

**LONG-TERM FINANCING SECTOR FRAMEWORK DOCUMENT****CONNECTIVITY, MARKETS, AND FINANCE DIVISION****APRIL 2023**

This document was prepared by: Juan Antonio Ketterer (IFD/CMF), Division Chief; Daniel Fonseca (IFD/CMF), Acting Division Chief; María Carmen Fernández Díez and Juan Martínez Álvarez (IFD/CMF), Team Leaders; Diego Herrera, Joan Prats, Pau Puig, Manuel Fernandini, Omar Villacorta, Jaiwattie Anganu, Antonio García Zaballos, Juan José Durante, Rodrigo Pereira, Christian Schneider, Simón Fernández, Sebastián Vargas, Alejandro Támola, María Cabrera, Adrián Ortega-Andrade, Gerald Prado, Sonia Vadillo, and Cecilia Bernedo (IFD/CMF). This document was enriched by contributions from IFD/CMF staff, Phil Keefer and Claudia Mendieta (IFD/IFD); Roberto de Michele (IFD/ICS); Claudia Stevenson (IFD/CTI); Axel Radics and Oscar Valencia (IFD/FMM); Tomás Serebrisky (INE/INE); Ancor Suárez-Alemán (VPC/002); Eduardo Cavallo (RES/RES); Mario Umaña (INT/TIN); Giovanni Leo Frisari (CSD/CCS); Laura Vélez (FIN/TRY); Diego Flaiban and Ana Rosa Echeverri (INO/FLI); Marcelo Paz (DSP/SPK); Fermín Vivanco (MIF/MSM); Ana María Ibáñez and Silvana Molina (VPS/VPS); Adela Barrio (KIC/KLD); Gyoung Joo Choe (LAB/INV), and the IDB Invest and IDB Lab teams.

In accordance with the Access to Information Policy, this document is being made publicly available simultaneously with its distribution to the Board for information.

## CONTENTS

### EXECUTIVE SUMMARY

<b>I.</b>	<b>THE LONG-TERM FINANCING SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF EXISTING REGULATIONS, THE INSTITUTIONAL STRATEGY, AND INTERNATIONAL AGREEMENTS.....</b>	<b>5</b>
<b>II.</b>	<b>KEY CHALLENGES FOR THE FINANCIAL SECTOR IN THE REGION.....</b>	<b>6</b>
A.	The shallowness of the financial sector constrains access to finance .....	7
B.	Digitalization: Opportunities and challenges for sector development.....	14
C.	Stability gaps weaken sector resilience going forward.....	19
<b>III.</b>	<b>INTERNATIONAL EVIDENCE ON THE EFFECTIVENESS OF POLICIES AND PROGRAMS IN THE SECTOR .....</b>	<b>25</b>
A.	Policies and programs to promote finance .....	27
B.	Policies and programs to promote technological transformation in the sector	34
C.	Policies and programs to strengthen sector resilience.....	37
<b>IV.</b>	<b>LESSONS LEARNED FROM THE IDB GROUP'S EXPERIENCE IN THE SECTOR .....</b>	<b>40</b>
A.	Lessons aligned with the challenge of access to finance.....	40
B.	Lessons aligned with the challenge of sector technological transformation....	43
C.	Lessons aligned with the challenge of sector resilience .....	43
D.	Crosscutting lessons .....	43
<b>V.</b>	<b>LINES OF ACTION FOR THE IDB GROUP'S WORK IN THE SECTOR.....</b>	<b>44</b>
A.	Line of action 1: Promote more efficient, more inclusive, and more sustainable access to finance .....	44
B.	Line of action 2: Promote the technological transformation of the sector.....	47
C.	Line of action 3: Improve financial sector resilience.....	48
D.	Line of action 4: Increase the availability of sector data and knowledge.....	49

## ANNEXES

- |           |   |
|-----------|---|
| ANNEX I   | <b><u>ANNEX I. TABLES, FIGURES, AND BOXES</u></b> |
| ANNEX II  | <b><u>DATABASES CONSULTED</u></b>                 |
| ANNEX III | <b><u>SME FINANCING</u></b>                       |

**GLOSSARY**

**BIBLIOGRAPHY**

## ABBREVIATIONS

AI	Artificial intelligence
AML	Anti-Money Laundering
ASBA	Association of Supervisors of Banks of the Americas
BIS	Bank of International Settlements
CCAF	Cambridge Centre for Alternative Finance
CFT	Combating the Financing of Terrorism
ECLAC	Economic Commission for Latin America and the Caribbean
EIU	Economist Intelligence Unit
ESG	Environmental, Social, and Governance
Fintech	Financial technology
FOGAPE	Fondo de Garantía para Pequeños Empresarios [Small Enterprise Guarantee Fund]
FSB	Financial Stability Board
IFC	International Finance Corporation
ILO	International Labour Organization
ILS	Insurance-linked securities
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
MHC	Ministry of Finance of Chile
NGFS	Network for Greening the Financial System
OECD	Organisation for Economic Co-operation and Development
OVE	Office of Evaluation and Oversight
PATMIR	Programa de Asistencia Técnica a las Microfinanzas Rurales [Rural Microfinance Technical Assistance Program]
P2P	Peer-to-peer
PBP	Programmatic policy-based loan
PDBs	Public development banks
PPP	Public-private partnership
S&P	Standard and Poor's
SDGs	Sustainable development goals
SFC	Superintendencia Financiera de Colombia [Financial Superintendency of Colombia]
SFD	Sector Framework Document
SMEs	Small and medium-sized enterprises

## **EXECUTIVE SUMMARY**

### **LONG-TERM FINANCING SECTOR FRAMEWORK DOCUMENT**

**In the region, the financial sector plays a key role in navigating the complex transition to the new normal.** Anticipating risks and adapting to new realities is an opportunity for the sector to look to the future with confidence. Traditionally, the financial sector has contributed to sustainable economic growth and poverty and inequality reduction. A developed financial sector drives economic and social gains by enabling a more effective allocation of capital toward higher value projects, channeling savings, and creating incentives for investments in research and innovation, increasing consumption and investment capacity, and expanding financial services to reach segments with fewer economic opportunities, such as low-income groups and micro, small, and medium-sized enterprises (MSMEs). The crises that have emerged in the wake of the pandemic have demonstrated the need for financial institutions that can preserve their own stability while handling demands for financing to step up the pace of the economic recovery. Identifying and analyzing the risks facing the financial sector in the region makes it possible to anticipate potential consequences, enhance capacities in order to reduce gaps, and gauge the scope of future challenges more fully. The sector will need to balance the risks that undermine its stability and limit its future resilience, such as: (i) the impact of ongoing economic, social, and environmental disruptions and crises and the uncertainty over how those crises will evolve going forward; (ii) technological disruptions and the rise of cryptoassets; and (iii) climate change and its potential effects on financial risks to the sector. Success in navigating this transition lies in the sector's ability to anticipate and adapt to the new realities.

**The financial sector in the region is grappling with challenges that constrain its potential contribution to creating more jobs and generating more economic growth.** The region is contending with three challenges to the sector's ability to help achieve greater economic growth and a more inclusive, more environmentally sustainable society: (i) shallow financial depth; (ii) gaps in financial sector digitalization; and (iii) the limited resilience of the sector. The region needs a financial sector that has deeper, more diverse financial markets to ensure better, broader access to productive financing, that taps the benefits of new digital technologies to achieve efficiency and inclusivity gains, and that has resilient institutions that are equipped to perform their role as intermediaries during both expansionary periods and economic contractions. Though conditions vary greatly among the countries of the region, generally speaking Latin America and the Caribbean should focus its efforts on: (i) deepening and diversifying their financial markets, to ensure better, broader access to the productive financing that will fast-track economic growth and sustainable development, especially for MSMEs and more vulnerable sectors, while helping steer capital flows in alignment with the Paris Agreement; (ii) tapping the benefits of new digital technologies to make the sector more efficient and more inclusive so it can better respond to global challenges and economic crises; and (iii) making financial markets more resilient to ensure that they are better equipped to efficiently perform their role as financial intermediaries and manage the financial risks posed by climate change.

**First, banking systems lack depth, as do capital and risk management markets.** The shallowness of the sector in the region means that financing is scarce and expensive, which is especially the case for long-term financing. Since financing is scarce, scant attention is given to demands for long-term financing that have a significant impact on gains in economic growth and social wellbeing, such as productive financing for MSMEs and companies owned or led by women or members of vulnerable groups, such as Indigenous peoples and Afro-descendants, and financing for investments in infrastructure,

housing, and environmental sustainability. With regard to investments in environmental sustainability in particular, given the advance of climate change and the need to strengthen the country commitments set out in the Paris Agreement and associated national strategies and guidelines, the region needs a financial sector that can mobilize national, international, public, and private financial resources to invest in achieving carbon neutrality. Crises brought on by external factors, such as pandemics and wars, have pointed up the importance of the financial sector in providing the financing needed to fast-track economic recovery and meet short-term liquidity needs. International experience has shown that the public sector plays a vital role in improving financial sector depth. Public policies to improve access to finance are premised upon the need to correct existing market failures, such as asymmetrical or a complete lack of information. A first set of policies for improving access to finance comprises policies and reforms that correct market failures and promote the development and exchange of information (such as credit bureaus, reforms to the protections afforded to investors, efforts to make bankruptcy systems more efficient, development of guarantee and insurance systems, and improvements to financial transparency). A second set of policies addresses credit scarcity through productive financing programs that are targeted and tailored to specific segments (like MSMEs and vulnerable segments) or economic sectors (like infrastructure, housing, or sustainable finance). These policies have been proven effective in alleviating constraints on credit.

**Second, the low level of financial sector digitalization restricts the opportunity to develop a more efficient, more inclusive financial system for both individuals and companies.** Digitalization can drive efficiency gains and improve sector inclusivity, and fintech companies have the potential to contribute to that end. Nonetheless, the region has fallen behind in financial sector digitalization and fintech ecosystem development. The low levels of use of digital financial services can be attributed, in part, to structural characteristics of the economies of the region (such as large informal sectors and low levels of digital connectivity) and to specific drivers including anemic investment in the fintech ventures that would expand the services on offer. A lack of regulations that explicitly address fintech ecosystems is also a contributing factor. In this area, the public sector has a role to play as a driving force in the technological transformation of the financial sector, by fostering conditions for the digitalization of financial intermediaries, facilitating development of the fintech ecosystem to help achieve financial inclusion goals (for individuals and companies like MSMEs), and developing regulations that minimize risks to consumers and promote financial stability and competition. Public policies for fintech ecosystem development include investments in digital infrastructure for connectivity, regulation of enabling technologies and fintech activities, and public policies to promote digital financial services. The updating of fintech regulations is a prerequisite for development of the ecosystem through enabling technologies, fintech activities, and active promotion policies (such as innovation centers, regulatory sandboxes, and accelerators).

**Third, the financial sector of the future will need to balance the risks that undermine its stability and limit its resilience.** There is an opportunity to strengthen the sector by mitigating these risks. Economic crises such as those that have arisen in the wake of the pandemic, the war on Ukraine, and the generalized increase in prices have exacerbated weaknesses in sector resilience in the short term, and technological disruptions and the rise of cryptoassets in the medium term, while the unfolding of climate change poses challenges to sector resilience in the long term. Success in navigating this transition lies in the sector's ability to anticipate and adapt to the new realities with a forward-looking vision. The short-term challenge is to manage the potential increase in credit risk

stemming from post-pandemic macroeconomic conditions, whose ultimate impact on the sector will greatly depend on the speed of the economic recovery. In the long term, the financial risks associated with the advance of climate change pose a threat to sector stability, so it will be important to build capacity for identifying, evaluating, and managing such risks. With a view to developing a more resilient financial sector, three sets of policies are needed: (i) macroeconomic policies to mitigate the impact of volatility and uncertainty on the sector; (ii) public policies to strengthen sector stability and transparency; and (iii) public liquidity mechanisms to reduce financial instability during crises.

**A review of lessons learned from the IDB Group's work in the sector demonstrates the need to develop innovative solutions** to overcome the high perception of risk in segments such as MSMEs and more vulnerable sectors and facilitate the mobilization of financing from private investors and banks to foster sustainable development. In that sense, the financial sector has an important role to play in proactively addressing the challenges of climate change, achieving this by integrating risks and opportunities into decision-making for capital allocation, low-carbon financing, and the climate- resilient transition. Thus, one key takeaway is the need to continue strengthening the institutional capacities of private financial intermediaries and public development banks in the design, monitoring, and evaluation of financial solutions that are tailored and targeted to potentially profitable segments with high perception of risk, in addition to creating long-term financing and risk-mitigation mechanisms that help develop and consolidate the private market, particularly to expand existing markets that serve consumer and business segments with limited access to finance and new markets (such as green finance) that promote resilient investments that pursue climate change mitigation and adaptation and, by extension, a low-carbon economy. The IDB Group's experience shows the importance of joint delivery of financial and nonfinancial support services as a criterion for success, given the potential to combine the positive effects of different financial instruments such as credit, guarantees, insurance, and investments with technical assistance. To support digitalization of the financial sector, the IDB Group's experience also underscores the importance of having suitable regulatory and legal frameworks in place for digital infrastructure deployment, digital financial inclusion, and fintech ecosystem promotion initiatives. It also attests to the importance of pushing ahead with improving regulation and supervision and forums for public-private dialogue in order to strengthen financial sector resilience and efficiency, and of enhancing institutional capacity at public and private financial entities to channel financing to the sustainable development goals and align financing with the Paris Agreement. Lastly, the IDB Group's experience speaks to the need to continue efforts to build knowledge regarding the effectiveness of programs and policies that support sector development with a view to improving the design of financial solutions moving forward.

Based on the challenges faced by the sector in Latin America and the Caribbean and the good practices from both international experience and IDB Group interventions, **the objective of the IDB Group's work in the region will be to help build deeper, more stable, more efficient, and more inclusive financial sectors.** To that end, this document proposes four lines of action, which should be adapted to conditions in each country: (i) promote more efficient, more inclusive, and more sustainable access to finance by developing banking, capital, and risk management markets, strengthening programs to stimulate supply of long-term credit for MSMEs, women and diverse groups and populations that experience discrimination due to their collective identity, including Indigenous peoples and Afro-descendants, infrastructure, and housing, and mobilizing private sector financing for green finance and social and economic sustainable development goals; (ii) promote the technological transformation of the financial sector by

expanding the coverage of digital connectivity, improving its quality, and making it more affordable, and by building knowledge on and fostering the development of digital financial inclusion and fintech venture ecosystems; (iii) improve financial sector resilience through macroeconomic and macrofinancial risk management policies to mitigate the impact of shocks affecting sector stability, improvements to institutional capacity for regulation and supervision, and knowledge and strides toward implementation of prudential regulatory frameworks; and (iv) increase the availability of sector data and knowledge, particularly as regards sector, gender, and diversity gaps in access to finance, and facilitate studies that analyze the impact of recent crises on the sector, the impact of new financial technologies on sector efficiency, and the impact of climate risks on sector stability.

## **I. THE LONG-TERM FINANCING SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF EXISTING REGULATIONS, THE INSTITUTIONAL STRATEGY, AND INTERNATIONAL AGREEMENTS**

- 1.1 The [Long-term Financing](#) Sector Framework Document has been prepared in accordance with the document “Strategies, Policies, Sector Frameworks, and Guidelines at the IDB” (document GN-2670-5), which establishes guidelines for the preparation of the Bank’s sector framework documents (SFDs). SFDs are documents that aim to identify the main challenges facing the IDB Group’s borrowing member countries in a given sector and guide the IDB Group’s work in helping them overcome those challenges. This document replaces the Support to SMEs and Financial Access/Supervision Sector Framework Document (document GN-2768-7), which was approved by the Operations Policy Committee on 19 July 2017.
- 1.2 This SFD is consistent with the second Update to the Institutional Strategy, “Development Solutions that Reignite Growth and Improve Lives” (document AB-3190-2). Financial sector development plays a role in addressing the key challenges to the region achieving sustainable growth and combating social exclusion and inequality, as identified in that document (low productivity, low innovation, and limited regional integration). The SFD is also consistent with the crosscutting issues set out in the Update to the Institutional Strategy, inasmuch as financial sector development helps strengthen: (i) institutional capacity and rule of law, by supporting the institutions and regulations that establish the foundation for financial markets; (ii) gender equality, by closing gaps in women’s access to finance; and (iii) environmental sustainability, by increasing the range and reach of financing mechanisms for green investments. The SFD also contributes to increasing resource mobilization, an area of emphasis in the Update to the Institutional Strategy, by increasing access to private financing for sustainable development.
- 1.3 Given that financing is inherently a crosscutting issue, this SFD dovetails with [other Bank SFDs](#), including Innovation, Science, and Technology; Gender and Diversity; Climate Change; Fiscal Management; Transparency and Integrity; Housing and Urban Development; Integration and Trade; Agriculture; and Transportation. This document conveys a vision at the IDB Group level and complements the IDB Invest Business Plan 2020-2022 (document CII/GA-80-2) and the IDB Lab Strategy for Financial Sector Development ([Table 3](#)).
- 1.4 This SFD is consistent with the IDB’s strategy for supporting achievement of the Sustainable Development Goals (SDGs). According to a recent report on multilateral mobilization instruments (Planifica Ecuador, 2019), the channeling of public and private resources to support financing of the SDGs is a challenge. The financial sector needs to serve as an intermediary so more financing for the SDGs and for the region’s economic recovery can be secured. [Tables 1](#) and [2](#) identify and discuss the ways the financial sector directly and indirectly supports achievement of SDG targets.
- 1.5 This SFD focuses on financial sector development as a mechanism for fostering inclusive and sustainable economic growth in Latin America and the Caribbean, and on the future of the sector amid the risks it faces in building up its resilience. This document places particular emphasis on small and medium-sized enterprises

(SMEs) as the primary beneficiaries of policies and actions promoting financial inclusion and access to finance.<sup>1</sup> Furthermore, Annex III provides additional information specifically addressing the SME segment. The rest of the document is organized as follows. Section II describes the state of the financial sector in the region and identifies key challenges. Section III reviews the evidence regarding the effectiveness of sector policies. Section IV discusses lessons learned from the IDB Group's experience. Lastly, Section V proposes a set of strategic lines of action to guide the IDB Group's operational, analytical, and dialogue activities.

## II. KEY CHALLENGES FOR THE FINANCIAL SECTOR IN THE REGION

- 2.1 **Financial sector development contributes to sustainable economic growth and poverty and inequality reduction.** Financial sector development promotes growth by making the economy more productive. Developed financial systems help boost economic productivity by: (i) allowing better allocation of capital toward projects with higher returns (Buera et al., 2011); (ii) creating incentives for innovation and for research and development (Aghion et al., 2010), facilitating access to higher value-added segments and markets (Manova, 2010); and (iii) cushioning the impact of volatility and macroeconomic shocks (Aghion et al., 2005; Cavallo et al., 2013). Financial sector development facilitates economic growth by: (i) helping the public sector invest in infrastructure (Claessens and Feijen, 2006); (ii) providing opportunities for households to invest in human capital and reap the benefits of greater consumption and investment capacity (Cuellar, 2013); (iii) channeling savings; and (iv) facilitating inflows of foreign capital for productive investment (Desbordes and Wei, 2014). Financial sector development also helps reduce poverty by expanding the provision of financial services to low-income households and micro, small, and medium-sized enterprises (MSMEs) (Čihák and Sahay, 2020). Financial inclusion of women, in particular, promotes economic empowerment, thereby contributing to poverty reduction (Hendriks, 2019). Financial sector development aids in inequality reduction as well, since the impact of economic growth on employment is relatively greater for those at the lowest end of the income distribution (Levine et al., 2007; Beck et al., 2010) ([Table 4](#)).
- 2.2 Financial sector development occurs when the impact of information, transaction, and enforcement costs is minimized so that the financial sector can be more competitive and can more efficiently perform its roles within the economy. Savings and lending constraints and frictions distort household and company decision-making on savings and loans, lead to capital misallocation, and undermine productivity (Granda et al., 2017; Cavallo and Serebrisky, 2016). A competitive financial sector is able to efficiently channel an economy's savings toward investments in productive activities, thereby spurring economic and social development.
- 2.3 **Limited financial sector development in Latin America and the Caribbean holds back the sector's contribution to achieving higher levels of economic growth and a more inclusive and more environmentally sustainable society.** The region has gaps in financial sector development, which manifests in shallow

---

<sup>1</sup> Since this SFD contains substantive, up-to-date information to guide loan operations targeting MSMEs, it will supersede the Sector Guidelines for SME Finance and Development Programs (document GN-2615, 2011).

financial markets (private credit amounted to 53.7% of gross domestic product (GDP) in 2021, [Table 5](#)) that are dominated by just a few financial instruments ([IDB, 2017](#)). The following sections analyze the future challenges faced by the region in the development of the sector's depth, digitalization, and resilience, as well as fundamental issues in navigating the complex transition to the financial markets of the future. Though conditions vary widely across Latin America and the Caribbean, the main challenges for the countries of the region will be to: (i) deepen and diversify their financial markets, to ensure better, broader access to the productive financing that will fast-track economic growth and sustainable development, steering and redirecting capital flows to align them with the Paris Agreement and support achievement of the SDGs, among other objectives; (ii) tap the benefits of new digital technologies to make the sector more efficient and more inclusive so it can better respond to global challenges such as the ones brought on by recent crises; and (iii) make the financial markets of the future more resilient and better equipped to perform their role as intermediaries during both expansionary periods and economic contractions. As climate change unfolds, the region needs a financial sector that can mobilize and leverage financial resources toward investments in achieving carbon neutrality and in mitigation and adaptation activities.

**A. The shallowness of the financial sector constrains access to finance**

- 2.4 **The region has clear gaps in terms of financial sector deepening.** Despite the region's gains in financial sector development in recent years ([Figure 1](#)), the sector still lacks depth ([Table 5](#)), which constrains access to finance in the region. The market frictions that affect [financial depth](#) the most are related to [enforcement](#), [information](#), and [transaction costs](#) (Levine, 2004; Merton and Bodie, 2005; de la Torre et al., 2013) ([Box 1](#)). Two types of factors influence the extent to which financial markets and institutions can efficiently lower these costs: (i) structural characteristics of the socioeconomic environment in which financial markets and institutions conduct business; and (ii) the implications of long-term policy. Structural characteristics are socioeconomic conditions beyond the scope of the sector (size of the economy, distribution of the population, demographic structure, per capita income, economic informality rates, etc.), while policy implications directly relate to the financial sector (the macroeconomic policies, contractual and information frameworks, infrastructure, and technology that underpin the sector). With regard to policy implications, macroeconomic volatility (Kagochi, 2019), weak contractual frameworks (Aboal et al., 2014), and insufficient information (Greenwood et al., 2010) are the main drivers of the shallow, incomplete financial markets that make financing scarce and expensive in the region. Some of these market failures constrain market development and competition; for example, high, volatile inflation rates increase transaction costs and discourage borrowers and lenders from entering into financial contracts ([Box 2](#)).
- 2.5 **The region's financial depth is below its potential.** According to studies by Beck ([2016](#)) and Beck and Mooney (Chapter 11, [2021](#)), the countries of the region should have higher levels of private credit to GDP and stock market capitalization to GDP given the income, size, and demographic structure of their economies ([Figure 2](#)). In terms of financial depth, the region is behind advanced economies and the economies of emerging Asia. In 2019, Latin American and Caribbean countries scored a 0.18 out of 1 on the financial depth component of the IMF's [Financial Development Index](#), versus a score of 0.57 for advanced countries and a score of

0.21 for emerging markets ([Figure 3](#)). Though financial sectors differ from country to country within the region, this low score reflects the fact that banking systems in the region channel less credit to the private sector than those in countries with similar levels of economic development. The factors that set Latin America and the Caribbean apart include low savings rates ([Cavallo and Serebrisky, 2016](#)), high informality rates ([Box 3](#)), and financial crises that have undermined confidence in the sector among economic agents, thereby constraining expansion of the deposit base, potential growth in formal intermediation of savings, and availability of financing.

