocation activities) to individuals and businesses outside of the traditional banking system.” Coverage thus broadly corresponds to peer-to-peer lending and forms of online crowdfunding. Platforms that process payments, cross-border remittances and foreign exchange transactions are not included in the definition. See Tania Ziegler and others, 3rd Asia-Pacific region alternative finance industry report (Cambridge, UK, Cambridge Centre for Alternative Finance, 2018), p. 19. Available at https://www.jsb.cam.ac.uk/faculty-research/centres/alternative-finance/publications/3rd-asia-pacific-region-alternative-finance-industry-report/.


36 Since an online-survey methodology was used, only digitally active SMEs could be included.


39 For more details, see Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum). Available at https://sustainabledevelopment.un.org/tfm/.

40 For more details and latest version of the draft guidebook, see “Online information repository for the STI Roadmaps work.” Available at https://sustainabledevelopment.un.org/tfm/


42 For the group’s work, see “Workstream 10: Analytical work on emerging technologies and the SDGs.” Available at https://sustainabledevelopment.un.org/tfm/.

43 For details on training workshops, see “Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum)” EVENTS.” Available at https://sustainabledevelopment.un.org/tfm/.

44 For all the STI Forum websites, see “Multi-stakeholder Forum on Science, Technology and Innovation for the SDGs (STI Forum)” Available at https://sustainabledevelopment.un.org/tfm/.
Chapter IV

Data, monitoring and follow-up

1. Key messages and recommendations

The rapid spread of digital technologies has caused a data revolution that holds great opportunities, as well as challenges, for sustainable development. Big data, together with machine learning and artificial intelligence (AI), can help strengthen official statistics for the implementation and monitoring of the Sustainable Development Goals (SDGs). Nonetheless, not all countries have the capacity to harness these new data sources, and questions remain around data security, access and privacy.

Many countries still lack a minimum set of quality traditional data, including basic census and civil registration data. At the same time, the emergence of a new and evolving data ecosystem around new technologies, data sources and actors is challenging the traditional role of official statistical systems as the predominant producers of statistics and providers of information for policymaking.

National statistical systems need to modernize and the capacities of their member entities need to be strengthened, to enable them to fill development data gaps and establish their new role in a changing data ecosystem. This requires a step-change in resource mobilization for statistics. New financing mechanisms can help pool external funding from different sources, mobilize additional funding and increase sector coordination. They should support strengthening and modernization of national statistical systems and align with countries’ national statistical plans.

As national Governments reconsider the role of data management in information and technology-based societies, many are looking beyond legal frameworks for data security and privacy. They are beginning to review national data strategies and new institutional set-ups, including a potential role for national statistical offices as data stewards. For these efforts to succeed, national Governments should view data as a strategic asset for development, and task and capacitate their national statistical systems—in collaboration with other government entities—to actively use and develop this asset.

Against the backdrop of these technological and institutional transformations, the statistical community has continued to work on strengthening methodologies for the provision of quality, timely and disaggregated data, as called for in the Addis Ababa Action Agenda. In addition to the global SDG indicators, national and subnational indicators can support SDG monitoring and policymaking, and help identify financing gaps and constraints as part of an integrated national financing framework. The SDG indicator framework underwent the 2020 comprehensive review, and countries, regions and cities have started to design their own place-specific indicator sets. Despite progress, there is also still a need to further develop and establish concepts, definitions and methods for gender statistics.

In view of the limitations of gross domestic product (GDP) and GDP per capita for measuring sustainable development, efforts are ongoing to provide statistical guidance on the measurement of well-being that incorporates the impact on the environment and on progress in education, health and gender equality, among others, as called for in the Addis Agenda. Based on this guidance, national accounting frameworks will need to be integrated with different measures of well-being to better reflect all three dimensions of development—economic, social and environmental.

This chapter discusses initiatives and mechanisms to address funding needs for statistics. It then considers options to repurpose official statistics in the context of an evolving data ecosystem. It reviews progress on data frameworks, measurements and data collection, and gives an update on monitoring the financial sector.

2. Funding for data for sustainable development

To meet the data requirements of the 2030 Agenda for Sustainable Development, national statistical systems (NSSs)—the
ensemble of statistical organizations and units within a country that develop, produce and disseminate official statistics on behalf of the Gov-ernment—and need to be understood, and the capacities of their member entities increased. The Cape Town Global Action Plan for Sustainable Development Data lays out how this can be achieved, including both by strengthening traditional and embracing new sources of data. It also provides a broad range of funding requirements. In addition to increased domestic funding, joint international efforts will need to be stepped up to support developing countries, particularly least developed countries (LDCs).

2.1 The Cape Town Global Action Plan for Sustainable Development Data: priorities and funding needs

The Cape Town Global Action Plan for Sustainable Development Data (CTGAP), adopted by the United Nations Statistical Commission in March 2017, lays out a set of actions for transforming national statistical systems to ad-dress and meet the data needs of the 2030 Agenda. It identifies six strategic areas: (i) strengthening national statistical systems and improving coordina-tion; (ii) modernizing statistical systems and embracing new technologies and data sources; (iii) strengthening basic statistical activities covering statistical, administrative and other data sources; (iv) improving dissemina-tion and use of data; (v) developing and strengthening multi-stakeholder partnerships for sustainable development data; and (vi) mobilizing resources and coordinating efforts for statistical capacity-building.