- 2.6 **The banking system dominates the financial sector in the region but is also shallow.** Banking systems are the leading providers of finance in the region but are relatively small in relation to their economies. The regional average of banking assets relative to GDP for Latin America and the Caribbean stood at 62% in 2021, versus 130% for the emerging Asian countries and 102% for countries belonging to the Organisation for Economic Co-operation and Development (OECD) (World Bank, 2021). Domestic credit to private sector by banks in 2021 in the region was lower than in other regions (55% of GDP on average in Latin America and the Caribbean, versus 84% for OECD countries and 157% for emerging Asia). However, conditions vary widely across the region. Countries like Panama (98%), Chile (87%), and Bolivia (80%) outperform the regional average, while countries like Uruguay (26%), Argentina (13%), and Haiti (9%) trail behind ([Figure 4](#)).
- 2.7 **Capital markets are at an early stage of development and lack liquidity.** This can be attributed to: (i) regulatory framework and institutional weaknesses that increase uncertainty and hold back market development; (ii) a lack of liquidity markets (such as [repos](#)), which makes it hard to leverage investors; (iii) a dearth of retail and [institutional investors](#), which makes it difficult to channel pooled savings toward investment finance; (iv) a lack of standardized asset classes and limited [securitization](#) mechanisms, which dilutes the potential for using securitization mechanisms to create liquid secondary markets; and (v) a lack of risk management and assurance instruments and markets (for example, for exchange risk and interest rate risk), which limits project risk management and contributes to an increase in risk premiums (Ketterer, 2017; International Organization of Securities Commissions – IOSCO, 2020). Bond, equity, and derivatives markets have grown but remain relatively small in most of the countries of the region ([Box 4](#)), which restricts access to finance, especially for the productive sector and housing and infrastructure financing ([Figure 5](#)).
- 2.8 The **shallowness** of the region's banking systems and capital markets **constrains access to long-term financing in particular.** Shallow financial sectors that contend with significant [market failures](#) and frictions generate a scarcity of long-term financing. The literature concurs that macroeconomic instability, large informal sectors, institutional weaknesses, [information asymmetry](#), and poor contract enforcement prompt financial institutions to offer less financing and at shorter terms ([Table 6](#)). These market failures and frictions limit the depth of financial sectors in the region and keep them from efficiently: (i) channeling savings to financial instruments with longer maturities designed to meet the investment needs of the real economy; and (ii) providing a broad array of financing and risk management instruments for long-term investment ([Box 5](#)). Extending the

- maturity structure of finance is considered to be at the core of the sustainable financial development of emerging economies (World Bank, 2015).<sup>2</sup>
- 2.9 Long-term investments are necessary for expanding economic productivity and employment and require financing with an appropriate time frame ([Figure 6](#)). In the region, there are four key areas of demand for long-term financing for productive investments that are underserved by the financial sector and that have a high impact on gains in economic growth and social welfare: (i) financing for MSMEs, especially those that are owned or led by women or vulnerable groups; (ii) infrastructure financing; (iii) housing financing; and (iv) financing for environmental sustainability. In the short term, MSMEs also require resources to meet liquidity needs, especially during the various stages of recovery after economic crises.
- 2.10 **MSMEs in the region run up against constraints on access to productive financing.** MSMEs are particularly important in Latin America and the Caribbean, where they account for 99% of all companies, generate 25% of the region's GDP, and employ 61% of the region's economically active population (Dini and Stumpo, 2020). Nevertheless, the scarcity of long-term financing is one of the most significant restrictions on their ability to conduct business. The lack of financing inhibits their ability to invest, which in turn obstructs: (i) their ability to increase their productivity and grow the size of their business;<sup>3</sup> and (ii) their opportunities for integration with international markets and [global and regional value chains](#) (Calatayud and Ketterer, 2016; IDB, 2021). Estimates from 2017 indicated that the total MSME finance gap in the region stood at over US\$1 trillion for the formal sector, with women-owned businesses accounting for US\$93 billion of that figure, whereas the gap in the informal sector stood at US\$765 billion, which amounts to 18% of the region's GDP ([World Bank, 2017](#)) ([Figure 7](#)).
- 2.11 In the region, the financial sector has limited capacity to meet the potential demand for MSME financing. On one hand, the shallowness of banking systems and capital markets means that the financing that is on offer is short term, costly, and in short supply. The most common means of financing long-term investments is bank intermediation of credit to the productive sector,<sup>4</sup> which has net interest margins of nearly 6%, versus 2% in OECD countries and 3% in Asia (World Bank, 2021) and an average term of 2.8 years, 1.5 years shorter than in advanced markets. On the other hand, the region's productive structure is biased toward informal arrangements, smaller companies, and relatively low value-added sectors<sup>5</sup> compared to other regions, which translates into higher information costs and [credit risk](#) and adversely impacts the sector's ability to finance productive activities (Ruprah et al., 2014). Typical constraints on MSME access to finance in the region

---

<sup>2</sup> Long-term financial contracts can be understood as a risk-sharing problem between providers and users of finance. For the lender, there is the risk of nonpayment and the risk that repayment flows will decrease in value. For the borrower, there are rollover and interest rate risks. The two parties decide how they share the risk involved at different maturities, depending on their needs.

<sup>3</sup> Rollover risk keeps businesses from using short-term loans to carry out long-term investments, which adversely affects MSME productivity (Almeida et al., 2011).

<sup>4</sup> Banking systems are the main providers of long-term productive financing. Even in high-income countries where capital markets are more developed, companies finance 60% of their investments with bank loans (Gutierrez et al., 2018).

<sup>5</sup> See the value-added structure of Latin American and Caribbean economies in the [Observatory of Economic Complexity](#).

- include: (i) a lack of performance records and internal procedures for generating quality financial information; (ii) low levels of capitalization and a lack of collateral and guarantees ([Figure 8](#)); (iii) high informality rates and poor financial education; (iv) higher operating costs for [financial intermediaries](#) when lending at smaller scales; and (v) lower returns relative to other business segments (IDB, 2017).
- 2.12 These issues increase the credit risk perceived by financial intermediaries and exacerbate the higher cost and depleted supply of credit for MSMEs.<sup>6</sup> Only 47% of MSMEs in the region use some sort of bank loan or credit line ([Figure 9](#)), and only 26% of investments and fixed assets purchased by companies in the region are financed with bank loans ([Figure 10](#)). Furthermore, 18% of companies say that the lack of access to credit hinders their ability to conduct business, versus 9% of companies in OECD countries ([Figure 11](#)). In light of these difficulties, many companies opt out entirely and resort to using their own funds—if they have any available—or personal loan sources, such as credit cards (Cambridge Centre for Alternative Finance—CCAF—and IDB, 2021). The lack of productive finance is a roadblock to their digital transformation and leads to fewer potential business opportunities emerging in the short and medium term as economies recover from economic crises, especially investments in long-term projects and innovation.
- 2.13 The sector shortcomings that constrain access to productive finance have a more pronounced impact on women-owned and women-led MSMEs. Lack of access to finance predominantly affects smaller companies, young enterprises, companies in relatively riskier sectors and sectors with less collateral (such as new-technology intensive firms) (Freel, 2007; Lee et al., 2015), and women-owned and women-led companies (Buvinić and Furst-Nichols, 2014). Estimates indicate that 30% of women-owned and women-led MSMEs in the region have run up against constraints on access to finance, versus 25% of MSMEs owned or led by men. The literature has analyzed institutional, financial, and social drivers to account for the higher barriers faced by women entrepreneurs ([Table 7](#)). In Latin America and the Caribbean, companies owned by one or more women encounter severe restrictions on their access to finance (70% of women-owned MSMEs in the region that need a loan have not been able to obtain one from a financial intermediary). The dearth of sex-disaggregated data and analysis is another constraint, since this obstructs the development of products and services tailored to the specific preferences and needs of women entrepreneurs (Elam et al., 2019). The constraints faced by these companies have been exacerbated by recent shocks brought on by the pandemic, which affected women-owned businesses more than those owned by men, regardless of whether their status was formal or informal (Torres et al., 2021).
- 2.14 **These constraints on access to finance are more severe for vulnerable groups, such as Indigenous peoples and Afro-descendants, and thus there is a need to measure the gaps faced by these segments and the obstacles they contend with in the region.** Indigenous peoples and Afro-descendants are the minority groups most frequently overlooked by and excluded from the benefits of development, with above-average poverty rates for their respective countries. According to the International Labour Organization (ILO) (2020), 8.5% of the population of Latin America and the Caribbean is Indigenous. This amounts to over

---

<sup>6</sup> The region lacks data on gaps in access to credit by economic sector and subsector, as well as data disaggregated by sex or ethnic group. This issue is even more pronounced for business-level data.

54 million people<sup>7</sup> and means that it is the region with the highest proportion of Indigenous peoples worldwide. Meanwhile, one out of every four Latin Americans identifies as Afro-descendant (Freire et al., 2018), which, at an estimated 134 million people, amounts to 21% of the region's population (Economic Commission for Latin America and the Caribbean – ECLAC, 2020). According to the same study, more than 86% of Indigenous peoples work in the informal economy, compared to 66% of non-Indigenous people. Informal employment tends to be associated with poor working conditions and a lack of social protection. Though there is no specific data on lack of access to credit at the country or regional level, there is evidence that people who are Indigenous and/or Afro-descendant are more likely to experience discrimination in the financial system (Martínez and Reséndiz, 2021). A study from Mexico concludes that people with darker skin encounter more obstacles to accessing financial services and receive worse service than people with lighter skin, who obtain more facilities and are treated better (people with darker skin report that bank officers were rude to them during 24.7% of bank visits, versus 10.7% in the case of people with lighter skin). When visiting a bank branch, people with lighter skin were more frequently told that they could qualify for MSME loans (45.5% versus 33.6%) (Martínez-Gutiérrez, 2019).

- 2.15 **The infrastructure financing offered by the domestic financial sector falls short of what is needed to meet the region's needs.** Infrastructure and associated services bolster economic growth, increase employment rates, and help reduce inequality by expanding access to markets and economic opportunities (Calderón and Servén, 2014). To achieve its SDGs, the region must overcome an infrastructure financing gap estimated at the equivalent of 2.5% of annual GDP.<sup>8</sup> Infrastructure investment in Latin America and the Caribbean is predominantly public investment, but significant fiscal constraints have come into play after the surge in public debt to mitigate the impact of economic crises. In the last decade, the region has increasingly turned to public-private partnerships (PPPs) as a supplementary mechanism to help meet infrastructure investment needs. However, private infrastructure financing is concentrated in a handful of countries: Argentina, Brazil, Chile, Colombia, Mexico, and Peru accounted for 85% between 2014 and 2018.<sup>9</sup> All told, 79% of total infrastructure financing was channeled through bank debt, which includes commercial banks (59%), multilateral banks (10%), and public banks (10%). The bulk is channeled to the energy and transportation sectors (Cavallo and Powell, 2019). Though commercial banks were the primary providers of private financing over that period, 55% of the total came from 10 international banks in foreign currency (Figure 12).

<sup>7</sup> ILO. [Implementing the ILO Indigenous and Tribal Peoples Convention No. 169: Towards an Inclusive, Sustainable, and Just Future.](#)

<sup>8</sup> See "[From Structures to Services](#)" for an analysis of sector financing gaps. If the investment gap persists, Latin America and the Caribbean could lose 15% of potential economic growth over the next 10 years.

<sup>9</sup> From 1997 to 2015, Brazil, Chile, and Mexico received 73% of this type of financing ([García-Kilroy and Rudolph, 2017](#)).

- 2.16 The longer credit terms needed for PPPs are only available in the region's deepest financial sectors, such as Chile and Mexico, where local commercial banks offer long-term financing.<sup>10</sup> In addition to constraints on the supply of long-term, low-cost financing, [single borrower limits](#) restrict credit risk pooling in some Latin American and Caribbean countries. Some local banks quickly hit such limits because their capital is relatively small in relation to the high volumes of financing required for major infrastructure projects. Syndication can alleviate this restriction, but smaller banks do not always have the appetite for this type of risk or the technical capacity for structured financing (Serebrisky et al., 2017).
- 2.17 Nonbank private financing is limited in Latin American and Caribbean countries ([Figure 13](#)) since private firms and institutional investors contribute just 8% of total private investment ([Box 6](#)). Capital markets are underdeveloped, which makes it difficult to channel domestic savings toward long-term infrastructure financing in local currency through local institutional investors.<sup>11</sup> Brazil, Colombia, Chile, Mexico, Peru, and Uruguay are the only countries in the region that have infrastructure equity and/or debt funds or securitize infrastructure assets.<sup>12</sup> Project bonds account for only 17% of debt channeled to PPP financing in the region.<sup>13</sup>
- 2.18 **The shortage of housing finance limits access to housing in the region.** Access to safe and affordable housing is a sustainable development goal. In the region there is a new housing deficit of 6% in urban areas.<sup>14</sup> One obstacle to investments in purchasing or making quality improvements to a home is the lack of access to long-term financing, which translates into limited access to mortgage finance. The region's mortgage market, measured through mortgage lending as a percentage of GDP and the share of families with a mortgage, is shallow compared to the figures reported by developed countries ([Figures 14 and 15](#)).<sup>15</sup> Financial intermediaries prefer to lend via consumer loans with shorter terms, which are more profitable and have lower capital provisioning requirements. The region's securities markets are underdeveloped, which keeps financial intermediaries from being able to fix term mismatches on their balance sheets by selling mortgage assets prior to maturity in exchange for funds to originate new loans. Reasons behind this low level of development include the lack of deep capital markets and a dearth of local institutional investors that buy securitized issues (paragraph 2.7) ([Box 7](#)). As to mortgage demand, informal economic arrangements make it difficult to document income, and inadequate property records make it difficult to put up

---

<sup>10</sup> In evaluations of PPP development, financing is the area in which the region scores the lowest ([Economist Intelligence Unit – EIU, 2022](#)).

<sup>11</sup> As of 2019 institutional investors from seven countries in the region had been involved in PPP projects in the previous five years. Institutional investors manage over US\$3 trillion in assets in the region, but less than 1% is put toward infrastructure. If institutional investors directed a higher percentage of their assets to infrastructure, private infrastructure investment would increase significantly ([Cavallo and Serebrisky, 2016](#)).

<sup>12</sup> Over the 2000-2018 period, infrastructure assets amounting to 13% of the region's GDP were securitized in Mexico (52.4%), Peru (16.6%), Brazil (13%), Chile, (5.8%), Colombia (4.6%), Panama (2.5%) and El Salvador (2.4%) (Calculations using data from the Dealogic and Fitch databases; see [Annex II](#)).

<sup>13</sup> Project bonds respond to a call to shift to standardized structures and lower credit risk levels in order to attract a broader investment base.

<sup>14</sup> For the region as a whole, the total housing deficit is 52% for the poorest urban quintile, versus 16% for the wealthiest quintile.

<sup>15</sup> The average maturity for the active mortgage portfolio should be between seven and 10 years in most Latin American and Caribbean countries, but deposits and other funding sources used by financial intermediaries in the region have average terms of just two to three years (Vera and Pérez-Caldentey, 2015).

- the collateral needed for a mortgage. This is compounded by the limited savings capacity among low-income segments, which makes it difficult to assemble the funds to pay the down payment on a home. These obstacles are even more severe for women, especially those who are heads of household, since they have lower levels of employability, earn lower wages on average, and are more likely to be self-employed or work in the informal economy (Domínguez et al., 2017).
- 2.19 **Limited technical capacity and a shortage of financing constrains the region's potential for becoming more environmentally sustainable and supporting achievement of the targets set out in the Paris Agreement.** The financial sector could provide solutions given the region's high exposure to the impact of climate change ([Figure 16](#)). To achieve the SDGs associated with environmental protections and stewardship, investments in climate change mitigation and adaptation and reduction of carbon emissions are needed, and climate mitigation and adaptation criteria need to be introduced and made the central focus of activities. The fight against climate change requires the mobilization of enough capital to finance long-term needs related to renewable energy generation, industrial energy efficiency, agricultural adaptation and the bioeconomy, sustainable transportation, and resilient infrastructure.<sup>16</sup> Effective implementation of the Nationally Determined Contributions requires both public and private investment. To meet the targets set out in the Paris Agreement, spending to the tune of 7%-19% of GDP (an increase of US\$1.3 billion) will have to be redirected each year in the region (Galindo Paliza, Hoffmann, and Vogt-Schilb, 2022). Estimates from 2018 indicated that in Argentina, Brazil, and Mexico alone there is potential for at least US\$2.64 trillion in investment projects tied to enhancing climate change resilience and cutting carbon emissions before 2030 (Stein et al., 2018). Yet sustainable financial markets in the region are still developing, and their contribution to financing the transition to a more resilient, more carbon neutral economy is still marginal ([Figure 17](#)). From an institutional perspective, the level of preparedness and capacity for climate finance varies widely in the public and private banking sectors. Financial institutions need to strengthen their commitments to net zero emissions strategies to produce direct results for the objectives of the Paris Agreement. Thus, it is vital that these institutions strengthen their capacity and adopt quantifiable climate strategies and goals in their business models.
- 2.20 Banking systems and capital markets are the main sources of sustainable finance in the region. The banking system has the potential to increase its role in sustainable finance.<sup>17</sup> Only 49% of banks in the region offer at least one green mortgage or green lending product, versus 95% of international banks. To handle the region's long-term investment needs, the banking system will have to substantially increase its green asset portfolio from 7% in 2016 to 30% by 2030, based on current estimates. Obstacles to increasing the banking system's offer of green financial products and services include a lack of: (i) capacity to identify

<sup>16</sup> Risk management products to secure savings in energy efficiency programs and insure the value of agricultural production in the event of a natural disaster are important steps to furthering economic resilience to the impact of climate change (Chaparro et al., 2020).

<sup>17</sup> For example, the inclusion of environmental criteria for microfinance products (a portfolio currently worth US\$40 billion) is an increasingly common practice in Latin America and the Caribbean. Microfinance institutions need to improve their products and strategies to reach their green potential in the region (Forcella, 2017).

opportunities within its client base and measure demand for green products and services; (ii) regulatory incentives to offer green products; and (iii) access to green finance from international sources (International Finance Corporation – IFC, 2017). Other obstacles include: (i) exchange risk, when countries receive aid in U.S. dollars or other international currencies but financial entities issue loans in local currency; (ii) the requirements for accessing those resources under financial terms that are suitable for handling this type of investment (loan tenors, rates, amounts, and currency); and (iii) a perception that climate and resilient technologies are higher risk, which discourages banking institutions from developing lines for such purposes.

- 2.21 In recent years, capital markets have seen an increase in public and corporate debt issues to fund sustainable projects ([Figure 18](#)). The green bonds market in the region is growing but remains shallow (paragraph 2.7). The market's US\$30.2 billion in issues is 2% of global volume, and only 13 of the region's 33 countries have had green issues ([Figures 19](#) and [20](#)). All told, 80% of those issues were in hard currencies,<sup>18</sup> with 30% of issues having long tenors (10 to 20 years) and 34% having medium tenors (five to 10 years) ([Climate Bond Initiative, 2021](#)). There are three specific obstacles to green bond market development: (i) higher issuance costs; (ii) more complex issuance procedures; and (iii) stricter reporting and impact measurement processes ([Box 8](#)).<sup>19</sup> Nonetheless, the segment should continue to grow,<sup>20</sup> and it is expected to play a key role in the sustainable economic recovery (Mejia-Escobar et al., 2020). One driver of the growing interest in this instrument among bond issuers is the stability of the investor base. That trait is especially important during periods of uncertainty, since it helps decrease price volatility in secondary markets (Alonso and Marqués, 2019). In 2020 investors bought and held green bonds, which helped issuers with debt management during the pandemic.

## B. Digitalization: Opportunities and challenges for sector development

- 2.22 **Digitalization and technological advances have great potential to make financial sectors in the region more efficient and more inclusive.** Financial technology, or [fintech](#), consists of an array of technology-enabled financial innovations that could result in new business models, applications, processes, or products with an impact on financial institutions and markets and the provision of financial services (Financial Stability Board – FSB, 2018). The last decade has seen exponential growth worldwide in enabling technologies such as cloud computing, robotics software, distributed ledger technology ([blockchain](#)), [smart contracts](#), [virtual currencies](#), [biometrics](#), [artificial intelligence \(AI\)](#), the [Internet of things](#), [open data](#), and analysis of [big data](#). These technologies have made new business models viable for emerging companies that disrupt the traditional organization of the financial industry (OECD, 2018<sup>a</sup>).<sup>21</sup> The rapid development of

<sup>18</sup> Local issues have limits on amount and tenor (less than US\$300 million and seven years).

<sup>19</sup> The IDB has developed a [green bond transparency platform](#) to develop the market.

<sup>20</sup> Many groundbreaking transactions have taken place in the region, including the first green bond issued by a Latin American issuer in 2014 (Energía Eólica, Peru), the first social bond issue in 2017 (Banco de Estado, Chile), and the first gender bond in 2017 (Banitsmo, Panama). Among sovereigns, Chile issued its first green bond in 2019, Mexico issued its first sustainable bond in 2020, and Ecuador issued its first social bond in 2020.

<sup>21</sup> Three fundamental changes have had an impact on fintech development: the generation of big data, breakthroughs in computational algorithms, and the increase in processing capacity.

financial innovations driven by these technologies has impacted sector development (paragraph **Error! Reference source not found.2.1**) by emphasizing delivery of payment and loan services that are faster, more efficient, and cheaper than conventional services. Thus fintech presents an opportunity to overcome the constraints on financial sector development in the region (paragraph 2.4) by: (i) improving [financial efficiency](#) (increasing competition<sup>22</sup> and cutting transaction and information costs); and (ii) fostering [financial inclusion](#) (Sahay et al., 2020).<sup>23</sup>

- 2.23 **Fintech can improve financial sector efficiency.** The financial sector in the region has limited scale and low levels of competition, which translates into high loan rates and spreads ([Figure 21](#)). Fintech company activities have the potential to stimulate competition in interest rates and financial service fees, thereby alleviating the adverse impacts of concentrated banking systems ([Box 9](#)). In addition, fintech can improve sector efficiency by lowering costs for financial service providers and consumers ([Figure 22](#)). For example, [mobile money](#) accounts lower financial service costs for people in remote areas where banks do not have branches; international payment systems lower the cost of sending remittances, which are a significant source of income in places such as Central America and the Caribbean ([Box 10](#)); and alternative peer-to-peer (P2P) lending systems reduce asymmetrical information and provide agile, less expensive financing, thereby helping expand access to credit for MSMEs in the region.
- 2.24 **Fintech's greatest promise is the potential to improve the financial inclusion of individuals and companies.**<sup>24</sup> Over 207 million people in Latin America and the Caribbean do not have a bank account ([Figure 23](#)), and MSMEs struggle to access credit. In recent years, fintech has made it easier to access bank accounts, transactions, and credit, helping expand opportunities to participate in formal economic activities to a larger portion of the population and the productive sector ([Box 11](#)). With the growing use of mobile phones and increased Internet access, fintech is creating opportunities to better serve segments that have been underserved by the traditional financial sector. Fintech companies are also key to improving women's financial inclusion, since women tend to contend with greater restrictions on their time and mobility ([Box 12](#)). If women can save time and money with lower transaction costs, they can devote more time to their businesses and use more formal financial services instead of informal mechanisms (Sahay et al., 2020). [Digital financial services](#) do more to close gender gaps than traditional financial inclusion programs ([Figure 24](#)). However, there are specific barriers to [digital financial inclusion](#) such as access to resources (mobile phones, Internet) and financial education, which can be more pronounced for women. There is also a need to gain a better understanding of barriers to the digital inclusion of vulnerable groups, such as Indigenous peoples and Afro-descendants.

---

<sup>22</sup> These technologies have the potential to lower the cost of entering the industry for such players as fintech startups, digital banks, tech companies, and telecommunications operators.

<sup>23</sup> Some studies have found a positive relationship between fintech development and economic growth (Loukoianova and Yang 2018, Čihák and Sahay, 2020). Digital financial inclusion helps reduce poverty and inequality in the region, especially in remote and rural areas (Heng, 2016).

<sup>24</sup> Financial inclusion rates are improving in the region but remain low. Half of the adult population does not have access to the financial system, and financial inclusion rates are particularly low among vulnerable groups, rural communities, and women. See [Demirguc-Kunt et al., 2018](#).

- 2.25 **In Latin America and the Caribbean, digital financial services are growing fast but remain limited compared to traditional services.** The ecosystem of fintech companies in the region has grown very quickly in recent years and is driving an increase in the availability of digital financial services. Estimates indicate that there were 2,301 fintech companies in the region in 2020, a figure that has grown 227% since the IDB began to monitor the ecosystem in 2016.<sup>25</sup> The significance of fintech varies widely from country to country within the region, depending on the level of economic and financial development ([Figure 25](#)). All told, 83% of fintech activity is concentrated in Brazil and Mexico, followed by Colombia, Argentina, and Chile. Since 2017, the most important business segments for fintech have been payments (23% of fintech companies), loans (18%), and enterprise financial management (14%). The tech for financial institutions segment has grown quickly (10% of fintech companies), which reflects the growing demand for digital solutions among financial institutions, which are undergoing their own digital transformation process. Notably, 46% of fintech companies in Latin America and the Caribbean focus on helping unbanked consumers or financially supporting MSMEs (IDB, 2018<sup>a</sup>).
- 2.26 **Payment segment.** The bulk of fintech activity is in the payment segment, which reflects the opportunity associated with low penetration of [digital payments](#) in a region where bank account use is low but mobile phone penetration is high. Alternative financing sources are also growing, and the business loan segment has become very important.<sup>26</sup> Most alternative financing in the region is carried out using [digital loan](#)<sup>27</sup> ([marketplace lending](#)) platforms, and Brazil, Mexico, and Chile are the countries where [digital credit](#) has the largest foothold.<sup>28</sup> In the loan segment, a total of US\$7.2 billion in loans were originated in 2020, with 90% going to business financing. That means that US\$6.4 billion was channeled to finance companies, mainly MSMEs, with Latin America and the Caribbean being the region with the strongest emphasis on business financing and largest year-on-year growth worldwide (500% since 2018) (CCAF, 2020; University of Cambridge, 2021).
- 2.27 **The continued expansion of financial inclusion remains a challenge for the region.** Though the region has made strides in digital financial inclusion,<sup>29</sup> penetration rates for both the traditional sector and digital financial services from fintech companies remain low ([Global Findex, 2022](#)). Consolidating the expansion of digital payments is a particularly pressing task in Latin America and the Caribbean, where formal financial sector transactions still predominantly use

---

<sup>25</sup> Drivers of fintech ecosystem development in the region include: (i) bank loan penetration, which indicates the potential market; (ii) market infrastructure, which determines if there are barriers to the implementation of digital platforms and algorithm-based credit evaluation; and (iii) market structure, which determines the level of competition and potential barriers to entry.

<sup>26</sup> The main determinants of digital credit development are regulation, financial development, digital infrastructure, and market structure (Claessens et al., 2018).

<sup>27</sup> Big Tech is a separate category of alternative financing providers, but its presence in the region is still limited (Ehrentraud, Garcia Ocampo, and Quevedo Vega, 2020).

<sup>28</sup> Studies of personal loans suggest that, in comparison to traditional lenders, fintech lenders process loan applications faster (Fuster et al., 2019), reach underserved client segments, and offer credit at a lower cost (Jagtiani and Lemieux, 2017; de Roure et al., 2021).

<sup>29</sup> [Global Microscope](#) 2021 discusses the state of digital financial inclusion in the region.

cash<sup>30</sup> ([Box 13](#)). For example, estimates indicate that, on average, just 49% of adults in the region had access to an account to make and receive payments in 2019, compared to 92% of adults in OECD countries and 80% of adults in emerging Asia. The average person in Latin America and the Caribbean carries out, on average, 50 digital payments per year, which is nine times lower than the figure for OECD economies ([Figure 26](#)). One pending challenge is to set up access for individuals and companies that do not have access to digital payments due to structural factors (such as requirements or informal arrangements). Along those lines, central banks are spearheading initiatives like the creation of low-value payment platforms based on the infrastructure for high value payments, which would make payments quick, interoperable, and free of charge for users. Only two countries in Latin America and the Caribbean have developed such platforms: Brazil (Pix) and Mexico (CoDi). Worldwide, central banks are exploring digital currencies to lower the cost of keeping cash in circulation and improve the mechanism for transmitting monetary policy into financial inclusion. In the region, Uruguay piloted such a program in 2017 and 2018, and The Bahamas launched implementation of the “Sand Dollar” project ([Alfonso et al., 2020](#)).

- 2.28 **Economic crises have demonstrated the economic and social potential of digital financial services.** The travel restrictions implemented to curb the spread of the pandemic amplified the benefits of expanding digital financial services, which: (i) ensured continuous access to financial services for individuals and companies; (ii) helped maintain a continuous flow of consumption and credit; and (iii) channeled public economic and social support programs more efficiently and more securely. Public economic support programs have improved the digital financial inclusion of vulnerable groups, helping financially integrate more than 40 million people in Argentina, Brazil, and Colombia in 2020 (Americas Market Intelligence, 2020). However, there are clear challenges to the expansion of digital finance in the region, for example, the need for: (i) sound infrastructure for interoperable digital payments, especially low value payments; and (ii) mobile payment solutions that create incentives for businesses to receive digital payments and maintain the associated infrastructure ([Box 14](#)).
- 2.29 **The pandemic and ongoing crises in the region have also attested to the importance of improving the availability of the conditions required for the adoption of digital financial solutions in the short term.** Affordable and robust connectivity, access to mobile devices, digital identity, financial education, and familiarity with technology are prerequisites for the use of digital financial services ([García Zaballos and Iglesias, 2020](#)). The region’s digital connectivity underperforms in key areas such as access, quality, and price, which is a constraint on digitalization of the financial sector as a whole and on adoption of digital financial services ([Table 8](#)). These factors pose new financial exclusion risks for the region due to inequalities in personal and business access to digital infrastructure and financial education, which has been magnified by the increase in the foothold of digital financial services in the post-COVID era. There is also a gender gap in Internet use ([World Economic Forum, 2022](#)). Connectivity challenges also affect companies, especially SMEs (40.4% do not have Internet

---

<sup>30</sup> In 2018, nearly 50% of Latin Americans withdrew their salary or public subsidy in cash as soon as it had been deposited in their bank account, and 81% of retail sales transactions used cash.

connections and just 50% actively use the Internet for business processes) (National Economic Research Associates, 2020).

- 2.30 **In the medium term, the region's fintech ecosystem must navigate certain challenges to continue expanding the financial services it offers.** The most significant challenges facing fintech companies are: (i) ecosystems that do not foster entrepreneurship and innovation. There are several roadblocks to entrepreneurship in the region, including excessive red tape and the lack of an expedient process for opening a business. Colombia and Uruguay are examples of countries in the region that have facilitated the establishment of businesses with low-cost, quick processes, in line with OECD countries ([World Bank, 2020](#)); (ii) a dearth of investment mechanisms for early-stage ventures. The region's venture capital industry has grown significantly but remains at an early stage of development compared to advanced economies, with a lower rate of investment in tech innovations than countries with similar levels of development (Stein and Wagner, 2019). There are also gender gaps in access to this type of capital. In 2021, for example, startups in the region whose founding teams consisted solely of men raised US\$13 billion in venture capital funds, approximately three times the amount raised by mixed gender teams and 345 times the capital raised by teams consisting solely of women (Harlem Capital, 2022). It should be noted that the development of the venture capital industry varies widely across Latin America and the Caribbean, with Chile and Mexico standing out as countries with venture capital industries that are as developed as those in OECD countries ([Box 15](#)); (iii) limitations on the supply of tech professionals. Fintech companies in the region severely lack personnel with technological expertise, which hinders their ability to recruit talent and constrains their productivity and ability to grow; and (iv) the lack of a regulatory environment that ensures that fintech can grow and that helps unlock its benefits while mitigating its risks. This last issue is cited as the most significant challenge by 53% of fintech companies in Latin America and the Caribbean, which feel that dialogue with regulators is weak. Only 45% are of the opinion that financial regulators in the region are strongly open to dialogue.<sup>31</sup>
- 2.31 **The advancement of technological innovation results in the emergence of new risks in the sector going forward** for consumers, service providers, and policy makers, which must be taken into account for supervision and regulation. Fintech may pose risks to financial integrity, financial stability and consumer and data protections. First, the impacts of fintech on the structure of the financial system and on [financial stability](#) are not yet well understood (Vučinić, 2020). Fintech applications have had limited reach in the region,<sup>32</sup> but trends indicate that fintech is expanding, including in the provision of traditional banking services (Erel and Liebersohn, 2020). Along these lines, the arrival of [Big Tech](#), the increase in digital credit, and the growing overlap between banks and fintech companies, which are subject to less regulation, are the main trends that need to be monitored. Second, though these technologies can support enforcement of Anti-Money Laundering/Combating the Financing of Terrorism ([AML/CFT](#)) controls, a swift expansion of complex transaction models that obscure identification of the owner of an asset could pose a risk to the sector's financial integrity. Third, the increase

<sup>31</sup> Industry surveys show that loan, crowdfunding, and financial institution technology companies are concerned about the regulatory environment ([World Bank and CCAF, 2019](#)).

<sup>32</sup> At the international level, the FSB has found that fintech and Big Tech companies still do not pose a systemic risk (FSB, [2017](#) and [2019](#)).

in digitalization and connectivity generates cybersecurity risks for the financial sector. The region is not very vulnerable to cyberattacks due to the modest degree of economic digitalization and limited use of online banking. However, the region lacks personnel with cybersecurity skills and effective legal frameworks for cybercrime to properly manage these risks (Berkmen et al., 2019). Fourth, potential misuse of consumer data by fintech companies (Pereira da Silva, 2018) due to regulatory requirements on data privacy that are less stringent than those used for traditional banking, coupled with inappropriate lending practices by nonregulated institutions, could undermine consumers' trust in digital financial services and hold back progress toward financial inclusion. Along these lines, improving consumer protections, digital identification,<sup>33</sup> and financial and digital education are all challenges on the region's agenda (paragraph 2.40).

### C. Stability gaps weaken sector resilience going forward

- 2.32 **Financial sector resilience is vital to sustainable economic growth.** A resilient financial sector can dispel financial imbalances generated by external macroeconomic shocks or by bad practices within the sector through corrective mechanisms that prevent spillovers to the real economy. Sector instability has severe implications for the flow of credit to the economy and, especially, capacity for financing long-term investments (Aghion et al., 2005). Episodes of financial instability generate hysteresis, and the impact on risk perception and management tends to persist over time, thereby reducing the efficiency of the sector in performing its role as credit intermediary (Bernanke, 1983). Financial crises in emerging countries lead to larger declines in production accompanied by longer recessions (Reinhart and Rogoff, 2009). For the sector to be able to consistently and continuously provide financing at a reasonable cost and a long enough term during both expansionary periods and recessions, financial stability must be assured.<sup>34</sup> Identifying and analyzing the risks facing the sector in the region is an opportunity to look to the future. Taking these risks into account makes it possible to anticipate potential consequences, enhance capacities in order to reduce gaps, and gauge the scope of future challenges.<sup>35</sup>
- 2.33 **The financial sector of the future will need to balance the risks that undermine its stability and limit its resilience, with a view to navigating a complex transition.** The main risks faced by financial markets in the region going forward are: (i) the handling of crises and impacts stemming from ongoing disruptions and from the uncertainty over how those crises will unfold moving forward; (ii) technological disruptions and the rise of cryptoassets; and (iii) climate change and its potential effects on financial risks in the sector. Success in navigating this transition lies in the sector's ability to anticipate and adapt to the new realities. The following sections provide a strategic forecast of the risks and

---

<sup>33</sup> Ownership of, access to, and use of digital information must be addressed as part of a broader discussion of digital identity and the role of the financial system and public policy ([World Economic Forum, 2016](#)).

<sup>34</sup> During the 2008 financial crisis, the financial systems whose lending contracted the least were systems with banks that were better capitalized and had access to stable funding sources (Kapan and Minoiu, 2013). Furthermore, unstable financial sectors can magnify the impact on productivity, since financially constrained businesses exit the market even when they are productive (Eslava et al., 2010).

<sup>35</sup> This work could benefit from greater diversity, because closing gender gaps in leadership positions in the financial sector could contribute to financial stability since a higher percentage of women on bank boards of directors and oversight agencies appears to be associated with greater financial resilience and banking sector stability (Sahay, 2018).

the mechanisms through which they arise, which can help inform strategies for building up the resilience of financial sectors in Latin America and the Caribbean.

### **1. Risks related to the impact and future evolution of existing crises**

- 2.34 The impact of the crises that have emerged, such as the pandemic, the war on Ukraine, the impact of inflation, and uncertainty pose a risk to the sector's stability and resilience to potential future shocks. The severe human and economic impacts of COVID-19 materialized rapidly in the region, with direct and indirect effects that will impact the financial sector and its role in the economic recovery. The pandemic's direct effects on the sector are associated with the impact on economies in the region ([World Economic Forum, 2022](#)). Restrictions on movement to prevent the spread of new variants of the virus and delays in achieving high levels of vaccination stalled economic recovery in the region while heightening the perception of uncertainty, financial market volatility, and liquidity and solvency risks. These are coupled with indirect effects such as the accumulation of macroeconomic imbalances (the upward trend in inflation and interest rates, and low growth projections) that weaken capacity for managing a scenario with greater stability when faced with economic crises.
- 2.35 **The sector faces risks that stem from the effects of these crises on economies in the region.** These risks include: (i) the increase in loan losses, which still persist in the sector due to the drastic reduction of economic activity between 2019, 2021, and 2022 ([Table 9](#)); and (ii) the deterioration of capital reserves coupled with low profitability, which limit the sector's ability to replenish reserves to face new shocks going forward. At the beginning of the pandemic, the region's banking systems had high solvency and liquidity ratios, which shored up their baseline resilience to contend with the impact. Regulatory capital to risk-weighted assets ratios in the countries of the region stood at 17%, including average Tier 1 capital of 13% ([Figure 27](#)). This level of capitalization is higher than the minimum capital requirement recommended by the [Basel III Accords](#), allowing banks in the region to have substantial capital reserves to cushion losses stemming from economic or financial crises (Nuguer and Powell, 2020). In addition, although banks have become less profitable, low loan default rates and high liquidity positions prior to the pandemic ([Figure 28](#)) helped put the sector in a solid position to face the crises that have arisen. Though conditions vary between institutions and countries, these conditions gave banks in Latin America and the Caribbean a certain margin of solvency in the face of the adverse shocks that occurred from 2019 to 2022 ([IMF, 2022](#)).
- 2.36 **The future scenarios that limit the potential contribution of banks to the post-pandemic recovery are linked to high market and credit risk projections,** which means that financial institutions develop more conservative strategies that maintain a greater preference for liquidity while reducing their loan supply, especially once all government stimulus measures have been eliminated. Unemployment and business insolvency are driving the rising level of risk in credit portfolios. Financial intermediaries are expected to gradually disclose reports of potential loan losses, which will have more or less impact depending on the speed of the economic recovery in each country ([Figures 29 and 30](#)). Defaults and credit losses in bank portfolios are expected to increase in 2023, but the risk of bank under-capitalization is considered low ([Figure 31](#)). Credit losses could lead to stress positions or insolvency at some financial intermediaries on an individual

basis, so financial authorities have to monitor trends at weaker financial intermediaries to efficiently manage potential insolvency and bank resolution scenarios. Most countries have deposit guarantee systems for such situations, but the structure and size of those systems vary widely, as does the level of individual coverage provided ([Table 10](#)). Clearly, **financial resilience**, needs to be preserved, since a new financial crisis would delay the recovery and take a toll on the most vulnerable.<sup>36</sup> Going forward, the main challenge facing the sector and its regulators is striking a balance between safeguarding financial stability and rebuilding capital reserves, on the one hand, and expanding credit supply, on the other, which is needed to achieve economic recovery ([Cavallo and Powell, 2021](#)).

- 2.37 **On top of the initial effects of COVID-19, global macroeconomic factors and multiple crises arose, which will add challenges to the sector's transition to the new normal.**<sup>37</sup> Recently, the financial markets have become more concerned over inflation risks and rising interest rates. More restrictive monetary policies to fight inflation could cause real interest rate hikes, a heightened perception of payment risks, and a tightening of loan supply and demand (the adverse effects of [unwinding](#)). The sector has to face the effects of the region's GDP contracting by more than 7.4% in 2020 and with an economic recovery that is projected to entail high levels of public and private debt.<sup>38</sup> Most countries of the region are not expected to return to pre-pandemic GDP levels until 2023<sup>39</sup> or to pre-pandemic per capita income levels until 2025, which is the slowest projected recovery of all regions worldwide ([IMF, 2022](#)). In addition, it is possible that supply chain disruptions and the scarcity of labor and materials will persist longer than expected, generating uncertainty in international financial markets. Against this backdrop, financial intermediaries that are more exposed to the sectors hit hardest by the pandemic (such as tourism, trade, hotels and restaurants, transportation, and the automotive industry) and to segments with less [access to finance](#) and capacity (such as MSMEs and vulnerable and low-income individuals) have higher levels of credit risk on their balance sheets.
- 2.38 **Looking ahead, sector resilience in the region will continue to be linked not only to macroeconomic stability factors but also to institutional strength.** Since the beginning of the century, the financial sector in the region has become more stable thanks to macroeconomic, institutional, and regulatory reforms that facilitated a period of stability and improvements to sector resilience. However, sector resilience amid the short- and medium-term challenges that must be addressed varies widely from country to country within the region. Countries that experience greater macroeconomic volatility, that have financial institutions that

---

<sup>36</sup> Excessive risk-taking behavior should be avoided in the medium term to restore profitability.

<sup>37</sup> Inflation, severe currency depreciation, the devastation of the business fabric and employment, the increase in corporate and public debt, and the accumulation of contingent liabilities are a few of the medium-term macroeconomic weaknesses facing the countries of the region ([IMF, 2022](#)).

<sup>38</sup> The situation varies widely. Tourism is vital for Caribbean countries. As the country in the region with the highest level of global value chain integration, Mexico was hit hard by the plummeting of global demand. Oil and commodity exporters and countries that receive remittances have seen their revenues dwindle ([Powell and Rojas-Suarez, 2020](#)).

<sup>39</sup> All told, 34.2% of the region's formal jobs and 24.6% of its GDP were produced by sectors highly affected by the pandemic (ILO, 2020). Estimates projected that it was highly likely that businesses in those sectors would shut down permanently, with at least 2.7 million MSMEs (19% of all MSMEs in the region) being affected (ECLAC, 2020). Unemployment was also expected to increase by 4%-5%, climbing to 41 million ([Cavallo and Powell, 2022](#)).

are more dependent on crossborder capital flows, and that have weaker legal, regulatory, and financial risk supervision frameworks are weaker in their response to the impact and evolution of the crises.

- 2.39 **Institutional risks in some countries make the sector less resilient in the medium term.** Financial stability assessments conducted in the region ([Table 11](#)) indicate that going forward, the main institutional challenges faced by the sectors of the region going forward are: (i) delays in implementation of macroprudential regulations, which limit capacity to protect against risks stemming from systemic financial crises. Only Argentina, Brazil, Chile, and Mexico have fully implemented international standards for managing systemic risk in the banking system ([Table 12](#)); (ii) weaknesses in [financial transparency](#), which increase exposure to capital outflows and [de-risking](#) in the region.<sup>40</sup> The region has fallen behind other regions in terms of implementation of external and internal audit systems and implementation of international AML/CFT controls and fiscal information exchange and transparency measures; and (iii) inefficient bankruptcy and reorganization procedures for companies, which make it difficult to collect debts in the event of nonpayment. In Latin America and the Caribbean, recovery of debt after default is low (33 cents per dollar) compared to OECD countries (41 cents per dollar) ([Figure 32](#)). Though some countries have sound resolution frameworks as a result of the financial crises experienced in the 1980s and 1990s, other countries have weak frameworks for contending with cases of bank insolvency and mitigating the associated impact on sector stability as a whole. In addition, dollarized economies without lenders of last resort lack instruments to respond to systemic liquidity risks (Powell, 2012).

## 2. Risks related to technological disruption and the rise of cryptoassets

- 2.40 **The disruptive new technologies in the financial sector and the growth of cryptoasset ecosystems may affect sector competitiveness and financial and operational stability.** While the risks to financial stability are not yet systemic, they must be closely monitored for two reasons: first, because of their potential global implications; and second, because operational and regulatory frameworks are not fully developed in most jurisdictions.
- 2.41 **Sector competitiveness may be affected by the entry of new external actors in the delivery of traditional financial services.** The disruptive entry of Big Tech and alternative platforms could displace traditional incumbents and cause them liquidity and solvency problems. The disruptive entry of Big Tech companies in the transactional ([fee-based](#)) space may deprive incumbents of alternative funding sources, limiting their diversification and increasing their costs. There is also a risk of regulatory arbitrage that could jeopardize incumbents, as they may have to contend with higher costs and more regulatory procedures that would prevent them from competing on equal footing with new fintech players entering the market with less of a regulatory burden. This dynamic could lead to a further loss of profitability and intensify capital depletion in traditional banks. Future financial service models will need to be less dependent on financial intermediaries and focus more on creating value added and promoting customer engagement.

---

<sup>40</sup> According to the Basel Institute on Governance's [AML Index](#) (2022), financial transparency and accountability levels vary widely across the countries of the region.

- 2.42 **There is a financial stability risk in economies where [cryptoassets](#) and [stablecoins](#) have been adopted rapidly.** The rise in cryptoasset trading could lead to destabilizing capital flows (IMF, 2021a, 2021b, 2021c; FSB, 2019; McKinsey, 2021). The growth in cryptoassets and their lack of regulation could help them elude capital control and exchange restrictions put in place by countries. Cryptocurrency exchanges play a key role in facilitating the conversion of local currency to cryptoassets and vice versa. Increased demand for cryptoassets could lead to capital outflows and affect the foreign exchange market. At the same time, the banking sector could feel pressured if the crypto ecosystem becomes an alternative to local bank deposits or even to loans. Greater competition over bank deposits through stablecoins kept in cryptocurrency exchanges or private wallets could push local banks toward less stable and more expensive financing sources in order to maintain similar levels of portfolio growth. In addition to the direct loss of net interest income, a loss of customer relationships and transactional data would also erode the assessment of customer credit risk and the capacity to offer them specific products.
- 2.43 Stablecoins and [decentralized finance](#) (DeFi), which did not exist on a large scale in 2018, are now utilized widely, and their scope and use could be scaled rapidly and take on systemic importance in multiple jurisdictions. Cryptoassets have evolved to meet different needs in terms of speculative investment, value storage, currency conversion, and payment, but questions abound as to their design, use, regulation, and supervision at the national and international level. A regulatory and supervisory risk could arise if, in the future, stablecoins are not subject to the same financial auditing and reporting standards as commercial banks, which would increase uncertainty and volatility. The lack of reporting, as well as questions regarding redeemability at a 1:1 ratio with the value of its reserves, or the speed at which reserves can be liquidated to fulfill potential reimbursements, could lead to the risk of a run on the banks. Even if stablecoins are not currently big enough to be considered systemic, they could have implications for the financial stability of large banks in the event of bank runs that trigger major, rapid sell-offs of the assets that back stablecoins. There may also be crossborder contagion effects when global exchanges occur.
- 2.44 Lastly, operational issues could arise from the growth of the crypto ecosystem, such as: (i) cybersecurity threats: If systemically important financial institutions are attacked, these risks could affect sector stability; (ii) risks related to consumer protection: Inappropriate lending practices by unregulated institutions could erode consumer confidence in digital financial services and limit progress toward digital financial inclusion; (iii) risks related to a lack of transparency and integrity: A rapid expansion of complex transaction models that make it difficult to ensure transparent asset ownership could threaten sector financial integrity, especially in the countries of the region that do not have enough resources for effective regulation and supervision of such activities; and (iv) limitations on data certainty and availability: Uncertainty over the evolution of the regulatory model for the ownership and use of information could jeopardize the expansion of innovation.

### 3. Financial risks stemming from climate change

- 2.45 **In the long term, climate change is a new driver of risks to financial sector resiliency.<sup>41</sup>** Environmental and climate risks can be divided into [physical risks](#) and [transition risks](#) (stranded assets)<sup>42</sup> ([Network for Greening the Financial System – NGFS, 2022](#)). These risks can materialize as financial risks ([Figure 33](#)) that can adversely affect the stability of the financial sectors of the region ([NGFS, 2020](#)). Physical risks are pressing due to the region's high exposure and vulnerability to natural disaster risks and the impact of changing weather patterns on key economic sectors, such as tourism and agriculture, as well as on vulnerable groups, such as women and Indigenous peoples, who have lower capacity for resilience. In particular, Indigenous peoples' access to nontraditional means of income generation is hindered by a lack of training and skills, weak market linkages, discrimination in the formal and informal economy, limited access to credit, insecure landholdings, and few incentives for investment (ILO, 2018). These populations' limited access to formal services (such as savings, loans, payments, and insurance) and limited use thereof are among the factors that make them more vulnerable to major climate-related financial impacts. This has prompted an exploration of the role that financial services could play in helping these more vulnerable communities mitigate and adapt to climate crises.<sup>43</sup>
- 2.46 There is a rising trend in the number of natural disasters and associated economic losses ([Figure 34](#)), which means that the region's financial institutions are also more exposed to physical risks through their investments and loan portfolios in economic sectors that are vulnerable to the impact of climate change and natural disasters. For example, given that banks in the Caribbean are highly exposed to tourism investments and banks in Central America are highly exposed to agricultural loans, they are vulnerable to potential nonpayment and deteriorations in the value of their assets. At the same time, traditional models for assessing historical risks do not accurately anticipate the climate's potential effects on sector stability. Transition risks are a challenge for the economies of the region that are more dependent on the exploitation and use of fossil fuels and for financial intermediaries whose portfolios are dependent on those sectors (Ramírez et al., 2020).<sup>44</sup> This could pose a solvency risk to financial institutions whose balance sheets are highly exposed to these industries.
- 2.47 **The advance of climate change could increase sovereign, credit, market, and operational risks** (NGFS, 2022, 2021, and 2020; FSB, 2020; BIS, 2020). The public sector has limited capacity to absorb the rising economic losses caused by more frequent and intense natural disasters. The fiscal imbalances that could result from the growing impact of climate change and natural disasters will increase sovereign risk. This, in turn, could affect the quality of bank assets, as the banking sector is one of the main purchasers of public debt. In addition, the financial system

<sup>41</sup> For a broader discussion of this issue, see "[The Implications of Climate Change for Financial Stability](#)" (FSB, 2020).

<sup>42</sup> In a scenario in which global warming is less than 2°C, the average loss in value of financial assets is estimated at between US\$1 trillion-US\$6 trillion worldwide. Bank of England estimates indicate that between 2021 and 2030, there will be a decline of US\$2 trillion in assets amounting to 7% of the global total in the economic sectors that are most exposed to the transition (carbon, gas, and oil) (Bank of England, 2018).

<sup>43</sup> [Women and Climate: Hypothesis and Assumptions. Based on Consultative Group to Assist the Poor \(CGAP\), Agrofin, and Dalberg Research in Kenya \(2022\)](#).

<sup>44</sup> Ibid, [footnote 42](#).

may suffer from the contagion effects of climate change and exacerbate them. These financial risks include an increase in credit risk, due to the foreseeable increase in credit losses of individuals and companies, and the depreciation of collateral caused by the impact of disasters. Market risk would also increase due to adjustments in the valuation of assets and commodities. At the same time, there could be systemic risks of price hikes or [greenflation](#) of renewable energy projects, due to problems in supply chains, commodity prices, or other goods needed for green projects. Likewise, operational risks could materialize as a result of disruptions in supply chains and the forced closure of facilities.

- 2.48 **In Latin America and the Caribbean, the low level of development of risk management markets** is another driver of vulnerability that impacts sector resilience. The region has low insurance penetration (2.9% of GDP) compared to OECD countries (9% of GDP). Estimates indicate that the insurance protection gap stood at US\$246.8 billion in 2019, which means that insurance coverage in the region needs to be 2.6 times higher than current levels ([MAPFRE Economics, 2022](#)).<sup>45</sup> The underdeveloped insurance sector ([Figure 35](#)) constrains the ability to cushion the growing economic losses from the increase in the frequency and intensity of natural disasters (in 2019, US\$6.7 billion in disaster losses in the region were uninsured). The lack of insurance drives the higher cost that the private sector incurs when replacing assets and the additional costs that the public sector incurs when responding to the impact of natural disasters, which creates fiscal imbalances and increases sovereign risk (paragraph 2.47). This increase in sovereign and corporate credit risk could entail losses for banks and institutional investors through the deterioration of their public and private lending portfolios (Volz et al., 2020). This last point is significant in the region since the banking system is one of the largest buyers of public debt ([Figure 36](#) and [Table 13](#)). In summary, the financial sectors in the region that are more exposed to climate-related financial risks and that have less developed risk management mechanisms and markets have greater weaknesses in preserving their resilience and their ability to efficiently channel financing.