According to recent estimates, the cost for support for data and statistical financing gap of $1.3 billion (23 per cent) per year to be filled from external sources.

According to recent estimates, the cost for support for data and statistical statistics was $689 million, approximately half of the amount needed. Also in 2015, several developing countries and development organizations, including the World Bank and several key partners, committed to conducting triennial household-level surveys in the 78 poorest nations, with the first round to be completed by 2020. The estimated cost of the initiative —$500 million every three years—was expected to be borne by a mix-ture of countries’ own resources, donor funding and World Bank financing. Also in 2015, several developing countries and development organizations, including the World Bank and the World Health Organization, launched the Global Civil Registration and Vital Statistics Scaling Up Investment Plan that covers activities in 73 countries over a 10-year period. Its projected total cost is $13.82 billion through 2025, with an estimated funding gap of $11.9 billion, to be closed by a combination of additional domestic and international resources. Further commitments for sectoral data funding are currently materializing under the nineteenth replenishment of the International Development Association (IDA).

While these initiatives mobilize all forms of international and domestic invest-ment, large financing gaps remain. In addition, many initiatives focus primarily on data funding for specific sectors. Funding mechanisms with a specific sectoral focus can have the advantage of galvanizing donors and philanthropies around shared priorities, leveraging sectoral expertise and becoming hubs for knowledge-sharing. There is a risk, however, of advancing selected areas in line with donor priorities, without strengthening countries’ NSSs as a whole. A lack of alignment with country systems and priorities could also lead to reduced country ownership and development effectiveness.

Renewed efforts to increase and harmonize funding are currently underway, including reforms to donor financing mechanisms/trust funds, strengthened global partnerships and targeted multi-stakeholder cooperation. The United Nations–World Bank Group Strategic Partner-ship Framework for the 2030 Agenda, launched in 2016, includes a focus on realigning the data revolution through more concerted efforts to fill data gaps. Also in 2016, the Second United Nations World Data Forum adopted the Global Declaration, calling for the establishment of an innova-tive funding mechanism to support the implementation of CTGAP. The High-level Group on Partnership, Coordination and Capacity-Building has worked to define guiding principles and modalities for the establishment of this mechanism. The Bern Network on Financing Data for Develop-ment, a multi-stakeholder community of data and statistics-focused development practitioners, doners, and advocates, is working towards the launch of commitments at the Third United Nations World Data Forum in October 2018.

Lessons learned from other global funds: success factors

Several global funds have been established to address challenges in specific sectors, such as the Global Fund to Fight AIDS, Tuberculosis and Malaria (or Global Fund), or one chapter (II.C), the Global Partnership for Education; and, most recently, the Global Technology Fund. When targeting different sectors, these funds share several common elements that may have contributed to their success: (i) pooling of funds and coordination of resource allocation within the sector; (ii) placing target sectors in the lead of in-country efforts; (iii) coordination through a Board that includes target countries. Another key lesson from the Global Fund is the importance of going beyond financing and becoming a hub for knowledge-sharing on the implementation of national policies.

The pooling of donor funds may also help leverage additional concessional and non-concessional resources (e.g., World Bank International Develop-ment Association or International Bank for Reconstruction and Development resources), which can be complemented by increased domestic financing. So a three-pronged approach—pooling donor resources, leveraging additional resources and increasing domestic financing—could contribute to a step change in more sustainable financing for data and statistics. It was successfully applied in the 50x2030 Initiative for Data to End Hunger, launched in 2019 (see box II.9). The World Bank and several key partners have also spearheaded the launch of an Umbrella Trust Fund for Data to scale up this approach across key sectors and a range of low-income and middle-income countries, while ensuring a country-led, flexible, and adaptive approach to the strengthening of the capacity of national data and statistical systems.3

Box IV.1 Data to End Hunger: the 50x2030 initiative

In 2019, a coalition of low-income countries, bilateral donors, multilateral organizations and philanthropies committed significant funding in a single multi-donor trust fund mechanism to support agriculture statistics across 50 low- and lower-middle income coun-tries, Asia and Latin America by 2030. The goal is to support key agriculture statistics for targeted food production solutions, including increasing sustainable production by smallholder farmers in these countries by the 2030 impact deadline. To enable this, several donors, collaboratively committed an estimated $1200 million in a World Bank Trust Fund, which has so far leveraged $1000 million of World Bank Regional International Development Association for investments in the African region and mobilized further domestic resources in individual countries.

Source: World Bank

3. New sources of data and evolving national statistical systems

3.1 Opportunities and challenges around new sources of data

The increased use of digital technology over the past two decades has driven a data revolution. Big data, in combination with processing tech-nologies such as machine learning and AI, has become a powerful tool that can support evidence-based policymaking and strengthen the monitoring of SDG implementation. If managed effectively, big data from a variety of sources can contribute to the production of integrated and highly disaggregated statistics across the economic, social and environmental development pillars.