### III. INTERNATIONAL EVIDENCE ON THE EFFECTIVENESS OF POLICIES AND PROGRAMS IN THE SECTOR

- 3.1 As a result of the presence and severity of market failures affecting financial sector development and the sector's contribution to achieving more economic growth and a more inclusive and more environmentally sustainable society, there is room for public policy interventions by governments, regulators, and supervisors.
- 3.2 Public intervention is effective due to the need to address structural problems that limit financial sector development and offset existing market failures. In these cases, adverse selection and [moral hazard](#) hinder the efficient allocation of resources, according to credit rationing studies based on the fundamental works of Stiglitz and Weiss (1981). In a scenario with Pareto-optimal capital allocation, the market operates perfectly to set interest rates through the interaction between supply and demand, achieving efficient allocation of capital to the best investment projects. Most economic theory assumes a complete market with many buyers and

---

<sup>45</sup> The region has not systematically used other financial solutions for transferring climate risks, such as climate derivatives or the issuance of insurance-linked securities (ILS) or catastrophe bonds. Mexico is the only country of the region that has issued catastrophe bonds.

sellers. However, in practice, markets may not function properly (Stiglitz, 1989; 1993). Generally speaking, public intervention is justified when market operators do not have any incentive to, or cannot, ensure access to finance, especially long-term finance. These “market failures” can arise in situations where there is no market, despite the private sector operating rationally, or where the private sector operates suboptimally and the market is imperfect.

- 3.3 Some structural problems that adversely affect access to productive finance in an economy are: a weak productive structure and an underdeveloped institutional and regulatory framework. A weak productive structure—biased toward informality and sectors with relatively less value added—negatively affects the financial system’s ability to finance more productive activities (Busso et al., 2012b; Levy, 2012; Ruprah et al., 2014). The channel through which it affects the financial sector is due to the fact that informal and small sectors are the least conducive to generating verifiable, accurate credit information and generate higher transaction costs for financial intermediaries. This is particularly important in the case of SMEs, which puts them at a disadvantage when obtaining financing compared to larger companies. There are also challenges in the financial inclusion of Afro-descendants related to supply and financial institutions’ perception of risk.<sup>46</sup> Second, the institutional and regulatory framework, especially a sound definition of property rights, agile enforcement of financial contracts, and management of macrofinancial risks, particularly systemic ones, is vital (Fernández and Tamayo, 2017).
- 3.4 Beyond these structural and institutional issues, financial market development is largely determined by the presence and severity of market failures. Information asymmetry and incomplete information generate these market failures (Akerlof, 1970) when it is difficult for the lender to determine the level of risk of a company, entrepreneur, or individual without incurring significant expense.
- 3.5 In debt markets, lenders address this issue by trying to guarantee payment flows, so they require a robust financial record or collateral. This excludes certain types of businesses that cannot provide either, for example: SMEs, newly established businesses, and businesses seeking to launch new or innovative business models. Therefore, asymmetrical information can provide an economic rationale for interventions in debt markets for certain companies. Asymmetrical information also poses problems in capital markets, requiring high fixed costs for due diligence to conduct transactions on securities markets. Lastly, asymmetrical information poses not only supply-side problems, but demand-side problems as well. Situations arise in which companies or individuals are not aware of potential financing providers or underestimate potential benefits that access to finance could have for their businesses, thereby generating insufficient financing: for example, short-term financing, like credit cards, when financing under more supportive conditions could better meet their needs (Brown and Lee, 2017). Financial development institutions in the region, such as public development banks (PDBs),

---

<sup>46</sup> Despite the limited availability of data disaggregated by color or race that could be used to gain a better picture of who business owners are, the scant information that is available indicates that there is a gap in meeting Afro-descendant microentrepreneurs’ demands for financing. An IDB report found that, in two Brazilian cities, the percentage of microentrepreneurs whose demand was not met was 44.6% among those who self-identify as Afro-descendants, 35.1% among pardos, and 29.4% among whites (Paixão, M., 2017).

have an important role to play in driving and generating demonstration effects in the private financial sector.

- 3.6 This chapter presents a review of the literature on the effectiveness of public policies. In the sections below, there is a discussion of crosscutting policies followed by a discussion of the policies that could be implemented to address each of the three challenges analyzed in the previous chapter: access to finance, technological transformation, and financial stability. In cases where there is scant evidence on Latin America and the Caribbean, the discussion turns its focus to the knowledge gaps in the region.

#### A. Policies and programs to promote finance

- 3.7 Governments play a role in promoting long-term financing when financial markets have inadequate supply due to market failures (Section II, paragraph 2.8). **Crosscutting financial market development policies** aim to: (i) fix information and contract enforcement problems. These policies seek to promote better exchange of information, more robust protections for investors and creditors, and more reliable and more efficient contract enforcement (La Porta et al., 1997; 1998; and 2013); and (ii) stimulate financial market competition, since more diverse financial markets are associated with better access to finance (Beck et al., 2013).
- 3.8 Policies and reforms to promote financial market development and make them more competitive include: (i) institutional and regulatory reforms aimed at generating and disseminating information (such as credit bureaus, rating agencies, and accounting reporting standards) in order to improve the sector's risk assessment capacity. There is evidence that indicates that information exchange, **credit bureaus**, and credit ratings alleviate restrictions on credit for MSMEs (Berger et al., 2005; Brown et al., 2009; Arráiz et al., 2018, Flatnes, 2020) because these mechanisms make it possible to use credit data to predict repayment based on the borrower's characteristics (Love and Mylenko, 2003; Martínez Peria and Singh, 2014); (ii) regulations that ensure greater financial transparency, higher levels of competition, and better consumer protections, while generating incentives for the market to improve its project selection techniques ([Table 14](#)); (iii) development of insolvency and bankruptcy regulations and institutional frameworks that are able to ensure enforcement of financial contracts. Reforms that increase **protections for creditors** and enhance the efficiency of the bankruptcy system have a positive impact on credit supply (Araujo et al., 2012; Cirmizi et al., 2012). Estimates indicate that Brazil's new bankruptcy law, enacted in 2005, improved access to finance for companies by 23% and cut costs by 8%. Ponticelli and Alencar (2016) show that the impact of these reforms on access to finance heavily depends on having a judicial system that ensures efficient and predictable **contract enforcement**.<sup>47</sup> [Box 17](#) summarizes the impact of these reforms on formal employment; (iv) development of effective **collateral and insurance** systems to efficiently allocate risks between actors and minimize the costs of credit access and defaults. Reforms to collateral frameworks can help

<sup>47</sup> In 2014 Mexico implemented a reform to enhance the efficiency of registration and recovery of collateral for loan contracts and bankruptcy proceedings. Peru, Guatemala, and Colombia reformed their collateral registries (in 2006, 2009, and 2013, respectively) to expand the types of assets that can be used as collateral. Colombia and Chile reformed their bankruptcy laws (in 2010 and 2012, respectively) to streamline renegotiation and reorganization processes, which has led to lower liquidation rates and better allocation of resources between companies (Neira et al., 2016).

companies leverage their assets to obtain credit. Mexico has reformed its collateral systems, demonstrating that sound collateral laws and records help companies use their assets to back loans and reduce the need for public mechanisms (Fleisig et al., 2006; Love et al., 2016); and (v) development of legal and technological infrastructure for capital markets to promote long-term relationships between sources and uses of financial resources (e.g., through improvements to protections for investors' rights).

### 1. Policies and programs to improve access to productive finance

- 3.9 The public sector, especially PDBs, develops policies and programs to promote access to productive finance in order to generate financial additionality or demonstration effects for the private financial sector. Productive finance policies have two objectives: (i) resolve problems stemming from credit rationing when market failures are hard to correct (information asymmetries and opacity and economies of scale), especially for certain segments and sectors, like MSMEs (Cassar, 2004; Ibarrarán et al., 2010;<sup>48</sup> Berger and Udell, 1998); and (ii) increase financing levels that are suboptimal in the presence of externalities in which the activities of an individual or a business generate spillovers to the rest of society beyond private investment returns that are not captured in prices<sup>49</sup> (for example, mobilizing investment in energy efficiency and renewable energy sources to mitigate/prevent greenhouse gas emissions). In particular, PDBs have a privileged position in local markets, sound knowledge of and lasting relationships with the local private sector and other financial entities (especially when they act as second-tier banks), a sound understanding of obstacles to investment and investment opportunities, and extensive experience with financing long-term investments. In this context, PDBs play a key role in expanding private financing for climate change mitigation projects by channeling national and international public climate financing in their respective local credit markets (Netto et al., 2022, and Smallridge, et al., 2013).
- 3.10 Financial system market failures also stifle financial innovation. PDBs provide a solution by stepping up financial innovation through the creation of new markets and instruments. Most programs seek to boost financing supply. **Specific financing instruments** include concessional loans, guarantees, and capital market financing arrangements designed for and targeted to various actors, such as MSMEs or companies in specific value chains or sectors.<sup>50</sup> These instruments promote generation of investments in segments in a manner that cannot be achieved through market interactions (see [Box 17](#) for impacts by instrument type).
- 3.11 Active policies to support access to finance aimed at boosting the supply of financing have had positive impacts on the **generation of financial additionality**. These policies help surmount supply-side barriers to private sector financing that arise from: (i) a lack of long-term liabilities; and (ii) a high perceived asset risk. To achieve this, these policies offer potential private-sector financing sources a set of financing instruments that they can use in combination with their own resources to

<sup>48</sup> This can also constrain the amount of credit issued, limiting capacity for growth and opportunities to carry out investment plans.

<sup>49</sup> Another type of public intervention concerns requirements to disclose climate risks. This, along with carbon pricing, is key to determining price for climate-related externalities.

<sup>50</sup> See Ketterer and Villacorta (2017) for a review of the instruments that have been implemented in different regions.

efficiently meet demand for credit. An analysis of policies in the 37 member countries of the OECD found that all of those countries have at least one such instrument in place ([Table 15](#)).

- 3.12 Access to finance policies can be an alternative to redistributive policies. The relationship between access to credit and inequality reduction has been studied by Naceur and Zhang (2016) and Weychert (2020), who indicate that access to credit reduces income inequality. [Box 18](#) provides a summary of policies and programs to improve financial inclusion, while [Table 16](#) discusses examples of instruments from the region.

### **1.1 Evidence on policies and programs for MSME financing**

- 3.13 Productive financing programs that target MSMEs aim to improve the company's ability to obtain financing and decrease credit rationing with a view to achieving higher levels of growth. These objectives are achieved by targeting segments in which the market failures and restrictions on access discussed above are exacerbated. The literature suggests that the characteristics of MSMEs mean that they struggle more with problems that lead to credit rationing (Jaffee and Russell, 1976; Stiglitz and Weiss, 1981) than large corporates do (according to Beck et al. (2005), MSMEs are one-third more likely to have financial constraints). See [Box 19](#) for a discussion of market failures that adversely affect MSMEs and Annex III for additional information on SMEs' access to credit in the region.
- 3.14 **SME financing programs have proven to be effective in addressing certain market failures.** Public intervention through PDBs alleviates financial constraints for companies with profitable projects, helping improve conditions that boost growth and productivity, such as low capitalization and investment rates. For example, Colombia managed to expand economic activity in terms of SME sales, achieving growth of 4% (Eslava et al., 2014).
- 3.15 **Some programs target ventures, startups, and other companies at early stages of growth.** For new companies, especially tech companies and startups, venture capital is the preferred model (Baum and Silverman, 2004; Lerner, 2010), whereas MSMEs tend to avoid or try to minimize ceding ownership of part of their business to foreign investors (Myers and Majluf, 1984; Hamilton and Fox, 1998; Carter and Van Auken, 2005). Innovative MSMEs contend with greater obstacles to obtaining financing, especially during financial crises when credit rationing is high (Freel, 2007; Lee et al., 2015). However, those that do borrow are better equipped to survive and earn higher revenues (Cole and Sokolyk, 2018).
- 3.16 **Programs can be geographically targeted.** Geographic location is a key driver of borrower diversity. A company's ability to obtain financing hinges on its location (Martin and Sunley, 2015). Although this applies to all MSMEs (Zhao and Jones-Evans, 2016), the literature suggests that innovative MSMEs located in peripheral areas are at a greater disadvantage (Lee and Brown, 2016). These access problems are attributable to the structural failings of smaller markets, where investors and companies struggle to connect with each other outside of major cities (Nightingale et al., 2009). In addition, weak levels of local competition in these areas allow banks to select clients, with few incentives to issue credit to other MSMEs (Canales and Nanda, 2012).
- 3.17 The literature establishes a causal relationship between business clustering and competitiveness and productivity levels. Value chain integration has been proven

- to eliminate certain market failures and problems, such as the lack of credit records, collateral, or asset bases for individual risk analysis (Cowling and Mitchell, 2003; Lee, Sameen, and Cowling, 2015). Value chain financing programs that aim to improve companies' capacity for value chain integration and/or address the financing needs of a set of companies participating in the same value chain have positive impacts. This makes a case for public policy interventions to decrease credit rationing and improve the scale and survival of MSMEs, especially during times of crisis (Larson et al., 2004; Dana and Gilbert, 2005). Policies that foster the reconfiguration of global value chains can include financial facilities and mechanisms to promote the development of trade and regional integration (IDB, 2021). These policies are part of broader interventions that include: (i) financing instruments, like credit, guarantee, and insurance funds, factoring platforms, and supplier development financing; and (ii) nonfinancial instruments, including technical assistance and training in topics relating to investment, trade infrastructure, and trade integration and connectivity.
- 3.18 **The mix of credit and technical assistance in value chain programs has proven effective for achieving development objectives.** Joint delivery of financial and nonfinancial support delivers favorable outcomes because it provides an opportunity to pool the positive effects of a variety of instruments and incentives (such as credit, guarantees, insurance, and investments) and has an impact on employment, survival, and export growth of the companies served. For example, Bueso-Merriam et al. (2016) and [IDB \(2019\)](#) analyze the impact of a program in the province of San Juan that incorporated loan funds and technical assistance. In the **rural sector**, technical assistance alongside financing has played a strategic role in removing credit constraints ([Box 20](#)).
- 3.19 **MSMEs play a pivotal role in the transition to a low-carbon economy given their contribution to the carbon footprint and their potential for eco-innovations.** Though MSMEs have strong motivations, such as cost reduction and demand-side pressures, they also contend with several obstacles related to lack of information and awareness, access to finance, capacity, and uncertainty. The environmental transition of MSMEs requires a better understanding of the type of financing needed to invest in going green, as well as the identification of suitable financial and nonfinancial products and policies and exchanges of good practices (OECD, 2021).
- 3.20 **Experience has shown that constraints on MSMEs' access to credit worsen during times of crisis** (Cowling et al., 2013; Lee et al., 2015). After the COVID-19 pandemic, the measures instituted to halt the spread of the virus have disrupted everything from supply chains and consumer demand to financial and labor markets. MSMEs struggle with greater obstacles to accessing the loans they need for survival in the short term and recovery in the long term ([IDB, 2021](#)). Herrera (2020) summarizes the public policies instituted to support the productive fabric, which include monetary and financial measures as well as the easing of fiscal burdens and freezes on tax payments to support the liquidity of MSMEs in the short term. [Box 21](#) summarizes the different types of measures instituted to respond to COVID-19. In the United States, the Paycheck Protection Program under the CARES Act has had a positive impact on the likelihood that a company will survive the pandemic (between 14% and 30%) and on employment (Bartik et al., 2020). Gourinchas et al. (2020) analyze the impact of COVID-19 on bankruptcy rates in 17 countries and find that SME bankruptcies increase by 9% when the SME does

not have government support. Furthermore, in countries where SMEs receive government support, bankruptcy rates decrease even after the program ends. Support needs to be targeted because a balance must be struck between reducing bankruptcies among companies and the fiscal cost (a 15% subsidy of a company's wage bill decreases the likelihood of bankruptcy by 5.6%, saving 2.96% of employment at a fiscal cost of 1.8% of GDP). Using data from Hungary, Horvath, and Lang (2021) illustrate the efficiency of subsidized loans on real variables and demonstrate that they are an effective policy tool for maintaining investment, creating jobs, and increasing productivity.

- 3.21 There is a knowledge gap regarding how to target public intervention when delivering financial solutions to support sectors based on their potential and viability. More recent studies (Gourinchas et al., 2020) analyze COVID-19 stimulus programs and find impacts on decreases in bankruptcy and job losses in certain sectors. The financial system can facilitate the reallocation of factors (labor, capital, and technology) by providing credit that helps accelerate the transition to a new equilibrium based on financial position ([Támola and Fernández Díez, 2020](#); [Bebczuk, Fernández Díez, and Támola, 2021](#)), but a distinction must be made between financially viable companies with one-time liquidity problems and insolvent companies ([Peek and Rosengren, 2000](#) and [Caballero, Hoshi, and Kashyap, 2008](#)). There is room for public intervention in the generation of information on the risk and return of various activities, on the impact of financing on accelerating the adjustment process, and on proven positive impacts of social protection networks (Gallego et al., 2021).
- 3.22 **A thorough effort to identify Indigenous peoples' and Afro-descendants' financial needs and the challenges they face is needed, giving due attention to the diversity and heterogeneity of those groups.** Financial inclusion of Indigenous peoples also requires a mix of financial products and services that are not only affordable and tailored to their specific needs but also have been developed and can be delivered in a manner that respects their cultures and traditions. For example, initiatives aimed at low-income Indigenous women from rural communities in the Peruvian sierra (Trivelli, 2018) have proven that it is possible to achieve the financial inclusion of this demographic with positive outcomes through a framework that combines access to savings accounts in the formal financial system with financial education. The outcomes indicated that after four years of intervention, 44% of these women continued to use their accounts, and half were using other financial services as well (in comparison, 9% of Peruvian adults have formal savings accounts).
- 3.23 Regional case studies facilitated by national development banks provide insights into the path to closing gaps in access to finance among Indigenous peoples and Afro-descendants. In Mexico, under the framework of the Federal Discrimination Prevention and Eradication Act, BANSEFI (now known as Banco del Bienestar) established guidelines for the Rural Microfinance Technical Assistance Program (PATMIR) to offer financial services to the Indigenous population through financial inclusion plans tailored to serving this sector and a quota under which at least 10% of the population served had to be residents of an Indigenous municipio or a municipio with an Indigenous presence. PATMIR has achieved the financial inclusion of 1.3 million people in rural areas, 29% of whom live in Indigenous areas. In Chile, BancoEstado signed an agreement with the National Corporation for Indigenous Development (CONADI) to facilitate Indigenous peoples' access to

formal banking services. These case studies have also pointed up the importance of nonfinancial services for these groups. In Colombia, Banca de las Oportunidades developed methodological guidelines for its financial education program tailored to Indigenous peoples and Afro-descendants. Lastly, in Brazil, the Brazilian Development Bank (BNDES) has Fundo Amazônia (created in 2008), which harnesses nonreimbursable resources for distribution to projects in that region for its conservation. As of 2015, Indigenous peoples were directly managing 9% of the total amount of resources from that fund.<sup>51</sup>

### **1.2 Evidence on policies for infrastructure and housing financing**

- 3.24 Policies to promote private investment in infrastructure are justified by the need to put scarce public resources to a more efficient use—given high opportunity costs—and tap the efficiency advantages that the private sector could offer. Government intervention is needed to offset the risks faced by private investors in emerging markets under weak and volatile financial, institutional, and economic conditions (Moszoro et al., 2015). The array of measures to attract private investment notably includes: (i) regulatory policies, which aim to create an environment that is conducive to viewing infrastructure as a financial asset and facilitating the participation of private investors; and (ii) measures to promote infrastructure investments through financing or risk reduction mechanisms for infrastructure projects ([Box 22](#)).
- 3.25 Public policies to promote housing financing are justified by the need to reduce the housing shortage, especially for women heads of household and low-income and informally employed families whose savings are not enough to purchase or upgrade formal dwellings (Muñoz Miranda et al., 2012). Public policies to boost the supply of housing financing complement fiscal subsidy policies, which have a multiplier effect but run up against fiscal headroom constraints and competition with other social objectives. These measures include measures to develop the mortgage market and measures to increase the supply of available financing ([Box 22](#)).

### **1.3 Evidence on policies for sustainable finance**

- 3.26 [Sustainable finance](#) measures are a series of regulatory tools, sustainable financial policies, and voluntary initiatives that belong to a broader set of measures to steer financial markets toward fulfillment of the Paris Agreement on Climate Change and the SDGs.<sup>52</sup> Use of these tools is justified by the lack of incentives, data, and capacity for fostering private investment in productive capacity, infrastructure, and research and development (R&D) to decrease greenhouse gas emissions and build resilience to climate change. These tools also help disincentivize carbon-intensive investments. [Figure 37](#) provides an overview of recommendations for central banks and supervisory agencies.
- 3.27 Sustainable financial policy tools seek to incorporate climate-related risks and opportunities into decision-making by investors, financial institutions, and insurance companies when allocating capital, with a view to transitioning to a

<sup>51</sup> BNDES firma primeiro contrato de financiamento com associação indígena. Available at: <https://agenciabrasil.ebc.com.br/economia/noticia/2015-04/bndes-firma-primeiro-contrato-de-financiamento-com-associacao-indigena>.

<sup>52</sup> The overview of regulatory and sustainable financial policy tools covers four main complementary levers: fiscal policy tools, financial tools, monetary tools, and technical tools.

sustainable financial system. The IMF (2019) classifies the policy tools into two categories: (i) climate risk; and (ii) promotion of climate financing. Climate risk tools seek to integrate climate risks in decision-making for capital allocation and support climate objectives by changing demand for green investments and the relative price thereof. Key examples include required climate-related financial disclosures, corporate governance reforms, and classifications of sustainable activities.<sup>53</sup> Tools to promote climate financing seek to capture the benefits and externalities of interventions for society. According to the literature, these tools revolve around green support and [brown penalty](#) considerations in minimum capital requirements for banks and minimum amounts of green assets on bank balance sheets. These tools coexist with existing environmental and social regulations ([Box 23](#)). Some examples of disclosure requirements that cover environmental, climate, and social considerations include the European Union's Non-Financial Reporting Directive<sup>54</sup> and regulations for occupational pension companies and institutions.<sup>55</sup>

- 3.28 In Latin America and the Caribbean, there are recent examples of **implementation of financial policy tools** to foster **integration of environmental, social, and climate risks** into decision-making for capital allocation. In Brazil, Central Bank Resolutions [3,547/2011](#), [4,327/2014](#), and [4,557/2017](#) require financial institutions to: (i) evaluate their activities' exposure to environmental and social risks, demonstrate their ability to address those risks to maintain capital adequacy, and publicly disclose those risks; (ii) formally adopt an environmental and social risk accountability policy for their activities and issue guidelines on how to implement that policy; and (iii) implement a regular, integrated risk management structure that addresses environmental and social risks. In addition, [National Monetary Council Resolution 4,661/2018](#) requires pension fund asset administrators to consider environmental, social, and governance (ESG) risks as part of their decision-making process for investment decisions. In September 2020, the central bank issued its new sustainability agenda, which includes actions to promote disclosure of ESG risks and create a green liquidity line for financial institutions. Chile is conducting public consultations regarding integration of disclosure of climate-related risks into existing Chilean Financial Market Commission Regulations [385](#) and [386](#).
- 3.29 **Self-regulation initiatives** have played a vital role in the integration of ESG risks in investment and finance decision-making and in the promotion of sustainable finance in Latin America and the Caribbean. Examples include the Equator Principles, the Principles for Responsible Investment, the Principles for Responsible Banking, and agreements and protocols that apply to all industries, such as Protocolo Verde in Colombia and Mesa de Finanzas Sostenibles in Paraguay (see [Figures 38](#) and [39](#) on regulatory and self-regulation initiatives in the region). These initiatives have helped develop regulations in certain cases, such as the Central Bank of Paraguay's resolution on environmental and social sustainability for the financial sector (Resolution 8/2018). Likewise, stock

---

<sup>53</sup> For example, recent European Union regulations (Regulation 2020/852) establish a framework that facilitates sustainable investment (see the [European Commission](#) website).

<sup>54</sup> Directive 2014/95/EU, currently under review, identifies four sustainability issues (environment, social and employee issues, human rights, and bribery and corruption) and requires companies to disclose information about their business model, policies, outcomes, risks, risk management, and key performance indicators. For more information, see the [European Commission](#) website.

<sup>55</sup> In line with the European Union's Sustainable Finance Action Plan, laid out in 2018, this regulation aims to support the region's social, environmental, and climate sustainability objectives.

exchanges have implemented initiatives such as preparation of guidelines for ESG reporting, development of guidelines for the issuance of [thematic bonds](#), and creation of a trading segment specifically for those bonds.

**B. Policies and programs to promote technological transformation in the sector**

- 3.30 The digital transformation of the financial sector has the potential to boost sector development through improvements to financial inclusion and credit access (paragraphs 2.22, 2.23, and 2.24). Public intervention is justified by the need to **provide a regulatory environment that supports development of the fintech ecosystem and innovation while mitigating potential risks** stemming from fintech ecosystem development and transformation of financial services (paragraph 2.31). In this context, financial authorities are adjusting their policy frameworks and providing guidance based on evaluations of the implications of emerging technologies for the financial sector, with a view to mitigating risks to financial stability and competition while generating opportunities to make the sector more efficient and more inclusive.
- 3.31 The evidence offers mixed insights as to the impact of fintech growth on financial stability, but there is a consensus that fintech can increase financial depth and improve stability in economies with low levels of depth and development. The expansion of fintech (including Big Tech) and competition with existing financial institutions vary based on economic, financial, and institutional development, so the impact of fintech on stability, systemic risks, efficiency, competition, and consumer rights also depends on those factors and on the regulatory response. Fung et al. (2020) find that the expansion of fintech increases financial stability in emerging financial markets and decreases financial stability in more developed markets. Meanwhile, Li et al. (2020) suggest that risks inherent to fintech institutions may generate spillovers to traditional financial markets, possibly causing systemic risk (Shin, 2019; Li et al., 2020).
- 3.32 As regards **competition**, the advent of **Big Tech** could bring significant barriers to competitor market entry due to network economies and the creation of captive ecosystems. Institutional arrangements regarding customer data ownership rights, privacy considerations, and regulation of the use and distribution of that data (Shin, 2019) give Big Tech significant advantages over fintech companies and banks. Big Tech has the scale of banks combined with the technological capacity of fintech companies. This, coupled with the fact that Big Tech activities are integrated with the real segment, means that Big Tech is highly likely to generate anticompetitive capabilities that could bring about systemic changes (Stulz, 2019). In view of this risk, central banks are encouraging banking systems to delve deeper into improving efficiency, cutting costs, and making more intensive use of new technologies.
- 3.33 As for **consumer protections**, policy responses seek to address the problem of asymmetrical information. Among other considerations, use of nontraditional data and data processing technologies (like AI and machine learning) could lead to products that try to profit from consumers' cognitive limitations or evade existing regulations for financial products (Braggion et al., 2018) (paragraph 2.31).<sup>56</sup> New

---

<sup>56</sup> Though financial education programs for consumers are a partial fix for this problem, the capacity for addressing difficulty in understanding complex products and interpreting high volumes of evolving information continue to be significant constraints.

- technologies can make business models and costs less transparent, encourage regulatory avoidance, and hinder dispute resolution (Manasa and Padma, 2019; Saunders, 2019).<sup>57</sup> Another issue arising from the use of new technologies is the possibility of bias and discrimination (Jagtiani and John, 2018).
- 3.34 Given the risks discussed above, **regulatory responses** can be classified into three categories: enabling policies, enabling technologies, and fintech activities (Ehrentraud et al., 2020) ([Table 17](#)). **Enabling policies** establish conditions for fintech ecosystem development, such as frameworks clarifying digital identity use (especially in connection with financial services), regulatory frameworks for data protection, and cybersecurity frameworks for the financial sector. Regarding developments in enabling policies, an analysis of 31 jurisdictions worldwide found that 27 jurisdictions have digital identity frameworks, 29 jurisdictions have national data protection frameworks, and 29 jurisdictions have cybersecurity frameworks in place (see [Tables 18](#) and [19](#)). The widespread adoption of these frameworks lends credence to the fact that these elements have been recognized as key conditions for facilitating digital financial transactions.
- 3.35 Continuing the discussion of enabling policies, proper design and execution of public strategies for investment in **digital connectivity** can have striking socioeconomic impacts. Estimates indicate that an uptick in broadband penetration rates leads to GDP (Scott, 2012; Gilchrist, 2015), job (Katz, 2009; Kelly and Rossotto, 2012), and productivity gains (García Zaballos and López Rivas, 2012). In addition, increasing broadband download speeds also appears to have a positive economic impact on GDP growth (Ericsson, 2013). Studies have found that countries with developed connectivity infrastructures were able to mitigate 75% of economic losses stemming from the COVID-19 pandemic and the socioeconomic impact of the public health measures instituted to alleviate the epidemic (Katz et al., 2020). On the social front, studies have found that increasing investment in digital infrastructure should help decrease the number of people who suffer from poverty and/or hunger (García Zaballos et al., 2019).
- 3.36 Effective design and execution of public policy reforms in the area of digital connectivity can have impressive socioeconomic impacts. National broadband plans help fast-track sector development (Prats and Puig Gabarró, 2017). Implementation of digital agendas appears to help create jobs and increase GDP in both the short and medium term (Spain's Ministry of Industry, Energy, and Tourism, 2017). Furthermore, countries that have made strides toward developing sound regulatory environments have, on average, higher broadband penetration rates than countries that have not taken such measures (International Telecommunication Union – ITU, 2015), which in turn has positive socioeconomic impacts.
- 3.37 Second, the most common **regulatory responses to enabling technologies** address cloud computing (77%), biometric technologies (68%), and application programming interface (35%) ([Table 20](#)). Regulations addressing machine learning and AI (3%), and distributed ledger technologies (10%) are the most outdated in terms of development and modernization. These technologies have been the subject of exploratory analyses (52%) and general principles (45%), but the level of

<sup>57</sup> It should be noted that these problems can be more severe for segments that are traditionally excluded from the financial sector, given the lack of financial experience stemming from that exclusion and the possible differential profiles that can make them more vulnerable.

- development varies from country to country. All told, 56% of OECD countries have updated their regulations on application programming interfaces, versus 8% of non-OECD jurisdictions. As for regulatory responses to machine learning and AI, 44% of OECD jurisdictions have updated the corresponding regulations, performed exploratory analysis, or developed general principles or are in the process of doing so, versus 15% of non-OECD jurisdictions ([Tables 21a](#) and [21b](#)).
- 3.38 Third, **regulations and policies on fintech activities** address [crowdfunding](#), [robo-advising](#), [cryptoassets](#) and related activities, [open banking](#), and [active promotion policies](#). At the global level, 69% of the jurisdictions analyzed by Ehrentraud et al. (2020) have regulations that explicitly address crowdfunding, whereas 65% of those jurisdictions do not have any regulations that explicitly address robo-advising ([Table 22](#)). All told, 84% of those jurisdictions have released advisories regarding [use of cryptoassets](#), 58% have modified their **AML** frameworks, and a comparable percentage have issued clarifications on the tax treatment of cryptoassets. In addition, 48% have issued clarifications regarding regulations governing initial coin offerings and regulations governing cryptoasset providers and cryptoasset-related activities, while 42% have introduced cryptoasset registration, authorization, or licensing requirements and 16% have implemented bans on certain cryptoasset-related activities ([Table 23](#)). The situation varies from country to country. Bans on cryptoasset activities are five times more common in non-OECD jurisdictions. In contrast, OECD jurisdictions are 2.5 times more likely to have issued clarifications regarding the regulations governing cryptoassets and the tax treatment of cryptoassets and modified their AML frameworks ([Tables 23](#) and [24](#)). Generally speaking, 58% of the jurisdictions analyzed have open banking initiatives in place, though there are significant disparities between OECD and non-OECD jurisdictions (83% and 23%, respectively).
- 3.39 In Latin America and the Caribbean, development of fintech regulations and legislation has focused on activity type instead of on the characteristics of the companies that provide these services, with the exception of Mexico (Cantú and Ulloa, 2020). Legislation in the region has focused primarily on crowdfunding activities. As for nonlegislative actions, the countries of the region have actively developed regulations on [crowdfunding and alternative lending and deposits](#), and regulations on payment activities. Lastly, [cryptoassets](#) is the area in which regulatory agencies have most actively issued recommendations, guidelines, and public statements.
- 3.40 **Public policies to promote fintech** include the development of innovation centers, [regulatory sandboxes](#), and regulatory technology centers—including regulatory accelerators and roundtables. The likelihood that a non-OECD jurisdiction has one of these policies is 41%, which is lower than the figure for OECD jurisdictions (60%). Regulatory sandboxes are the most common (69%), followed by innovation centers (59%) and regulatory technologies and/or accelerators (31%) ([Table 25](#)). Appaya et al. (2020) explore emerging evidence generated by regulatory sandboxes and find no correlation between their effectiveness and the country's legal system (civil law, common law, or mixed) ([Box 24](#)). Herrera and Vadillo (2021) discuss the advantages of multi-jurisdictional regulatory sandboxes for the region.

- 3.41 Five Latin American and Caribbean countries have put regulatory sandboxes into place. As of this writing, results suggest some early success in the development of lessons learned and specialized expertise. In 2018, Colombia implemented a regulatory sandbox under the orbit of the Financial Superintendence of Colombia (SFC), which has played a vital role in issuing regulations in the areas of cybersecurity, cloud computing, payment arrangements, and QR codes and is currently in the process of issuing rules on fintech licensing and AML. It has served more companies than any other jurisdiction in the region (210 companies between 2018 and 2020, according to Bijkerk (2021)). In Brazil, in 2018 the central bank established the Financial and Technology Innovation Laboratory, which takes on the role of regulatory sandbox. Fintech company participants in regulatory sandboxes receive support from a number of public and private institutions and from researchers, developers, specialists, and representatives from multinational tech companies such as Microsoft, IBM, Amazon, and Oracle (Appaya et al. 2020).
- 3.42 Innovation centers have been used as an alternative to regulatory sandboxes or in combination with them. From the standpoint of supervisors, innovation centers provide an opportunity to monitor and understand new technologies and business models and identify challenges for regulation and supervision. Innovation centers have a stronger influence than regulatory sandboxes, as illustrated in [Figure 40](#), which shows that innovation centers support over 12 times the number of companies supported by regulatory sandboxes—a ratio that holds in jurisdictions with both initiatives in place (Appaya and Gradstein, 2020).
- 3.43 In the financial system innovation ecosystem, PDBs can support the development of the fintech ecosystem by supporting seed capital funds and undergoing their own digital transformation to achieve greater efficiency in resource use and higher rates of financial inclusion. For example, use of new information technologies and alternative data can improve repayment profiles and lower costs (fixed and transaction costs).<sup>58</sup> This would have an impact on PDB efficiency through improvements to portfolio quality (better credit allocation, stability, and predictability) and cost reductions (early fraud detection and data quality and improvements) (onboarding) (Nabalón et al., 2021). Furthermore, use of new technologies and alternative data would facilitate greater inclusion of innovative products (personalized products and products that target profiles not served by traditional products) that could help address gaps in financial inclusion, especially those affecting women and minority groups that continue to be underserved. PDBs can use new technologies and data to scale up their transformative capacity while improving their measurement and monitoring capacity to develop more efficient interventions where externalities and public asset generation are key considerations when determining overall benefits.<sup>59</sup> There is a need for a better understanding of the potential that partnerships between PDBs, seed capital markets, and the fintech ecosystem could have for the exchange of roles and knowledge and evaluation of these initiatives.

### C. Policies and programs to strengthen sector resilience

- 3.44 Public intervention is justified because financial stability is vital to ensuring the continuous and efficient supply of credit to the economy. The objective of public

---

<sup>58</sup> See Fernández Díez et al. (2020) for a review of financial sector modernization as it applies to PDBs.

<sup>59</sup> The main benefits observed are efficiency and effectiveness gains. All told, 27% of PDBs said digitalization would help them more effectively meet client needs (Fernández Díez et al., 2020).

intervention is to reduce the macroeconomic volatility that affects the sector and promote regulations to evaluate, allocate, and manage financial risks so the sector can run smoothly (Schinasi, 2004). Public policies focus on strengthening financial sector stability so the sector can contend with external macroeconomic shocks and improve risk management at sector institutions. This section discusses macroeconomic policies to support sector stability, integrated public asset and liability management frameworks that address an array of macrofinancial risks (IMF, 2012b), and macro policy instruments that can be used countercyclically to contend with macrofinancial shocks. It then goes on to discuss the effectiveness of institutional policies in improving risk management and transparency within the financial system. Lastly, it discusses measures to respond to the short-term stability challenges associated with mitigating the impact of economic crises and incorporating the impact of climate risks.

### **1. Macrofinancial policies to support sector stability**

- 3.45 Financial stability can be supported by policies focused on controlling macrofinancial risks in the economy. [Box 25](#) summarizes the tools used in practice, which include public asset and liability management instruments, monetary policy instruments, public guarantee systems and loan insurance, countercyclical reserve funds, and credit lines for natural disaster and public health emergencies.

### **2. Institutional policies to improve sector stability**

- 3.46 **Updating micro- and macroprudential regulatory frameworks is a necessary policy for fostering financial system resilience** (IMF, 2012 and 2013). There is evidence that these regulations promote stability over the long term by reducing macroeconomic and financial volatility<sup>60</sup> and reducing procyclicality amid shocks.<sup>61</sup> In particular, experience has shown that [microprudential regulation](#) helps lower liquidity and market risks for banks, especially those that are at higher risk (Klomp and de Hann, 2010). Additionally, there is evidence that [macroprudential regulation](#) helps keep credit growth in financial systems in check (Cerutti et al., 2015; Poghosyan, 2019). In the United States, Dodd-Frank regulations appear to have had a positive net benefit<sup>62</sup> (Liner, 2017). The establishment of payment systems, clearing houses, and liquidation systems help improve management of [counterparty risk](#) in the system (IMF, 2010; Wendt, 2015). These institutions act as intermediaries in financial asset transactions between economic agents, protecting against risk of breach of contract while also improving market transparency. For example, in Colombia<sup>63</sup> this type of institutional arrangement has helped mitigate counterparty and liquidity risks by establishing a network with less connectivity (in terms of exposure) and greater distance between buyers and sellers. Lastly, policies that aim to improve regulatory capacity and risk-based supervision are a measure to promote more efficient and effective use of supervision resources by allocating those resources to the areas with the highest

---

<sup>60</sup> Agénor and Pereira da Silva (2016) summarize the impacts of macroprudential policies.

<sup>61</sup> In other words, they help correct the tendency of credit supply to expand during growth cycles and contract during recessions. For more information, see Forbes (2020) and Agénor and Pereira da Silva (2016).

<sup>62</sup> The benefits (lower likelihood of financial crises, fewer losses, and lower expected social costs) outweigh the costs (higher capital, liquidity, and compliance requirements).

<sup>63</sup> Financial institutions maintain a single source of exposure (debtors or creditors to the central counterparty) and are less exposed to counterparty risk, which lowers information costs and improves market operations (Mariño-Martínez et al., 2020).

level of risk (Toronto Centre, 2018). A summary of the impact of micro- and macroprudential regulations can be found in [Table 26](#).

- 3.47 The region has some gaps in implementation of international standards for banking regulation. Most developing countries operate under either Basel I regulations or a piecemeal version of Basel II regulations (Ferreira et al., 2019). The extent to which Latin American and Caribbean countries have implemented Basel regulations varies. The countries where implementation is the furthest along are Argentina, Brazil, Chile, and Mexico, which have all fully implemented Basel II and Basel III ([Table 12](#)). In those countries, the changes to minimum capital and liquidity measures implemented under Basel III were proven to be effective for managing the crisis during the pandemic.
- 3.48 International evidence speaks to the positive effects of governance and institutional strengthening. The pursuit of a more transparent public policy has a positive impact on agents' compliance with their commitments (Kim, 2005; Porumbescu et al., 2017). Likewise, it helps reduce corruption by giving policies and actors greater visibility.<sup>64</sup> Policies to promote transparency in the financial sector include those aimed at strengthening governance, namely: the establishment of open decision-making and planning processes, efforts to make sector policies available to the public, the creation of codes of good practices, and efforts to promote accountability and integrity in the sector. This cuts down on opportunities for corruption, generates useful data for regulatory enforcement and decision-making (IDB, 2018a), and enhances the effectiveness of fiscal and monetary policies by making policy-makers more credible (Stella, 2002). Money laundering and the financing of illicit activities can pose a threat to economic and financial stability since they affect capital flows and foreign investment and lead to social losses due to improper allocation of productive resources (IMF, 2018). This problem can be addressed by such policies as those aimed at making transactions more transparent, AML/CFT measures, and controls to prevent tax evasion and avoidance (see [Table 14](#)).

### 3. Policies and measures to strengthen resilience to emerging risks

- 3.49 The impact of the ongoing crises on the productive sector in the countries of the region has prompted policy-makers to implement **short-term measures to curb the adverse effects of those crises**. The steps taken include the measures implemented by central banks to bring stability to the market, for example: the lowering of reserve requirements to reduce liquidity risk, extensions of moratoriums on loan payments, measures addressing bank use of capital, the opening or expansion of guarantee funds for loans to MSMEs, and cuts to interest rates. Such measures have been implemented in most of the countries of the region (Nuguer and Powell, 2020; Standard & Poor's (S&P) Global Ratings, 2020). The importance of nimble regulations focused on making bankruptcy and restructuring processes more efficient warrants mention. Such mechanisms are vital to keeping markets in efficient working order because they provide an institutional solution to debt contract enforcement problems and contain systemic effects on financial sector assets, such as the circumstances of the COVID-19 pandemic. However, estimates indicate that efficiency levels at institutions involved in bankruptcy and restructuring processes in the region are medium to

---

<sup>64</sup> See the discussion in the Transparency and Integrity Sector Framework Document (document GN-2981-2).

- low compared to the rest of the world (IMF, 2020b). This implies that debt markets in the region are underdeveloped (Djankov et al., 2008).
- 3.50 The road to economic recovery after the impact of these shocks poses an opportunity to rebuild economies in a more sustainable way.<sup>65</sup> To achieve this, climate sustainability considerations need to be factored into decision-making at financial institutions ([NGFS, 2022](#)). Along those lines, financial regulators have recognized that **climate change is a source of risk for financial stability** in that it stokes conventional prudential risks ([NGFS, 2021](#)). Regulators have started to take steps toward incorporating ESG risks in their mandates (International Organization of Securities Commissions – IOSCO, 2019; Bank of International Settlements – BIS, 2020; [NGFS, 2022](#)).
- 3.51 **Central banks and supervisors** play a vital role in ensuring that the financial system is resilient to these risks. The NGFS, comprised of a group of 78 central banks and supervisors, works to develop climate risk management for the sector, mobilize capital for sustainable development, and provide data to regulators so they can identify, quantify, and mitigate climate and environmental risks in the sector.<sup>66</sup> [Figure 37](#) provides an overview of their recommendations, and [Table 27](#) discusses sustainability measures.
- 3.52 **Latin American and Caribbean financial regulators** have taken steps to address climate-related and environmental risks. Regulators in Brazil, Chile, Colombia, and Mexico have surveyed financial intermediaries in their jurisdictions to understand the state of the industry and build awareness of the importance of these risks. The [Central Bank of Brazil](#) has taken steps to improve collection of data on socioenvironmental risks, incorporation of climate risks in stress tests, and regulations on socioenvironmental accountability policies to be implemented by financial intermediaries. Other countries like Colombia (SFC, 2019) and Chile have also taken measures to build capacity for green finance (MHC, 2019). [Figure 38](#) provides an overview of these initiatives, while [Table 28](#) discusses case studies of policies implemented in the region.

#### **IV. LESSONS LEARNED FROM THE IDB GROUP'S EXPERIENCE IN THE SECTOR**

- 4.1 The following paragraphs summarize the main lessons learned from IDB Group interventions in the financial sector. The lessons learned discussed in this section were gleaned from an analysis of reports from the Office of Evaluation and Oversight (OVE), sovereign guaranteed operations ([Table 29](#)), and non-sovereign guaranteed operations ([Table 30](#)).

##### **A. Lessons aligned with the challenge of access to finance**

- 4.2 In 2016, OVE conducted a survey of financial intermediaries in the region to evaluate the IDB Group's operations through financial intermediaries in the area of access to finance for SMEs ([OVE, 2016](#)). The evaluation found that: (i) financial intermediaries' perception that SMEs have higher credit risk (59% of respondents) is the main obstacle to SME finance; (ii) the [relevant portfolio](#) increased within the financial intermediaries' total portfolio at program closing (75% of transactions); (iii) achieving targets to extend loan tenors for SMEs is the main improvement to

<sup>65</sup> Referred to as the green recovery. For example, see: IMF (2020c), OECD (2020a), and OECD (2020b).

<sup>66</sup> See the NGFS's [Guide to Climate Scenario Analysis for Central Banks and Supervisors](#) (2022).

financing conditions for SMEs; and (iv) better monitoring of SME performance is needed to evaluate the ultimate effects on revenues, jobs, and exports. The cost of compiling this information on end beneficiaries is high, so it was recommended that resources be dedicated from the outset to improve efforts to monitor project outputs and outcomes. As a result of OVE's recommendations, the IDB Group has been working on two **areas of improvement**: (i) in the design phase of interventions, diagnostic assessments of credit demand and access barriers have been strengthened, as these have proven to be necessary for the interventions' relevance and targeting and for generating innovative financial products; and (ii) in all phases of the intervention (design, execution, and closing), capacities have been enhanced for monitoring and evaluation of the interventions carried out. This makes it possible to compile information on all financial intermediary transactions with SMEs with a view to tracking IDB Group investment and the additionality of its operations.

- 4.3 SME capacity needs to be bolstered so that financial intermediaries perceive them as less risky borrowers that offer the potential for profit. To that end, strengthening the diagnostic assessment during the design of interventions is key, with identification of barriers to access to credit and of the potential demand for financing. IDB Group operations are designed to target barriers to access to credit by combining financial products and technical assistance. In terms of financial products, long-term loans have focused on improving financing conditions for private banks so that they can provide better conditions to the end beneficiaries of the loans. Providing credit lines to underserved segments does not ensure a positive effect on financial inclusion by itself if the main problem is financial intermediary risk tolerance. In that regard, risk mitigation mechanisms are essential. Loan guarantee products aimed at reducing credit risk have helped leverage the IDB Group's resources to mobilize private credit toward consumer and business segments with higher credit risk. The IDB Group's equity products have helped address the limited venture capital available for innovative businesses in an early stage of development. Due to the maturity of the companies or of the market, or the availability of capital, these businesses have a high risk profile and still lack access to traditional bank financing,
- 4.4 Through programs with PDBs and private financial intermediaries, both the public and the private windows of the IDB Group have promoted the financial inclusion of consumer and business segments with fewer opportunities to access finance. Including economic incentives for financial intermediaries and beneficiaries and disseminating the advantages of structured financial products have been crucial to generating demonstration effects and disseminating innovative products. This leads to lower perception of risk in the sector and enables the sector to expand the supply of financial products to these segments beyond the scope of the program, which amplifies program benefits beyond those initially identified and builds financial depth in the sector (operation [ES-L1089](#), [Posoria](#), and [Moni](#)).
- 4.5 The IDB Group has also learned lessons from developing innovative products, such as support for issues of thematic bonds and the development of financial products in local currencies. One example of the IDB Group's successful mobilization of international investors toward sustainable development goals is the bond for decent and affordable housing in Ecuador (the world's first sovereign social bond) (operation [EC-U0001](#)). The following actions have been found to be drivers of success in the design of new solutions: (i) assess the scale of challenges

- to access to finance and fit financial tools to local conditions; (ii) ensure that financial intermediaries and beneficiaries are involved early on, beginning in the design stage, for programs with innovative approaches (operations [PR-L1140](#), [NI-L1080](#), [BA-L1034](#), and [ES-L1089](#)); and (iii) ensure coordination across the various government offices involved in programs.
- 4.6 In addition, technical assistance has been effective in strengthening: (i) the building of capacity for technical and financial evaluation of financial products; and (ii) support for monitoring outputs and outcomes, with the design of targets and indicators for the relevant portfolio, in order to measure the performance of operations, which helps gauge the contribution and additionality of IDB Group financing. The development and technical evaluation of innovative financial products has been a key driver of success in IDB Group programs. Technical assistance has been particularly important for closing knowledge gaps and improving training at executing agencies (operations [CO-L1214](#), [BR-L1442](#), [NI-L1080](#), and [ME-L1170](#)), and for performing regulatory framework studies for structured financing and bonds, which ensured viability and mitigated the risk of delayed transactions ([MercadoLibre](#), [Caja Arequipa](#), [Moni](#), and [BHD](#)). Moreover, technical assistance for institution-strengthening of financial intermediaries and PDBs in the region has created a body of knowledge on monitoring and evaluation strategies (Támola, 2020; and Haro and Fernández, 2019), which have been applied successfully in various programs (examples of monitoring measures for the supervision of the credits and loans issued can be found in operations [BA-L1034](#), [ES-L1089](#), and [BR-L1442](#)).
- 4.7 The **IDB Group's impact evaluation work** has made it possible to identify positive impacts attributable to SME financing programs. This work has generated empirical evidence and lessons learned to be used in the design of new operations. The main results to be taken into account are as follows: (i) the effects on end beneficiaries are more sustainable when companies receive long-term credit. According to Eslava et al. (2012), who analyzed the effect of credit programs for SMEs through second-tier public banks in Colombia, increases in production (24%), employment (11%), investment (70%) and productivity (10%) were identified; (ii) the effects are greater and more solid when credit is combined with technical assistance. An evaluation by OVE (2014) of business support programs in Brazil found positive impacts on wages, exports, and innovation; (iii) the joint delivery of financial and nonfinancial support services is a criterion of success due to the possibility of combining the positive effects of different instruments and incentives such as credit, guarantees, insurance, and investments. In this regard, Bueso-Merriam et al. (2016) and the [IDB \(2019\)](#) analyzed the impact of a program that incorporated credit and technical assistance funds in the province of San Juan (Argentina) and found positive effects on employment, survival, and export dynamics of the companies served; (iv) access to credit can generate redistributive effects by reducing poverty. In Colombia, Echavarría et al. (2017) studied the impact of rural credit programs on coffee producers and concluded that access to credit increased productivity by 12%, while helping to reduce poverty by 0.3%; and (v) in highly vulnerable and hard-to-access areas such as rural areas, eliminating liquidity constraints also leads to improvements in productivity (Aparicio et al., 2021).