The growing role of new technologies, data sources and actors has driven the establishment and rapid growth of a vast marketplace for individual data, where data demands have dramatically increased. At the same time, there is a ranging about the use and access to such data, as well as data privacy and security. This new and evolving data ecosystem chal-lenges the role of official statistical systems as the predominant producers of statistics and providers of information for policymaking, and forces them to update their vision, strategy and role.

3.2 The changing role of national statistical systems as part of Governments’ evolving digital strategies

Many official statistical systems around the world have responded to changes in the data ecosystem by embracing on an ambitious modernization process, including by standardizing statistical production processes and implementing new initiatives and partnerships. They are increasingly using new data sources and integrating geospatial and statistical data, which can strengthen monitoring of SDG implementation and provide the necessary data and analysis for evidence-based policy-making. At the international level, this work is supported by the High-Level Group for the Modernisation of Official Statistics, the Global Working Group on Big Data for Official Statistics and the United Nations Committee of Experts on Global Geospatial Information Management, among others.4

These efforts by national statistical offices (NSOs) and the larger national statistical systems are part of a broader shift, as many national Govern-ments are rethinking the role of data management in an information and technology-based economy and society. This shift is most noticeable in legal efforts to protect the use and privacy of individual data, but also in new attempts to better utilise government and private data for policymak-ing and the delivery of government services. In this context, some Governments are developing data and e-government strategies and are otherwise rethinking their institutional set-up. Some have also been or are considering creating new government positions such as chief data officer, chief data scientists or chief data steward. Other countries are assigning the responsibilities associated with these positions to existing government structures (see box II.2 on the possible roles of NSOs as data stewards).

Box II.2 Possible roles of a government data steward5

As part of efforts to reposition official statistics, National Statisti-cal Offices (NSOs) may take on the new role of government data stewards, in this role, NSOs would be responsible for the collection, management and use of government data by government agencies, and direct them in the adoption of common capabilities such as data tools or linking data infrastructure. This would foster the development of a comprehensive and integrated data systems that would aim to facilitate the use of government data for public and private purposes while safeguarding confidentiality and data security. NSOs may also become custodians and repositories of all government data.

3. Where sufficient capacity, supporting infrastructure and regulation exist, NSOs and NSIs can take on additional roles and responsibilities, from broader data collection and management becoming “infomediaries” by assuming a stronger coordination and dissemination role across an expanding constellation of data producers. Innovative NS models and functions (e.g., in New Zealand and Mexico) may serve as a blueprint for this evolution. Support from NSO peers and development organizations, together with new modes of collaboration and partnership mechanisms, could help systematize such transformations in developing countries.
4. As countries are rethinking the role of data management, they may also need to review, adjust and modernise the National Strategies for the Development of Statistics (NDSs) for their national systems.
5. For these efforts to succeed, Governments need to view data as a strategic asset for development, and task and capacitate NSOs—collaboration
As DGI-2 is approaching its completion date in 2021, countries have advanced PARIS21, “Partner report on support to statistics” (Paris, 2019).

Well-being and sustainability, and could provide a better understanding of potential synergies and trade-offs between the economic, social and environmental dimensions.

In 2018, the Intersecretariat Working Group on National Accounts, under the auspices of the United Nations Statistical Commission, initiated a work programme to produce guidance on integrated measures of economic activity, well-being and sustainability. Work is also ongoing on aspects related to informality in the economy, education and human capital; health and social conditions; distribution of household income, expenditure, and wealth; and unpaid household work. Draft guidance notes on the integrated measurement of these issues are expected during 2020.

5. Monitoring the financial sector

The Group of Twenty (G20) Data Gaps Initiative (DGI) aims to address important data gaps in the financial sector that were revealed by the 2008 world financial and economic crisis. The second phase of the Initiative (DGI-2) commenced in 2015 and is focused on (i) monitoring risk in the financial sector; (ii) vulnerabilities, interconnections and spillovers; and (iii) data sharing and communication of official statistics. As DGI-2 is approaching its completion date in 2021, countries have advanced in closing data gaps and moved closer to the goal of implementing regular and enhanced use of data on national websites and from market sources.

institutions, managed jointly by the World Bank Group, IMF, OECD and the Bank for International Settlements. In November 2019, the United Nations Conference on Trade and Development (UNCTAD), with the Commonwealth secretariat, launched a Debt Data Quality Assessment framework to review the quality of the data recorded in countries’ debt databases. The IMF is continuing to assist countries in graduating to the Special Data Dissemination Standard (SDDS) and SDDS Plus, supported by its Data for Decision Fund. In addition, as part of the IMF-World Bank Multi-Pronged Approach for Addressing Emerging Debt Vulnerabilities, the Joint Debt Management Facility entered its third phase in April 2019, with an enhanced focus on debt transparency and fiscal risks, and increased support for the implementation of the Medium-Term Debt Management Strategy.


Endnotes
7 Ibid, pp. 172-174.
Domestic Public Resources
Private Business and Finance Development Cooperation
Debt Systemic Issues
Technology and Capacity
Trade