**B. Lessons aligned with the challenge of sector technological transformation**

- 4.8 The IDB Group has boosted investment in and regulation of connectivity and fintech ecosystem development, with strategic operations that further the technological transformation of the financial sector. The IDB Group's experience in the region illustrates the catalytic effect of interventions that improve connectivity for individuals and companies (operations [ME-L1297](#), [GU-L1175](#), and [NI-L1090](#)) and also points up the need to update regulatory and policy frameworks (operations [AR-L1304](#), [CO-L1233](#), and [PR-L1163](#)) to improve the quality and affordability of connectivity services and build the digital skills needed to unlock the benefits of access to digital infrastructure. Projects should include: (i) estimates of social and productive demand; (ii) activities related to policies and regulations for infrastructure rollout; and (iii) connectivity plans with a technologically neutral approach that enhances international connectivity.
- 4.9 The IDB Group's experience indicates that implementation of digital financial inclusion and fintech ecosystem promotion initiatives depends on having solutions in place that are tailored to the circumstances in each country, as well as a legal framework that is conducive to implementing those solutions (operations [BO-L1214](#), [RG-L1146](#), and [CO-L1239](#)). The IDB Group stresses that digital financial education and inclusion programs should include training for beneficiaries and for financial intermediaries. Notably, the IDB Group has had a positive experience with the creation of digital assistant tools (chatbots) for communicating with users and identifying common user questions, thereby speeding up response times (operations [ME-L1120](#), [BO-L1214](#), [CO-L1239](#), and [RG-L1144](#)). As for support for fintech ventures, the IDB Group's experience has demonstrated the importance of choosing a respected partner with a reputation as a leader and forming in-house teams that are highly knowledgeable about the business, the target market, and the technology to be implemented ([Moni](#), operation [BO-L1214](#), operation [RG-G1017](#), and [BHD](#)).

**C. Lessons aligned with the challenge of sector resilience**

- 4.10 The IDB has supported reform processes from within the financial sector to improve sector stability through programmatic policy-based loans (PBPs) to strengthen financial supervision and regulation. The IDB's experience attests to the importance of: (i) including the sector reform agenda in National Development Plan strategies; (ii) appropriately timing reforms that combine regulatory advances with improvements in supervision capacity; (iii) institutional support for reform implementation, through technical assistance activities; (iv) coordination across the various public agencies and multilateral organizations involved in reform design; and (v) coordination of dialogue forums with the private sector, which enriches reform design (operations [NI-L1090](#), [ME-L1186](#), and [CO-L1214](#)). Design of PBP operations requires the selection of a limited number of policies, so support should be focused on high-impact structural changes to improve sector stability, depth, access, and efficiency. The Bank has also gleaned lessons learned from its support for urgent demands from countries for financing after macroeconomic shocks ([Box 26](#)).

**D. Crosscutting lessons**

- 4.11 Collaboration networks can be used to maintain a permanent dialogue with regulatory authorities, government representatives, public banks, and the private sector, with a view to building a joint work agenda for sector development. These

communication channels facilitate constant interaction with IDB Group clients, which becomes even more vital during periods of instability and following systemic shocks that affect the sector. Regional dialogues have proven to be stable channels for exchanges to strengthen multilateral and intraregional cooperation ([Table 31](#)). These networks help build technical capacity at public and private financial institutions and have been particularly valuable for building institutional capacity in the sector through knowledge exchanges between similar institutions and the creation of a joint work agenda between the IDB Group and the region. In addition, technical assistance provides crucial support for the sector development agenda since it helps correct information deficits, build institutional capacity at executing agencies and financial intermediaries, and address the lack of data on gender gaps in access to finance (operations [NI-L1080](#), [ME-L1121](#), and [ME-L1170](#)).

- 4.12 With a view to mainstreaming gender, studies need to be developed, data need to be compiled, and pilot programs and innovative initiatives (for example, [Woman Entrepreneurship Banking](#), IDB Invest) with demonstration effects need to be created to help boost the agenda for reducing gender gaps in access to credit in the financial sectors of the countries of the region. Pilot programs to support access to and use of digital technologies as part of digital financial inclusion with a gender focus should: (i) design cost-effective strategies for ensuring regular and continuous measurements of the digital gender gap; (ii) enhance the collection, analysis, and monitoring of gender-disaggregated data on Internet access and use (operations [RG-G1017](#), [NI-L1080](#), [ME-L1121](#), [ME-L1170](#), and [PR-L1144](#)); and (iii) adopt international standards in the development of new financial products with a [gender lens](#) and in the supervision of operations ([Caja Arequipa](#), [Moni](#), [Posoria](#), and [BHD](#)).

## V. LINES OF ACTION FOR THE IDB GROUP'S WORK IN THE SECTOR

- 5.1 This SFD proposes that the IDB Group's activities contribute to a deeper, more efficient, more inclusive, and more resilient financial sector going forward to support robust economic growth, poverty and inequality reduction, and environmental sustainability in Latin America and the Caribbean ([Figure 41](#)). Based on the diagnostic assessment set out in Section II, the evidence included in Section III, and the lessons learned discussed in Section IV, this SFD proposes four lines of action for the IDB Group's work, which are consistent with the guidelines established in other SFDs ([Table 32](#)) and which should be contextualized and adapted to conditions in each country ([Figure 42](#)).
- A. **Line of action 1: Promote more efficient, more inclusive, and more sustainable access to finance**
- 5.2 **The region needs to develop deeper financial sectors in order to make long-term financing more accessible.** The countries of the region should keep making strides toward creating institutional environments that can correct the major market failures that constrain financial depth and long-term financing. The region has to address structural factors, like low levels of savings and high informality rates, and improve macroeconomic management, availability of credit information, and enforcement of property rights and administration of insolvency procedures after credit default to help improve and expand intermediation and access to finance, lower collateral requirements and financial costs, and extend the term of available

finance. Efforts should be made to strengthen public records on real property collateral and create similar records for other types of collateral. By the same token, credit bureaus should be strengthened, transparency and information quality should be enhanced, and centralized information systems should be created.

- 5.3 **In particular, the region has to work on developing its capital and risk management markets, including for climate risk.** To develop instruments for long-term project financing, the countries of the region need to improve institutional capacity and regulatory and legal frameworks; develop risk mitigation, public bond, and money markets; broaden local investor bases; improve infrastructure and market connections; and develop national stock markets, corporate debt markets, and venture capital markets. Pension system reform should be pursued to build domestic savings in local currency with a long-term investment horizon. Steps should be taken to improve pension fund transparency and independence, train system administrators, and ensure their investment policies are sound. Efforts should also be made to build mechanisms to integrate the region's debt markets with a view to facilitating the issue of cross-border debt securities. In tandem with implementation of long-term reforms to develop markets, the countries of the region should develop solutions for the short term using special purpose vehicles, capital and debt funds, and other financing instruments to mobilize private and concessional resources toward long-term financing programs for MSMEs, infrastructure, housing, and environmentally sustainable investments with a gender and diversity lens for vulnerable groups.
- 5.4 **The region must expand productive financing for MSMEs.** The IDB Group should continue to develop solutions to expand access to long-term productive financing, encouraging MSME participation in capital markets while fostering development of credit portfolio securitization vehicles, through implementation of access to finance policies via PDBs and private financial intermediaries and guarantee mechanisms that mitigate credit risk and leverage private financing. Efforts should be made to improve value chain financing and comprehensive financial risk management through structured financing programs for anchor companies and MSMEs. Demand for finance should be strengthened with financial education, and efforts should be made to expand technical assistance and financing programs targeting segments underserved by the market or not served at all (such as startups and companies owned or led by women, Indigenous peoples, and Afro-descendants). To close gender gaps in access to finance, the availability of sex-disaggregated data needs to be improved so differentiated guarantee and financing programs can be designed and implemented. This is necessary to close diversity gaps in access to finance as well.
- 5.5 **Furthermore, the region needs to produce more long-term financing for infrastructure and housing.** In the case of infrastructure financing, the IDB Group should foster the development of project finance and project bond markets and encourage the participation of local and international capital markets and local institutional investors. There is a need to develop facilities for the preparation of efficient, sustainable, and bankable projects, as well as new public and private investment vehicles that fit the distinct risk-return profile of infrastructure projects. Efforts should also be made to strengthen local currency finance markets using instruments that help mobilize those resources toward long-term financing. To those ends, regulatory and policy frameworks should clearly state how risks are

shared, include infrastructure as a class of financial asset, facilitate involvement of private investors, and support implementation of new financing instruments. To boost long-term financing for housing, it is important to facilitate mortgage securitization processes on local and international markets and implement public policies to foster development of secondary markets. In addition, governments and PDBs need to build capacity for [structured financing](#) and project preparation and should strengthen development of expertise and mechanisms for risk mitigation and asset securitization instruments to mobilize more private investment toward infrastructure and housing projects. To that end, national infrastructure platforms must be developed that prioritize the preparation of the projects of greatest value for the achievement of the SDGs and optimize the use of public, multilateral, and donor resources through risk mitigation instruments that maximize the participation of private financing in new infrastructure.

- 5.6 **The region needs to push for a financial sector that aligns its business model with low-carbon strategies and channels more resources toward climate mitigation, adaptation, and resilience.** The countries of the region need strategies that promote alignment of financial sector flows with climate change agendas that uphold the Paris Agreement and that are in keeping with country commitments and priorities in this area, new bank products with sustainability criteria, and PDB interventions that support the development of new structured financial instruments and markets. Along those lines, it is important to continue building knowledge and capacity within the financial sector so that the sector can transfer that knowledge and capacity to its clients, especially MSMEs, and connect them with practical tools and resources for climate action. Examples of this could include methodologies for identification and tagging of climate projects, evaluation of climate risks and technical assistance to help actively mitigate those risks, and development of conventional and nonconventional financial products and services that could facilitate and incentivize net zero transactions, including by providing tools for measuring and reporting emission footprints. In addition, support should continue to be provided for the development of sustainable debt markets (thematic bonds) and for dialogue between public policy-makers, regulators, and public and private financial institutions to align incentives and criteria with a view to boosting the development of thematic bond markets. There is also a need to build public and private technical capacity and expertise in the structuring of thematic bonds. In the case of green bonds, efforts should be made to build institutional capacity for identifying high-impact ESG projects and monitoring their results.
- 5.7 In this framework, an explicit mandate for PDBs could help improve the climate change mitigation investment gap. By their very design, PDBs are called upon to play a more active, more effective role through a clear mandate to manage the climate agenda in keeping with country commitments and in coordination with various stakeholders (policy-makers, regulators, shareholders, etc.). PDBs have significant potential for harnessing climate finance and leveraging resources from the private sector and other financial institutions, making available a wide array of financial (concessional loans, guarantees, other structures) and nonfinancial (subsidies and technical assistance) instruments, thereby addressing financing from the supply side and from the demand side to generate greater scale.

**B. Line of action 2: Promote the technological transformation of the sector**

- 5.8 **The region should promote the adoption of new technologies in the financial sector to improve sector efficiency and inclusiveness.** The IDB Group should promote a comprehensive agenda for the technological transformation and digitalization of the financial sector that includes actions to improve financial infrastructure and digital connectivity, create incentives for digitalization processes at financial intermediaries, facilitate development of fintech company ecosystems, encourage individuals and companies to use digital financial services (especially those for loans and payments), and develop flexible regulation and supervision with a view to encouraging the market entry of new actors and products, safeguarding competition, and mitigating the sector stability and integrity risks that could arise from rapid growth of fintech.
- 5.9 **The region should continue to promote conditions that enable the development and adoption of digital financial services.** Promoting greater access to affordable, quality digital connectivity services is crucial, especially in rural and remote areas. To achieve this, regulatory frameworks with incentives for private investment are needed, as are public financial strategies for expanding and improving digital infrastructure. Initiatives to encourage the adoption of low-cost digital payment mechanisms should also be promoted with a view to improving the digital financial inclusion of low-income and migrant groups. To that end, infrastructure for interoperable digital payments, especially low-value payments, needs to be improved, and mobile payment solutions with appropriate incentives and the necessary infrastructure need to be developed. In addition, fostering access to connectivity, financial education, and digital training among specific segments is an important step in mitigating weak digital buy-in and unequal access to digital financial services. From the gender perspective, improving metrics on technology access, adoption, use, and expertise is a prerequisite for initiatives to bridge the digital divide.
- 5.10 **The technological transformation of the financial sector in the region will require efforts to scale up the digitalization of financial intermediaries and foster the fintech company ecosystem.** Financial intermediaries, including PDBs, must forge ahead with digitalization processes to make credit intermediation more efficient. New credit rating technologies and loan platforms for hard-to-reach segments—especially MSMEs, tech companies, and startups—should also be promoted to improve their inclusion while also ensuring that those technologies do not involve any gender, racial, or other types of bias. Awareness of and greater access to other digital financial services that facilitate financial planning (such as insurance and asset management for individuals and companies) should also be promoted. The fintech ecosystem requires comprehensive public support from regulators (regulatory improvements), governments and PDBs (access to seed capital), and universities and education centers (ready availability of a labor force with the right technical skills). In addition, cross-jurisdictional strategies should be developed to harness the economies of scale associated with deploying digital financial services at a regional level.
- 5.11 **The region needs to develop fintech regulations to unlock the benefits of fintech and mitigate the associated risks.** Efforts should be made to promote regulations that safeguard competition and contain stability risks while stimulating financial inclusion, safeguarding consumer and investor privacy, and affording

cybersecurity protections. There is a need for regulations that foster innovation and competition to expand financial inclusion and lower the cost of financial service delivery. Regulatory sandboxes and innovation centers should be established for the testing of new technologies in order to ensure that regulation evolves at the same pace as the development of technological solutions in the sector. Fintech markets need to be monitored, their weaknesses need to be identified and evaluated, and an evaluation framework that takes into account the evolving structure of those markets needs to be developed. Regulators and supervisors should develop new skills for evaluating and analyzing the risks that stem from fintech activities. The countries of the region should adopt technologies to improve regulatory and supervision processes ([ReqTech](#) and [SupTech](#)) with a view to making those processes more efficient. Regulators should also make strides toward standardization of new fintech regulations to facilitate the regional expansion of services and prevent regulatory arbitrage.

**C. Line of action 3: Improve financial sector resilience**

- 5.12 **The countries of the region should strengthen macrofinancial risk management.** Efforts are needed to continue developing policies and instruments that build capacity at public institutions for contending with macrofinancial shocks. To that end, the following activities should be designated as priorities: (i) building capacity at public institutions so they can continue to develop policies and instruments for managing contingent fiscal risks, responding to systemic liquidity crises, and establishing efficient procedures for banking system reforms; (ii) forming national financial stability committees to coordinate financial policy and improve the prospects of interactions between the public and financial sectors; (iii) supporting capitalization efforts at financial intermediaries to make those institutions more resilient and ensure they can respond to the more intensive use of capital required for long-term financing; and (iv) strengthening financial intermediary capacity to navigate a complex transition from the “historical” effects of economic crises, by anticipating potential risks to limit their impact on balance sheet solvency, and identifying sustainable future financing opportunities that contribute to economic recovery.

- 5.13 **The region should continue to promote regulatory and supervision reforms with a comprehensive approach.** The region has to press ahead with implementation of international micro- and macroprudential standards (such as Basel, IOSCO, and the International Association of Insurance Supervisors – IAIS) and with adoption of risk-based supervision. To that end, it is necessary to: (i) build institutional capacity at regulation and supervision agencies and encourage the digitalization of the exchange of information between supervisors and supervised entities; (ii) foster innovation in regulation and supervision by promoting forums for dialogue between regulators, supervisors, and the private sector; (iii) continue to advance the policy dialogue on regional integration of regulators and supervisors, with a view to modernizing and harmonizing national and regional regulation and supervision frameworks; (iv) improve the corporate governance of banks, companies, and market institutions; (v) continue achieving greater financial transparency through improvements to internal and external audit systems, frameworks for enforcing AML recommendations, and dissemination of data on market and institution performance to users; (vi) evaluate the usefulness of risk regulations and capital requirements that interfere with the ability of financial intermediaries to finance long-term projects; and (vii) support the formulation of global standards to regulate [cryptoassets](#), encourage appropriate regulation that corresponds to the risks of [stablecoins](#), and improve institutional capacity to monitor the crypto ecosystem.
- 5.14 **Financial regulations should ensure sector stability to support economic recovery after the ongoing crises.** There is a need to: (i) promote regulatory policies that detect weaknesses at financial intermediaries and build supervisors' capacity for measuring financial risks; and (ii) address the post-pandemic realities of the business sector with efficient, nimble regulations for managing bankruptcies. Furthermore, financial risks related to [cryptoization](#) and climate change need to be incorporated into regulations. To that end, the following must be strengthened: (i) capacity at public institutions (central banks, regulators, and supervisors) for development of a regulatory framework for management of risks related to technological disruption and the climate (identification, quantification, modeling, strategy, and disclosure); and (ii) knowledge and practices for integrating climate risks into financial supervision, including [greenwashing](#). Appropriate management of climate risks requires: (i) improving technical capacity and expertise at public and private financial institutions for assessing climate risks; (ii) supporting the creation of forums for dialogue at the national level (like sustainable finance committees); and (iii) promoting the adoption of ESG and climate risk definitions and taxonomies, the creation of ESG and climate risk disclosure frameworks for sector institutions, and the generation of data on these issues in collaboration with key actors, like credit bureaus and ratings agencies, in order to eliminate obstacles to the growth of green financial markets.

**D. Line of action 4: Increase the availability of sector data and knowledge**

- 5.15 **Increasing the availability of information and generating knowledge regarding the financial sector will be key.** Given the dearth of information on the financial sector in Latin America and the Caribbean, efforts should be made to promote the generation, consolidation, and analysis of data and information on all markets (credit, bond, securities, insurance, etc.), levels of government (national and subnational), economic sectors, and beneficiary types (gender and/or other demographic groups). Particular attention should be paid to measuring finance

gaps among vulnerable populations, such as Afro-descendants, Indigenous peoples, and other minority groups. This will make it possible to map priorities and develop public policies on the basis of empirical evidence and data analysis. These efforts should leverage new technologies that can be used to generate, analyze, and share data in more areas, in greater volumes, and at faster speeds. In line with the review of available information in the region and the challenges discussed in Sections II and III, the IDB Group should support the generation of knowledge regarding: (i) development of innovative instruments that can correct market failures in financial and capital markets; (ii) solutions that promote technology adoption and analyze the impact of connectivity and fintech solutions on credit intermediation and payment systems; and (iii) regulatory responses to bolster the resilience of the financial sector in the wake of the pandemic. Areas that warrant additional study include finance gaps by economic sector and subsector, including an analysis of loan terms and their determinants by company size and characteristics, as well as the impact of programs and policies that seek to increase MSME access to credit, gender and diversity, housing financing, involvement of capital markets in infrastructure financing, and the struggle against climate change. It is also imperative to understand the impact of: (i) economic crises on both the formal and the informal financial sector; (ii) financial regulations on long-term financing; (iii) the use of new fintech on sector efficiency; (iv) connectivity and infrastructure deployment; (v) climate risks on sector stability; (vi) financial regulations and the institutional framework for long-term financing on growth and equity; and (vii) digital technologies on the financial and digital inclusion of women and vulnerable groups.

## ANNEX I. TABLES, FIGURES, AND BOXES

[\[Return to the table of contents\]](#)

### I. Tables

**Table 1. Direct contribution to achievement of the Sustainable Development Goals (SDGs)**

[\[Return to main text\]](#)

Target	Objective
1.a	Environmental sustainability refers to methods of organizing human activities that ensure conservation of the biosphere's resources and resource quality over time.
5.a	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance, and natural resources, in accordance with national laws.
7.2	Increase substantially the share of renewable energy in the global energy mix.
7.3	Double the global rate of improvement in energy efficiency.
8.3	Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro-, small, and medium-sized enterprises (MSMEs), including through access to financial services.
8.10	Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance, and financial services for all.
10.5	Improve the regulation and monitoring of global financial markets and institutions and strengthen the implementation of such regulations.
10.b	Encourage official development assistance and financial flows, including foreign direct investment, to States where the need is greatest, in particular least developed countries, African countries, small island developing States, and landlocked developing countries, in accordance with their national plans and programs.
13.1	Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters.
13.2	Integrate climate change measures into national policies, strategies, and planning.
17.3	Mobilize additional financial resources for developing countries from multiple sources.

Source: United Nations (2015).

**Table 2. Indirect contributions to achievement of the SDGs**  
[\[Return to main text\]](#)

Target	Objective
1.1	Eradicate extreme poverty for all people, everywhere, currently measured as people living on less than US\$1.25 a day.
1.2	Reduce at least by half the proportion of men, women, and children of all ages living in poverty in all its dimensions according to national definitions.
1.5	By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events and other economic, social, and environmental disasters.
2.3	Double the agricultural productivity and incomes of small-scale food producers, in particular women, Indigenous peoples, family farmers, pastoralists, and fishers, including through secure and equal access to land.
5.2	Eliminate all forms of violence against women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation.
5.c	Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.
8.2	Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation, including through a focus on high-value added and labor-intensive sectors.
8.a	Increase Aid for Trade support for developing countries, in particular least developed countries, including through the Enhanced Integrated Framework for Trade-related Technical Assistance to Least Developed Countries.
9.1	Develop quality, reliable, sustainable, and resilient infrastructure.
17.5	Adopt and implement investment promotion regimes for least developed countries.
17.11	Significantly increase the exports of developing countries, in particular with a view to doubling the least developed countries' share of global exports by 2020.

Source: United Nations (2015).

**Table 3. Examples of how the Long-Term Financing SFD aligns with other IDB Group SFDs and strategic documents**

[[Return to main text](#)]

<b>IDB SFD</b>	
<b>Document</b>	<b>Alignment</b>
<b>Agriculture and Natural Resources</b>	Support for expanding access to finance for companies in the agriculture sector
<b>Climate Change</b>	Support for institutional development in line with the IDB Group's Sustainable Infrastructure Strategy, as well as delivery of technical and financial support for green finance and financial management of natural disaster risk
<b>Innovation, Science, and Technology</b>	Support for boosting financing and investment in innovation and technology adoption
<b>Integration and Trade</b>	Support for advancing integration of the productive sectors of the countries of the region into the global economy
<b>Transparency and Integrity</b>	Development of conditions for an effective and transparent financial sector
<b>Gender and Diversity</b>	Focus on closing gender gaps in access to finance
<b>Health</b>	Promotion of effective financial management to reduce the risk of impoverishment stemming from pandemic and epidemic risks
<b>IDB Invest</b>	
<b>Document</b>	<b>Alignment</b>
<b>Business Plan 2020-2022</b>	Pursuit of smart growth through efforts to boost the mobilization of private financial sector resources to achieve the SDGs and improve management of the risks affecting the sector (including environmental, social, governance, and other types of risk)
<b>IDB Lab</b>	
<b>Document</b>	<b>Alignment</b>
<b>Business Plan 2019-2021</b>	Finance for financial ventures related to digital financial inclusion as well as for innovative financial solutions that focus on promoting diversity and gender equality

Source: Prepared by the authors.

**Table 4: Evidence of the positive role of financial sector development in the economy and society**  
[\[Return to main text\]](#)

Impact	Channel	References
<b>Link between financial development and growth</b>	Higher levels of financial development boost economic growth.	Omri, A., et al., 2015. Financial Development, Environmental Quality, Trade, and Economic Growth: What Causes What in MENA Countries. <i>Energy Economics</i> .
	The banking sector and the stock market bolster production growth.	Masoud, N., and G. Hardaker, 2012. The Impact of Financial Development on Economic Growth: Empirical Analysis of Emerging Market Countries. <i>Studies in Economics and Finance</i> .
	Countries with higher levels of financial development experience higher per capita income growth rates over the long run.	IDB, 2021. Economic Institutions for a Resilient Caribbean. Inter-American Development Bank.
<b>Economic growth</b>	Enables better capital allocation to projects with higher returns.	Buera, F. et al., 2011. Finance and Development: A Tale of Two Sectors. <i>The American Economic Review</i> .
	Incentivizes innovation and research and development.	Aghion, P. et al., 2010. Regulation and Distrust. <i>The Quarterly Journal of Economics</i> .
	Facilitates access to markets and to segments with higher value-added.	Manova, K., 2010. Credit Constraints and the Adjustment to Trade Reform. World Bank.
	Cushions the impact of macroeconomic shocks and volatility.	(i) Aghion, P. et al., 2010. Regulation and Distrust. <i>The Quarterly Journal of Economics</i> ; (ii) Cavallo, E. et al., 2013. Catastrophic Natural Disasters and Economic Growth. <i>The Review of Economics and Statistics</i> .
	Helps the public sector invest in infrastructure.	Claessens, S. and E. Feijen, 2006. Financial Sector Development and the Millennium Development Goals. World Bank.
	Invests in human capital and higher consumption capacity.	Cuellar, C., 2013. El efecto de la desigualdad y el acceso al crédito sobre la acumulación de capital humano. <i>Ensayos sobre Política Económica</i> .
	Facilitates foreign capital inflows for productive investment.	Desbordes, R., and S.J. Wei, 2014. The Effects of Financial Development on Foreign Direct Investment. World Bank.
<b>Reduction of inequality</b>	Financial development accelerates economic growth and drives demand for labor. The benefits are relatively larger for those at the lower end of the distribution of income.	(i) Levine, R. et al., 2007. Finance, Inequality and the Poor, <i>Journal of Economic Growth</i> ; (ii) Beck, T. et al., 2010. Big Bad Banks? The Winners and Losers from Bank Deregulation in the United States. <i>The Journal of Finance</i> .
	The sector can provide economic opportunities to create a more inclusive society.	Čihák, M. and R. Sahay, 2020. Finance and Inequality. International Monetary Fund.
	Financial inclusion benefits economic growth.	Loukoianova, E. et al., 2018. Financial Inclusion in Asia-Pacific.
	Financial access and financial depth support economic growth.	Sahay, R. et al., 2015. Financial Inclusion: Can It Meet Multiple Macroeconomic Goals? International Monetary Fund.

Impact	Channel	References
<b>Poverty reduction</b>	Access to financial services alleviates poverty and fosters economic development.	Owen, A. and J. Pereira, 2018. Bank Concentration, Competition, and Financial Inclusion. <i>Review of Development Finance</i> .
	The negative correlation between financial development and income inequality.	Clarke, G. et al., 2006. Finance and Income Inequality: What Do the Data Tell Us? <i>Southern Economic Journal</i> .
	Financial development makes it possible to expand access to finance to vulnerable and low-income groups.	World Bank. Financial Development.
	Expanding private lending has a significant impact on the income levels of low-income countries and reduces inequality gaps with developed countries.	Beck, T., and R. Levine, 2004. Stock Markets, Banks, and Growth: Panel Evidence. <i>Journal of Banking &amp; Finance</i> .

- \* Financial sector development also facilitates the economic empowerment of women by enabling them to make productive, education, housing, and other investments (Demirguc-Kunt et al., 2013), which can help improve the role of the sector in economic growth and inequality reduction (Sahay and Čihák, 2018).

Source: Prepared by the authors.

**Table 5. Financial Development indicators, 2021**

[[Return to main text, paragraph 2.3](#)]

[[Return to main text, paragraph 2.4](#)]

		South America	Central America	Caribbean	LAC	OECD	Emerging Asia	Eastern Europe	Upper-middle-income
Depth	Domestic credit to private sector (% of GDP)	58.4	58.7	28.3	53.7	93.4	107.9	53.7	63.5
	Market capitalization (% of GDP)	55.9	22.2	—	48.7	73.1	100.3	23.6	64.4
	Stocks traded, total value (% of GDP)	23.2	2.7	0.2	12.5	43.1	71.5	23.1	36.9
	Outstanding domestic private debt (% of GDP)	16.1	16.3	—	16.2	46.7	40.7	2.0	24.7
	Outstanding domestic public debt (% of GDP)	33.4	27.8	—	32.3	46.4	31.4	24.5	38.7
	Mutual fund assets to GDP (%)	19.2	6.9	—	15.7	289.7	136.0	5.2	15.6
	Insurance company assets to GDP (%)	8.6	4.2	11.1	7.1	32.5	30.3	11.2	10.1
	Pension fund assets to GDP (%)	29.8	18.9	19.7	24.9	39.8	10.6	10.4	13.9
	Corporate bond average maturity (years)	9.0	13.3	16.7	10.9	33.5	104.5	26.7	33.0
	Deposit money bank assets to GDP (%)	64.2	65.9	52.8	62.3	102.7	130.8	66.0	76.9
Access	Market capitalization excluding top 10 companies (% of GDP)	35.7	52.0	—	38.4	53.9	65.1	59.9	47.6
	Firms identifying access to finance as a major constraint (%)	16.2	13.0	—	15.8	22.7	—	—	13.7
	Bank accounts per 1,000 adults	891.6	769.2	545.5	800.7	1285.7	990.3	1384.7	924.1
	Made digital payments in the past year (% age 15+)	39.7	26.8	28.0	33.7	82.0	40.6	63.5	38.3
	Loans requiring collateral (%)	52.6	66.6	—	54.4	50.5	—	—	50.2
	Bank branches per 100,000 adults	15.0	19.3	12.3	16.1	24.2	10.4	26.0	16.7
Efficiency	Bank net interest margin (%)	6.2	5.0	5.2	5.7	2.5	2.7	3.2	4.3
	Bank lending-deposit spread	11.6	7.7	8.8	9.7	3.3	3.4	5.2	6.9
	Bank return on assets (%, before tax)	1.4	1.1	0.9	1.2	0.7	0.9	0.9	1.1
	Bank overhead costs to total assets (%)	4.5	6.4	5.5	5.3	2.3	2.0	2.9	3.4

Source: World Bank. Global Financial Development Database, 2021.

**Table 6. Bibliography of evidence on the drivers of banking sector development**

[\[Return to main text\]](#)

Driver of development	References
Economic institutions	Filippidis, I. and C. Katrakilidis, 2014; Law, S. and W. Azman-Saini, 2012; Le, T. et al., 2016.
Legal systems	Beck, T., A. Demirgüç-Kunt, and R. Levine, 2003; Levine, R. et al., 2000.
Legal origin and traditions	Beck, T., A. Demirgüç-Kunt, and R. Levine, 2003b.
Trade and foreign capital liberalization	Andrianaivo, M. and C. Yartey, 2010; Baltagi, B. et al., 2009; Mahawiya, S., 2015.
Economic Growth	Le, T. et al., 2016; Filippidis, I. and C. Katrakilidis, 2014.
Macroeconomic stability	Boyd, J. et al., 2001.
Per capita income level	Andrianaivo, M. and C. Yartey, 2010; Falahaty, M. and S. H. Law, 2013.
Political institutions and the quality of democracy	Huang, Y., 2010a and 2010b.
Culture	Dutta, N. and D. Mukherjee, 2011; Stulz, R. and R. Williamson, 2003.
Human capital	Kodila-Tedika, O., and S. Asongu, 2015; Ozkok, Z., 2015.

Source: Prepared by the authors.

**Table 7: Bibliography of evidence on gender gaps in credit access**

[\[Return to main text\]](#)

	Potential barriers to credit access faced by women entrepreneurs	References
Institutional factors	Taste-based discrimination	Piras, C. et al., 2013; Lampani, K. P. and R. W. Bostic, 1999; Riding, A.L. and C.S. Swift, 1990; Cavalluzzo, K. et al., 2002; Zimmerman Treichel, M. and J. A. Scott, 2006; Ongena, S. and A. Popov, 2013.
	Statistical discrimination	Blanchflower, D. et al., 2003; Alesina, A.F. et al., 2013.
	Anticipation of rejection (discouraged borrowers)	Ongena, S. and A. Popov, 2013; Mijid, N., 2015; Moro, A. et al., 2017.
	Lack of data at banks	Moro, A. et al., 2017; IFC, 2014. Bellucci et al., 2010.
	Mismatch between supply and producer demand	Boston Consulting Group, 2009; CAF, 2018; GaBA, 2018.
	Organizational culture	GBA, 2018; Caso Banco Estado en Chile
Economic/financial factors	Smaller company size	Bardasi, E. et al., 2009; Bruhn, M., 2009; Robb, A. M. and S. Coleman, 2010; Orser, B. et al., 2006.
	Company sector	Stefani, M. L. and V. Vacca, 2013; Parker, S., 2010; Carrington, C., 2006; Bardasi, E. et al., 2011.
	Fewer years in business	Stefani, M. L. and V. Vacca, 2013.
	Ability to pledge collateral	Alesina, A. F. et al., 2013; Bardasi, E. et al., 2009; IFC, 2014.
	Lower demand for finance	Mijid, N., 2015; Faccio M. et al., 2016; Muravyev, A. et al., 2009; Stefani, M. L. and V. Vacca, 2013.
	Less professional experience	Loscocco, K. A. et al., 1991; Fischer, E., 1992; Fairlie, R. and A. Robb, 2008.
	Determination to maintain control of the company	Zimmerman Treichel, M. and J. A. Scott, 2006.
	Different motivations	Kepler, E. and S. Shane, 2007; Wilson, F. et al., 2007; Manolova, T.S. et al., 2012.

Potential barriers to credit access faced by women entrepreneurs		References
	Risk aversion	Jianakoplos, N. and A. Bernasek, 1998; Barber, B. M. and T. Odean, 2001; Dohmen, T. et al., 2005; Croson, R. and U. Gneezy, 2009; Breuer, W. et al., 2014.
<b>Social/psychological factors</b>	Confidence	Huang, J. and D. J. Kisgen, 2013; Croson, R. and U. Gneezy, 2009.
	Household and family obligations	Ferguson, F. et al., 1998; Robichaud, Y. et al., 2015; Marlow, S. and S. Carter, 2006; Bruhn, M., 2009; APEC, 2016.
	Legislation	Chamlou, N., 2008; Klapper, L. F. and S. Parker, 2010.
	Financial knowledge	Heilbrunn, S., 2004.

\* Stereotypes that lead to potential gender bias among financial institution officers that can adversely affect credit offers received by women (Montoya et al., 2020).

Source: Prepared by the authors.

**Table 8. Digital connectivity indicators in Latin America and the Caribbean, 2020**  
[\[Return to main text\]](#)

Indicator	LAC	OECD	Difference between LAC and OECD
Individuals with mobile broadband coverage	83.68%	98.47%	-14.79%
Households with Internet access	54.76%	78.17%	-23.41%
Affordability of fixed broadband services	22.96%	2.38%	20.58%
Affordability of mobile broadband services	5.17%	2.17%	3.00%
Broadband quality	34.48 megabits per second (Mbps)	100.62 Mbps	-66.14 Mbps
Quality of 4G mobile broadband services	23.46 Mbps	43.25 Mbps	-19.79 Mbps
Households with a personal computer	52.53%	85.92%	-33.39%
Penetration of fixed broadband services	13.05%	32.76%	-19.71%
Penetration of mobile broadband services	64.9%	96.2%	-31.30%
Internet users	59.67%	84.54%	-24.87%
Gender gap in Internet use	10.25%	4.48%	5.77%

Note: Gaps are markedly higher in many of the region's rural areas than regional averages suggest.

Source: United Nations (2020).

**Table 9. Analysis of the Banking Industry Country Risk Assessment (BICRA) for Latin American and Caribbean countries, 2022**  
[\[Return to main text\]](#)

Country	BICRA group	Trend in economic risk	Trend in industry risk	Economic risk			Industry risk		
				Economic resilience	Economic imbalances	Credit risk in the economy	Institutional framework	Competitive dynamics	Systemwide funding
Argentina	9	Stable	Negative	EH	H	EH	H	H	VH
Bolivia	9	Stable	Stable	VH	H	EH	VH	VH	H
Brazil	6	Stable	Stable	VH	I	H	I	H	I
Chile	3	Negative	Stable	H	L	I	I	L	L
Colombia	6	Stable	Stable	H	H	H	H	I	I
Costa Rica	8	Negative	Stable	H	H	VH	H	EH	H
El Salvador	8	Negative	Negative	EH	I	EH	H	I	VH
Guatemala	7	Stable	Stable	EH	I	VH	H	I	I
Honduras	8	Stable	Stable	VH	I	EH	VH	I	H
Jamaica	8	Negative	Stable	EH	I	VH	H	VH	VH
Mexico	5	Stable	Stable	VH	I	I	I	I	L
Panama	5	Negative	Stable	I	H	I	I	L	VH
Paraguay	8	Stable	Stable	VH	I	EH	VH	VH	H
Peru	5	Negative	Stable	H	VL	VH	L	I	I
Trinidad & Tobago	6	Stable	Stable	VH	I	VH	H	H	L
Uruguay	5	Stable	Stable	H	L	H	H	H	I

Positive trend in economic or industry risk	Stable trend in economic or industry risk	Negative trend in economic or industry risk
Very low risk (VL)	Low risk (L)	Intermediate risk (I)
High risk (H)	Very high risk (VH)	Extremely high risk (EH)

Source: S&P. Global Ratings (2022).

**Table 10. Bank deposit guarantee and insurance funds in Latin America and the Caribbean, 2020**  
[\[Return to main text\]](#)

Country	Coverage		Fund (F) / Guaranteee (G)	Times GDP per capita (2019)	Institution		
	Domestic currency	US\$ (approx.) EXR 30/06/2020			Name (acronym)	Type	Mandatory
Argentina	Arg\$1,500,000 (#)	21,400	F	2.0	Deposit Guarantee Fund (FGD/SEDESA)	Private	Yes
Bolivia	30% of privileged obligations	N/D	F	N/D	Saver Protection Fund (FPA)	Public	Yes
Brazil	R\$250,000 (#)	45,800	F	7.2	Credit Guarantee Fund (FGC)	Private	Yes
Chile	(a) 100% (##); (b) 90% up to 108 development units	3,800	G	0.2	—	—	Yes
Colombia	Col\$50,000,000 (#)	13,400	F	2.3	Financial Institutions Guarantee Fund (FOGAFIN)	Public	Yes
Costa Rica	-	-	-	-	-	-	-
Ecuador	US\$32,000 (#)	32,000	F	5.2	Deposit Insurance Corporation (COSEDE)	Public	Yes
El Salvador	US\$10,227 (#)	10,227	F	1.3	Deposit Guarantee Institute (IGD)	Public	Yes
Guatemala	Q 20,000 (#)	2,700	F	0.5	Savings Protection Fund (FOPA)	Public	Yes
Honduras	L 239,000 (#)	9,800	F	3.9	Deposit Insurance Fund (FOSEDE)	Public	Yes
Mexico	400,000 investment units (#)	111,800	F	12.1	Bank Savings Protection Institute (IPAB)	Public	Yes
Nicaragua	US\$10,000 (#)	10,000	F	5.1	Deposit Guarantee Fund (FOGADE)	Public	Yes
Panama	-	-	-	-	-	-	-
Paraguay	75 minimum wages	24,800	F	4.5	Deposit Guarantee Fund (FGD)	Public	Yes
Peru	S/ 100,123 (#)	28,600	F	4.7	Deposit Insurance Fund (FSD)	Public	Yes
Dominican Republic	RD\$500,000 (#)	8,700	F	1.1	Contingency Fund	Public	Yes
Uruguay	US\$10,000 (foreign currency) 250,000 indexed units (domestic currency)	10,000-28,000	F	0.6 1.8	Bank Savings Protection Corporation (COPAB)	Public	Yes

Dominican Republic: Coverage per depositor in the system. There is also a Bank Consolidation Fund specifically for systemic cases.

Uruguay: Indexed units are for deposits in the local currency.

Note: The countries of the region not included in this analysis do not have these types of funds.

Source: [Association of Supervisors of Banks of the Americas \(ASBA\)](#) (2020).

**Table 11. Financial stability reports published in Latin American and Caribbean countries**  
[\[Return to main text\]](#)

Country	First/Most recent update	Frequency	Central bank	Supervisory agency	Financial stability council
Argentina	2004/16 July	Semiannual	✓		
Barbados	2011/16 February	Annual update released mid-year	✓		
Bolivia	2006/16 April	Semiannual	✓		
Brazil	2002/16 April	Semiannual	✓		
Chile	2004/16 June	Semiannual	✓		
Colombia	2002/16 March	Semiannual	✓		
Ecuador	2013/16 June	Annual		✓	
El Salvador	2007/16 June	Semiannual	✓		
Guatemala	2007/12 June	Annual		✓	
Honduras	2012/2016	Semiannual	✓		
Jamaica	2005/2015	Annual	✓		
Mexico (CESF)	2011/16 March	Annual			✓
Mexico (central bank)	2006/15 November	Annual	✓		
Nicaragua	2013/14 September	Semiannual	✓		
Panama	2012/2016	Annual		✓	
Paraguay	2009/16 April	Semiannual	✓		
Peru	2006/16 May	Semiannual	✓		
Bahamas	2012/16 February	Annual	✓		
Trinidad and Tobago	2008/16 June	Annual	✓		
Uruguay	2010/16 July	Annual	✓		
<b>Total</b>			<b>16</b>	<b>3</b>	<b>1</b>

Source: Central bank and other institutional websites and IMF (2017).

**Table 12. Implementation of Basel III standards in Latin America and the Caribbean, 2020**

[Return to main text, paragraph 2.39]

[Return to main text, paragraph 3.47]

Country	Basel II			Basel III
	Pillar I	Pillar II	Pillar III	Pillar IV
Bolivia	Completed	Completed	Completed	Not yet begun
Colombia	Not yet begun	Not yet begun	Completed	Not yet begun
Costa Rica	Completed	Completed	Not yet begun	Partial
Dominican Republic	Not yet begun	Not yet begun	Not yet begun	Not yet begun
Ecuador	Completed	Completed	Completed	Not yet begun
El Salvador	Not yet begun	Not yet begun	Not yet begun	Not yet begun
Guatemala	Not yet begun	Completed	Not yet begun	Not yet begun
Honduras	Completed	Completed	Not yet begun	Partial
Panama	Completed	Completed	Completed	Partial
Paraguay	Not yet begun	Not yet begun	Not yet begun	Not yet begun
Peru	Completed	Completed	Completed	Partial
Uruguay	Not yet begun	Completed	Completed	Not yet begun
Argentina	Completed	Completed	Completed	Completed
Chile	Completed	Completed	Completed	Completed
Mexico	Completed	Completed	Completed	Completed
Brazil	Completed	Completed	Completed	Completed

Note: The countries of the region not included in this table are still implementing Basel I.

Source: Prepared by the authors based on Prats (2020).

**Table 13. Sovereign risk ratings and outlooks for Latin American and Caribbean countries since the onset of the pandemic**

[[Return to main text](#)]

Country	Sovereign risk (March 2021) International rating	Change in rating since March 2020	Change in outlook since the onset of the pandemic (March 2020)
Argentina	CCC+	+2	Stable (no change)
Bahamas	B+	-2	Negative to Stable
Barbados	B-	=	Stable (no change)
Belize	B-	+2	Stable (no change)
Bolivia	B+	=	Stable to negative
Brazil	BB-	=	Stable (no change)
Chile	A	-1	Negative to Stable
Colombia	BB+	-1	Negative to Stable
Costa Rica	B	-1	Negative (no change)
Dominican Republic	BB+	=	Negative to Stable
Ecuador	B-	No data	No data
El Salvador	B-	=	Stable to Negative
Guatemala	BB-	=	Stable (no change)
Honduras	BB-	=	Stable (no change)
Jamaica	B+	=	Negative to Stable
Mexico	BBB	=	Negative (no change)
Nicaragua	B-	=	Negative (no change)
Panama	BBB	-1	Stable to Negative
Paraguay	BB	=	Stable (no change)
Peru	BBB+	=	Stable to Negative
Suriname	No data	No data	No data
Trinidad and Tobago	BBB-	=	Stable to Negative
Uruguay	BBB	=	Stable (no change)

Note: Guyana, Haiti, and Venezuela are not included in the S&P report. No data is available for Guyana or Haiti, while Venezuela's rating remained unchanged for 2021 at selective default (SD).

Source: S&P Global Ratings, 2022.

**Table 14: Evidence on governance and institutional strengthening**

[[Return to main text, paragraph 3.8](#)]  
[[Return to main text, paragraph 3.48](#)]

Policy measure	Country	Observed impact	References
Improvements to public policy transparency	Theoretical analysis	Improved compliance with rules/policies.	Porumbescu, G.A. et al., 2017. Can Transparency Foster More Understanding and Compliant Citizens? <i>Public Administration Review</i> , 77: 840-850; Kim, S. E., 2005. The Role of Trust in the Modern Administrative State: An Integrative Model. <i>Administration &amp; Society</i> , 37(5): 611–35.
Policies for promoting transparency in the financial sector	Theoretical analysis	Fewer opportunities for corruption, positive spillovers for decision-making, and, by making policy-makers more credible, fiscal and monetary policies become more effective.	IDB, 2018. Transparency Fund: 2013-2018 Strategy and Results Framework. Washington, D.C.; Stella, P., 2002. Central Bank Financial Strength, Transparency and Policy Credibility. IMF Working Paper WP/02/137.

Source: Prepared by the authors.

**Table 15. Public policy tools to increase SME access to finance (OECD, 2018-2019)**  
[\[Return to main text\]](#)

Country	Government loan guarantees	Direct loans to SMEs	Interest rate subsidies	SME banks	Special loans and guarantees for start-ups	Venture capital funds	Angel investor co-investment funds
Australia		×				×	×**
Austria	×	×	×	×	×	×*	×
Belarus	×				×		
Belgium	×	×				×	×
Brazil	×	×		×		×	
Canada	×	×		×	×	×	×**
Chile	×		×	×	×	×	
China	×		×	×	×	×	
Colombia	×		×	×	×	×	
Czech Republic	×			×			
Denmark	×	×	×	×	×	×*	
Estonia	×	×	×	×	×	×	×*
Finland	×	×	×	×	×	×	×*
France	×	×	×*	×	×	×	×
Georgia	×	×		×	×		
Greece	×	×	×	×	×	×	
Hungary	×	×	×	×		×	×*
Indonesia	×	×		×	×	×	×*
Ireland	×	×		×	×	×	×
Israel	×	×	×	×	×	×	×
Italy	×	×	×	×	×	×	
Japan							
Kazakhstan	×	×	×	×	×		
Korea	×	×					
Latvia	×		×	×	×	×	×
Lithuania	×	×	×*	×	×	×*	×*
Luxembourg	×	×	×	×	×	×	×*
Malaysia	×	×		×	×	×	×*
Mexico	×	×			×	×*	×*
Netherlands	×					×	×
New Zealand	×	×		×	×	×	
Norway	×	×*	×*	×	×	×*	×*
Peru	×	×	×	×	×	×*	×*
Poland	×	×	×	×	×	×*	×*
Portugal	×	×	×	×		×	
Russia	×	×	×	×	×	×	
Serbia	×	×	×	×	×	×*	×
Slovakia	×	×					
Slovenia	×	×		×	×	×	
South Africa	×	×		×	×	×*	×*
Spain	×	×		×	×	×*	
Sweden	×						
Switzerland		×	×	×			
Thailand		×	×	×			
Ukraine	×	×	×	×	×	×	×
Turkey	×	×		×	×	×	×
United Kingdom	×	×		×		×	
United States	×	×		×	×	×	
European Union	×	×		×	×	×	×

\* Only for export companies

\* In cooperation with the EU

\* In cooperation with the EU

\* In cooperation with the EU

\*\* At the regional level

Source: OECD (2018, 2019).

**Table 16. Examples of public policies and tools to improve financial market inclusion in Latin America and the Caribbean**

[[Return to main text](#)]

[[Return to Box 18](#)]

Country	Objective	Tool
<b>Specialized in the housing sector</b>		
Peru	Foster financial inclusion	Inclusive Program for Rural Business Development (PRIDER), Corporación Financiera de Desarrollo (COFIDE). The program's main objective is to foster financial inclusion efficiently and sustainably, with a view to both reducing the vulnerability of low-income households and improving their income generation capacity. In addition to facilitating financial intermediation, the program's saving group model offers additional support activities aimed at promoting the comprehensive development of families.
Brazil	Foster financial inclusion in rural areas	Brasil sem Miséria - Bolsa Família program. In the last four years, 4.3 million Afro-descendant families from urban and rural areas accessed the Bolsa Família program's supplemental productive inclusion programs, including microloans and financial and nonfinancial technical training programs to boost entrepreneurship.
Peru	Foster financial inclusion in rural areas	Financial education programs as financing support, and financial education programs for high school students with lasting behavioral impacts.
Argentina	Reduce the gap in financing for women	Banks and other lenders have the leeway to design products and policies that better address gender issues by being more responsive to the distinct demands of women entrepreneurs.
Bolivia	Reduce gender inequality	Education and training programs that help integrate women into industries that are not at risk of becoming obsolete.
Bolivia	Reduce gender inequality	Programs to integrate people in digital activities will be especially important due to the growing importance of such activities in today's economy.
Mexico	Increase financing for women	Issuance of a gender bond to catalyze resources to expand the financing envelope for women entrepreneurs while also promoting best practices for serving women and contributing to several SDGs.
Colombia	Increase financing for women	Issuance of a gender bond under the Women Entrepreneurs Finance Initiative (We-Fi), an international alliance that aims to unlock financing and access to markets for women-led companies. Under the We-Fi program, IDB Invest will provide the issuer with a bond for a total of US\$300,000 over five years in exchange for meeting targets, in this case, expansion of the women-led SME loan portfolio from the current level of 20% to 27% (approximately 6,500 loans).
Panama	Increase financing for women	Issuance of a gender bond. IDB Invest structured and acquired 100% of the bond for onlending on the market. The funds collected from this issue aim to finance women-led SMEs and, more specifically, women-led SMEs with annual billing ranging from US\$12,000 to US\$10 million.

Source: Prepared by the authors.

**Table 17. A taxonomy of the fintech ecosystem**  
[\[Return to main text\]](#)

Enabling policies and conditions	Enabling technologies	FinTech activities
Digital ID	Application programming interfaces (API)	Digital payment services and e-money
Data protection and defined data ownership rights	Cloud computing	Crowdfunding, P2P
Cybersecurity	Biometrics	Robo-advice
Open banking	Distributed ledger technology (DLT)	Digital banking and open banking
Innovation facilitators	Machine learning and artificial intelligence (AI)	Activities related to cryptoassets
		InsurTech

Source: Adapted from Ehrentraud et al. (2020).

**Table 18. Public policies that enable delivery of digital services: Digital identity, data protection, and cybersecurity**  
[\[Return to main text\]](#)

	Framework for use of digital ID for financial services	National data protection framework	Financial sector cybersecurity framework
<b>Total number of jurisdictions analyzed</b>	31	31	31
<b>In place</b>	27	29	29
<b>In development</b>	0	0	2

Note: The analysis focuses on “jurisdictions,” not countries, because one country may have areas or regions with differing regulatory or legal approaches.

Source: Prepared by the authors based on Cantú and Ulloa (2020) and Berkmen et al. (2020).

**Table 19. Regulatory responses to enabling technologies**  
[\[Return to main text\]](#)

Country	API	Cloud computing	Biometrics	DLT	Machine learning and AI
Germany		U		C	X
Saudi Arabia	C	U	U	C	C
Argentina		U	U		
Australia	X	X	U	X	C
Austria	U	U	U	X	X
Belgium	U	U	U		
Brazil	U(D)	U		X	C
Canada	X(D)	U			
Chile		U			
China	C	C	C	C	C
Colombia		U	U		
United Arab Emirates	X	C			
Spain	U	U	U		
United States	X	X		X	X
Russia	X	C	U	U(D)	C
Philippines		U	U		
France	U	U	U	U	X
Hong Kong Special Administrative Region (SAR)	X(D)	U	U	X	U(D)
Italy	U	U	C	X	
Japan	U	U	U	C	C
Luxembourg	U	U	U	U	X
Mexico	U(D)	U(D)	U		
Netherlands	U	U	U	C	X
Peru		U	C		
Poland	U	U	U	C	X
United Kingdom	U	U	U	X	C
Singapore	X	U	U	U	X
South Africa	C	U		X	C
Sweden	U	U	U		
Switzerland		U	U	U(D)	
Turkey	U(D)	U(D)	U		U

Note: U = updated; X = exploratory analysis; C = under consideration; (D) = in development.

Source: Adapted from Ehrentraud et al. (2020).

**Table 20. Summary of the current status of enabling technology regulation**  
[\[Return to main text\]](#)

API	Cloud computing	Biometrics	DLT	Machine learning and AI
Total number of jurisdictions analyzed				
31	31	31	31	31
Regulatory update				
11 35%	24 77%	21 68%	3 10%	1 3%
Regulatory update, in development				
3 10%	2 6%	0 0%	2 6%	1 3%
Exploratory analysis and formulation of general principles				
5 16%	2 6%	0 0%	8 26%	8 26%
Exploratory analysis and formulation of general principles, in development				
2 6%	0 0%	0 0%	0 0%	0 0%
Update and/or exploratory analysis and/or formulation of general principles, in place or in development				
21 68%	28 90%	21 68%	13 42%	10 32%
Regulatory update and/or exploratory analysis and/or formulation of general principles, under consideration				
3 10%	3 10%	3 10%	6 19%	8 26%

Source: Prepared by the authors based on Cantú and Ulloa (2020) and Berkmen et al. (2020).

**Table 21a. Summary of regulatory responses to enabling technologies within the OECD**  
[\[Return to main text\]](#)

API	Cloud computing	Biometrics	DLT	Machine learning and AI
Total number of jurisdictions analyzed				
18	18	18	18	18
Regulatory update				
10 56%	14 78%	13 72%	2 11%	1 6%
Regulatory update, in development				
2 11%	2 11%	0 0%	1 6%	0 0%
Exploratory analysis and formulation of general principles				
2 11%	2 11%	0 0%	5 28%	9 39%
Exploratory analysis and formulation of general principles, in development				
1 6%	0 0%	0 0%	0 0%	0 0%
Update and/or exploratory analysis and/or formulation of general principles, in place or in development				
15 83%	18 100%	13 72%	8 44%	8 44%
Regulatory update and/or exploratory analysis and/or formulation of general principles, under consideration				
0 0%	0 0%	1 6%	4 22%	3 17%

Source: Prepared by the authors based on Cantú and Ulloa (2020) and Berkmen et al. (2020).

**Table 21b. Summary of regulatory responses to enabling technologies in non-OECD jurisdictions**  
[\[Return to main text\]](#)

API	Cloud computing	Biometrics	DLT	Machine learning and AI
<b>Total number of jurisdictions analyzed</b>				
<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>
8%	77%	62%	8%	8%
<b>Regulatory update</b>				
<b>1</b>	<b>10</b>	<b>8</b>	<b>1</b>	<b>1</b>
8%	77%	62%	8%	8%
<b>Regulatory update, in development</b>				
<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
8%	0%	0%	8%	8%
<b>Exploratory analysis and formulation of general principles</b>				
<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>
23%	0%	0%	23%	8%
<b>Exploratory analysis and formulation of general principles, in development</b>				
<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
8%	0%	0%	0%	0%
<b>Update and/or exploratory analysis and/or formulation of general principles, in place or in development</b>				
<b>6</b>	<b>10</b>	<b>8</b>	<b>5</b>	<b>2</b>
46%	77%	62%	38%	15%
<b>Regulatory update and/or exploratory analysis and/or formulation of general principles, under consideration</b>				
<b>3</b>	<b>3</b>	<b>2</b>	<b>2</b>	<b>5</b>
23%	23%	15%	15%	38%

Source: Prepared by the authors based on Cantú and Ulloa (2020) and Berkmen et al. (2020).

**Table 22. Regulations and policies on cryptoassets and related activities**  
[\[Return to main text\]](#)

Country	Introduction of licenses, authorizations, or registries specifically for cryptoassets	Clarification of regulations governing initial coin offerings (ICO)	Clarification of regulations governing cryptoasset providers and related activities	Clarification of tax treatment	Modification of AML framework	Publication of warnings	Bans on certain cryptoasset-related activities
Germany	L	C	C(D)		M(D)	W	
Saudi Arabia							B
Argentina				C		W	
Australia		C	C	C	M	W	
Austria		C	C	C	M	W	
Belgium		C			M(D)	W	B
Brazil						W	
Canada	(D)	C	C	C	M	W	
Chile						W	
China							B
Colombia						W	B
United Arab Emirates	L	C	C				
Spain		C		C	M(D)	W	
United States	L			C(D)		W	
Russia	(D)			C		W	
Philippines	R					W	
France	L, R	C	C	C	M	W	
Hong Kong SAR		C	C		M	W	
Italy					M	W	
Japan	L	C	C	C	M	W	
Luxembourg				C	M(D)	W	
Mexico	A		C		M	W	B
Netherlands	R	C	C	C	M(D)	W	
Peru						W	
Poland				C	M	W	
United Kingdom		C	C	C		W	
Singapore	L	C	C	C	M(D)	W	
South Africa	(D)	C	C	C	M	W	
Sweden				C	M		
Switzerland	(D)	C	C	C	M	W	
Turkey						W	

Note: L = license; A = authorization; R = registry; C = clarification; M = modification; W = warning; B = ban; (D) = in development.  
Source: Adapted from Ehrentraud et al. (2020).

**Table 23. Summary of regulatory policy responses to cryptoassets and related activities within the OECD**

[Return to main text]

Introduction of licenses, authorizations, or registries specifically for cryptoassets	Clarification of regulations governing ICO	Clarification of regulations governing cryptoasset providers and related activities	Classification of tax treatment	Modification of AML framework	Publication of warnings	Bans on certain cryptoasset-related activities
Total number of jurisdictions analyzed						
18	18	18	18	18	18	18
Authorization/license/registry, clarification, modification, warning, ban (where applicable)						
6	10	10	12	10	16	1
33%	56%	56%	67%	56%	89%	6%
Authorization/license/registry, clarification, modification, warning, ban (where applicable), in development						
2	0	1	1	4	0	0
11%	0%	6%	6%	22%	0%	0%
Authorization/license/registry, clarification, modification, warning, ban (where applicable), implemented or in development						
8	10	11	13	14	16	1
44%	56%	61%	72%	72%	89%	6%
44%	56%	61%	72%	72%	89%	6%

Source: Prepared by the authors based on Ehrentraud et al. (2020).

**Table 24. Summary of regulatory policy responses to cryptoassets and related activities in non-OECD jurisdictions**

[Return to main text]

Introduction of licenses, authorizations, or registries specifically for cryptoassets	Clarification of regulations governing ICO	Clarification of regulations governing cryptoasset providers and related activities	Classification of tax treatment	Modification of AML framework	Publication of warnings	Bans on certain cryptoasset-related activities
Total number of jurisdictions analyzed						
13	13	13	13	13	13	13
Authorization/license/registry, clarification, modification, warning, ban (where applicable)						
3	5	4	4	2	10	4
23%	38%	31%	31%	15%	77%	31%
Authorization/license/registry, clarification, modification, warning, ban (where applicable), in development						
2	0	0	0	2	0	0
15%	0%	0%	0%	15%	0%	0%
Authorization/license/registry, clarification, modification, warning, ban (where applicable), implemented or in development						
5	5	4	4	4	10	4
38%	38%	31%	31%	31%	77%	31%

Source: Prepared by the authors based on Ehrentraud et al. (2020).

**Table 25. Summary of regulatory responses to fintech promotion policies**  
[\[Return to main text\]](#)

Country	Innovation hub	Regulatory sandbox	RegTech, including regulatory accelerators
Germany	IH		
Saudi Arabia	IH(D)	RS	RA(D)
Argentina	IH		
Australia	IH	RS	
Austria	IH		
Belgium	IH		
Brazil	IH	RS(D)	RA
Bulgaria	IH		
Canada	IH	RS	RA
Chile			
China		RS	
China: Hong Kong	IH	RS	RA
Cyprus	IH		
Colombia	IH	RS	
South Korea	IH	RS	
Denmark	IH	RS	
Egypt		RS	
United Arab Emirates: Abu Dhabi	IH	RS	
United Arab Emirates: Dubai	IH	RS	
United Arab Emirates: Dubai International Financial Centre		RS	
Spain	IH	RS	
United States	IH	RS	RA
Estonia	IH		
Philippines		RS	RA
Finland	IH		
Fiji		RS	
France	IH		RA
Hungary	IH	RS	
India	IH	RS	RA
Indonesia	IH	RS	
Ireland	IH		
Iceland	IH		
Israel		RS	
Italy	IH		RA
Jamaica		RS	
Japan	IH	RS	RA
Jordan		RS	
Kazakhstan		RS	
Kenya		RS	RA
Kuwait		RS	
Latvia	IH		
Liechtenstein	IH		
Lithuania	IH	RS	RA
Luxembourg	IH		
Malaysia	IH	RS	

IH = innovation hub; RS = regulatory sandbox; RA = regulatory accelerator.

Source: Adapted from Ehrentraud et al. (2020).

**Table 25. Summary of regulatory responses to fintech promotion policies (cont.)**  
[\[Return to main text\]](#)

Country	Innovation hub	Regulatory sandbox	RegTech, including regulatory accelerators
Malta		RS	
Mexico		RS	RA
Mozambique		RS	
Nigeria		RS	RA
Norway		RS	
Netherlands	IH	RS	RA
Peru			RA
Poland	IH	RS	
Portugal	IH		
United Kingdom	IH	RS	RA
Chinese Taipei*		RS	
Rwanda			RA
Romania	IH		
Russia		RS	RA
Serbia		RS	
Sierra Leone		RS	
Singapore	IH	RS	RA
Sri Lanka		RS	
Eswatini		RS	
South Africa			
Sweden	IH		RA
Switzerland	IH	RS	
Thailand	IH	RS	RA
Turkey		RS	
Uganda		RS	
European Union		RS	

IH = innovation hub; RS = regulatory sandbox; RA = regulatory accelerator.

\* Use of the phrase “Chinese Taipei” does not in any way reflect the position of the IDB Group or any of its member countries regarding issues of national sovereignty or diplomatic recognition.

Source: Prepared by the authors based on Ehrrentraud et al. (2020) and Appaya and Gradstein (2020).

**Table 26. Impact of micro- and macroprudential regulation**  
[\[Return to main text\]](#)

Policy measure	Country	Observed impact	References
Microprudential regulation	OECD countries	Lower liquidity and market risks for banks, especially higher risk ones	Klomp, J. and J. de Hann, 2010. Banking Risk and Regulation: Does One Size Fit All? CPB Discussion Paper.
Macroprudential regulation	European Union/several countries	Slowdown in financial system credit growth	Poghosyan, T., 2019. How Effective Is Macroprudential Policy? Evidence from Lending Restriction Measures in EU Countries. IMF Working Paper; Cerutti, E. et al., 2015. The Use and Effectiveness of Macroprudential Policies: New Evidence. IMF Working Paper.
Dodd-Frank Regulations	United States	Net annual benefit equivalent to 1.62% of GDP	Liner, E., 2017. The Economic Benefit of a Stable Financial System. Report. Third Way.
Establishment of payment systems and clearinghouses	Theoretical analysis	Better management of financial system counterparty risk	IMF, 2010. Making Over-the-Counter Derivatives Safer: The Role of Central Counterparties. Global Financial Stability Report, April; Wendt, F., 2015. Central Counterparties: Addressing Their Too Important to Fail Nature. IMF Working Paper WP/15/21.
Establishment of payment systems and clearinghouses	Colombia	Mitigated counterparty and liquidity risks	Mariño-Martínez, R. et al., 2020. Las entidades de contrapartida central en la mitigación del riesgo de contraparte y de liquidez: El caso de los derivados cambiarios en Colombia. <i>Borradores de Economía</i> . Bank of the Republic.

Source: Prepared by the authors.

**Table 27. Sustainability measures in Latin America and the Caribbean**

[[Return to main text](#)]

Country	Entity name	Sustainable Stock Exchange Initiative member?	ESG report guidance?	Segment for listing sustainable bonds?	Required ESG reporting?	Required/voluntary ESG reporting?	Guidelines for thematic bond issues?	Sustainability protocols/roundtables?
Argentina	Bolsas y Mercados Argentinos (BYMA)	Yes	No	Yes	Yes	Required	No	Yes
	Bolsa de Comercio de Buenos Aires (BCBA)	Yes	No	No	No	N/A		
Brazil	B3	Yes	Yes	Yes	Yes	Voluntary	Yes	Yes
Bolivia	Bolsa Bolivariana de Valores	No	No	No	No	N/A	Yes	Yes
Chile	Bolsa de Comercio de Santiago	Yes	Yes	No	No	N/A	Yes	Yes
Colombia	Bolsa de Valores de Colombia	Yes	No	Yes	No	N/A	Yes	Yes
Costa Rica	Bolsa Nacional de Valores	Yes	Yes	No	No	N/A	No	Yes
Ecuador	Bolsa de Valores de Quito	Yes	No	No	No	N/A	No	No
	Bolsa de Valores de Guayaquil	No						
El Salvador	Bolsa de Valores de El Salvador	No	No	No	No	N/A	No	Yes
Guatemala	Bolsa de Valores Nacional	No	No	No	No	N/A	No	No
Honduras	Bolsa Centroamericana de Valores	No	No	No	No	N/A	No	Yes
Jamaica	Jamaica Stock Exchange	Yes	No	No	No	N/A	No	No
Mexico	Bolsa Mexicana de Valores	Yes	Yes	Yes	No	N/A	No	Yes
	Bolsa Institucional de Valores (BIVA)	Yes	No	No				
Nicaragua	Bolsa de Valores de Nicaragua	No	No	No	No	N/A	No	No
Panama	Bolsa de Valores de Panama	Yes	No	Yes	No	N/A	Yes	Yes
Paraguay	Bolsa de Valores y Productos de Asunción	No	No	No	No	N/A	No	Yes
Peru	Bolsa de Valores de Lima	Yes	No	Yes	No	Required	Yes	Yes
Dominican Republic	Bolsa y Mercados de Valores de la República Dominicana	Yes	No	Yes	No	N/A	No	No
Uruguay	Bolsa de Montevideo	No	No	No	No	N/A	No	No

Source: Prepared by the authors.

**Table 28. Incorporating climate risk in the public finances. Case studies from countries of the region**  
[\[Return to main text\]](#)

Country	Advances in policy implementation
Colombia	<p><b>Challenges:</b> Contingent liabilities not explicitly identified. Dependent on implicit liability obligations. Insurance payments in the event of a disaster not estimated on a regular basis. Inclusion of the fiscal impact of natural disaster-related contingent liabilities in fiscal projections needs to be strengthened.</p> <p><b>Achievements:</b> Significant progress toward quantifying natural disaster-related contingent liabilities. Progress toward implementation of mechanisms for delivering post-disaster financial assistance. Plans for mitigating the financial risk stemming from natural disaster-related contingent liabilities in place.</p>
Costa Rica	Contingent liabilities are explicitly identified. Lack of implicit contingent liabilities. Clear estimates of insurance payments. Fiscal impact of natural disaster-related contingent liabilities included in fiscal projections. Mechanisms for delivering post-disaster financial assistance in place. Plans for mitigating the financial risk stemming from natural disaster-related contingent liabilities in place.
Peru	<p><b>Challenges:</b> Contingent liabilities not explicitly identified. Dependent on implicit liability obligations. Insurance payments in the event of a disaster not estimated on a regular basis. Inclusion of the fiscal impact of natural disaster-related contingent liabilities in fiscal projections needs to be strengthened.</p> <p><b>Achievements:</b> Significant progress toward quantifying natural disaster-related contingent liabilities. Mechanisms for delivering post-disaster financial assistance in place. Plans for mitigating the financial risk stemming from natural disaster-related contingent liabilities in place.</p>

Source: Extracted from OECD, International Bank for Reconstruction and Development (IBRD), and World Bank (2019).

**Table 29. Sovereign guaranteed operations analyzed for lessons learned**

[[Return to main text](#)]

Program name	Operation number
Enhanced Access to Credit for Productivity Project	<a href="#">BA-L1034</a>
First Program Under the Conditional Credit Line for Investment Projects: Financing Program for Sustainable Energy	<a href="#">BR-L1442</a>
Financial System Reform Support Program II	<a href="#">CO-L1214</a>
Program to Improve the Connectivity and Digitalization of the Economy	<a href="#">CO-L1233</a>
Contingent Loan for Natural Disaster Emergencies	<a href="#">EC-O0006</a>
Financing Low-income Housing in Ecuador	<a href="#">EC-U0001</a>
Global Credit Loan for Financing Productive Development in El Salvador	<a href="#">ES-L1089</a>
Financing Low Carbon Strategies in Forest Landscapes	<a href="#">ME-L1120</a>
“ECOCASA” Program	<a href="#">ME-L1121</a>
Second Program for Productive and Inclusive Rural Financing	<a href="#">ME-L1170</a>
Program to Boost Productivity in Mexico II	<a href="#">ME-L1186</a>
Access to Credit in Rural Production Chains	<a href="#">NI-L1080</a>
Broadband Program	<a href="#">NI-L1090</a>
Project for the Development of the Housing Finance Market in Paraguay	<a href="#">PR-L1140</a>

**Table 30. Non-sovereign guaranteed operations analyzed for lessons learned**

[[Return to main text](#)]

Program name	Operation number
<b>IDB Invest</b>	
BHD León: Loan to Women-led SMEs	<a href="#">11807-04</a>
Moni Online: Digital Banking for the Excluded	<a href="#">12116-01</a>
Credit Market: DCM #5	<a href="#">12313-01</a>
Caja Arequipa: Bono Mujer	<a href="#">13019-01</a>
Posorja Port	<a href="#">12177-01</a>
<b>IDB Lab</b>	
New Digital Financial Services for Unserved and Underserved Rural Areas	<a href="#">BO-L1214; BO-T1368</a>
Digital Financial Services in an Ecosystem of Inclusion	<a href="#">CO-L1239; CO-T1489</a>
Pago46: Revolutionizing Payments for Vulnerable Populations	<a href="#">RG-L1144</a>
From Bolivia to the Region: Digitalization of Financial Institutions for Inclusion	<a href="#">RG-L1146</a>
Financial Products to Promote Climate Change Resilience in Bolivia	<a href="#">BO-L1196; BO-L1197</a>
Digital Technology Solutions for an Interconnected Financial Ecosystem	<a href="#">RG-G1017</a>

Note: The authors worked with teams from the Knowledge, Innovation, and Communication Sector (KIC), IDB Invest, and IDB Lab to select these operations, using the following selection criteria: (i) the operations' objectives had to be clearly aligned with one or more of the three challenges to financial sector development set out in this SFD; and (ii) the operations had to be completed or near completion and have relevant data so their progress could be evaluated.

**Table 31. Main policy dialogue forums between the Bank and the Latin American and Caribbean financial sector**  
[\[Return to main text\]](#)

Policy dialogue forum	Participating institutions	Objectives
<b>LAC Debt Group</b>	Ministry of Finance Debt Management Offices	Improve institutional capacity for effective management of public and contingent debt and development of local public debt markets in the countries of the region
<b>PPP Risk Management Group</b>	Ministry of Finance Debt Management Offices	Improve institutional capacity for effective management of contingent liabilities and other risks posed by PPP projects for the public sector
<b>Latin American Association of Development Financing Institutions (ALIDE) Regional PPP Development Group</b>	Latin American and Caribbean public development banks	Foster the exchange of information between financial institutions to leverage private investment to finance PPPs
<b>Network of Regulators for Sustainable Development (REDES)</b>	Financial regulators and supervisors from the region, ASBA, the NGFS, and IOSCO.	Identify common challenges and facilitate coordination of policies and initiatives to develop sustainable finance and strategies for mitigating ESG and climate risks in the financial sector
<b>FinTechLAC</b>	Financial regulators, supervisors, and fintech associations from 18 countries in the region	Develop projects to innovate regulations and improve the fintech ecosystem in Latin America and the Caribbean
<b>Banking Sector Regional Policy Dialogue</b>	Bank supervisors and regulators, Ministries of Finance, and other public agencies in the banking sector	Develop mechanisms to promote and share knowledge between regulators, supervisors, and public policy makers from Latin American and Caribbean banking sectors
<b>Dialogue Network for Capital Markets in Latin America and the Caribbean (CAPILAC)</b>	Financial supervisors and regulators, stock exchanges, institutional investors, and other capital market stakeholders	Foster public-private dialogue and build public-sector institutional capacity for developing capital markets in the region

Source: Prepared by the authors.

**Table 32. IDB Group SFDs whose guidelines have been incorporated into the lines of action for the IDB Group's work in the financial sector**  
[\[Return to main text\]](#)

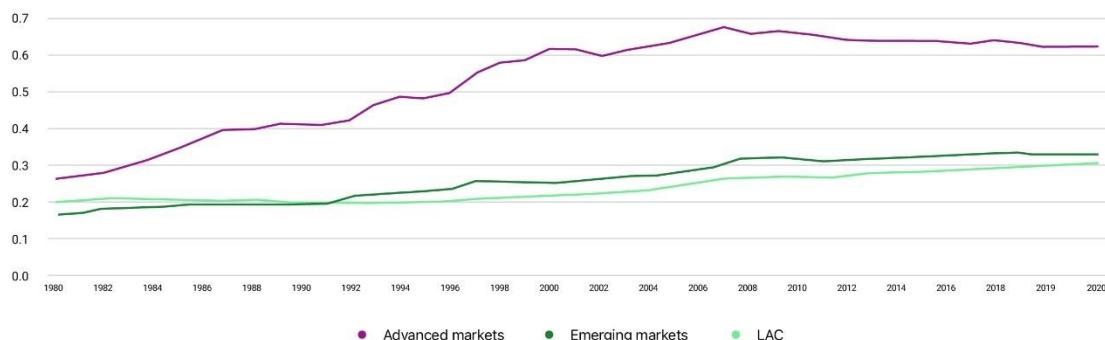
IDB Group SFD	Incorporation in lines of action
<a href="#"><u>Climate Change</u></a>	Activities enabling the development of financial markets for sustainable investment in the region
<a href="#"><u>Labor</u></a>	Activities enabling the formalization of the region's labor force to foster financial inclusion of individuals and companies as part of the formal financial sector
<a href="#"><u>Skills Development</u></a>	Activities enabling better recruitment of a labor force with technological expertise and digital skills for the use of financial services among groups at risk of financial exclusion
<a href="#"><u>Gender and Diversity</u></a>	Activities enabling better access to credit, traditional financial services, and digital financial services for women, women entrepreneurs, and vulnerable social groups
<a href="#"><u>Transparency and Integrity</u></a>	Activities enabling better regulation and supervision and better market practices to improve the transparency and integrity of the financial sector
<a href="#"><u>Fiscal Management</u></a>	Activities enabling better macroeconomic and fiscal management and macrofinancial risk management to improve financial sector stability and depth

Source: Prepared by the authors.

## II. FIGURES

**Figure 1. Financial Development Index (average), 1980-2020**

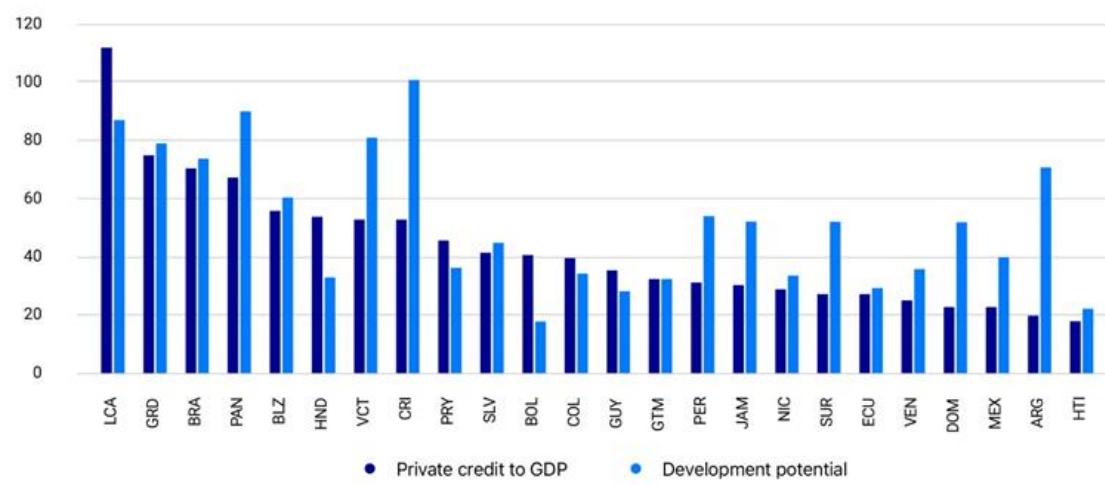
[\[Return to main text\]](#)



Source: Financial Development Index database, 2022 (classification of countries based on Sahay et al., 2015).

**Figure 2. Potential for development of financial intermediation in Latin America and the Caribbean, 2016**

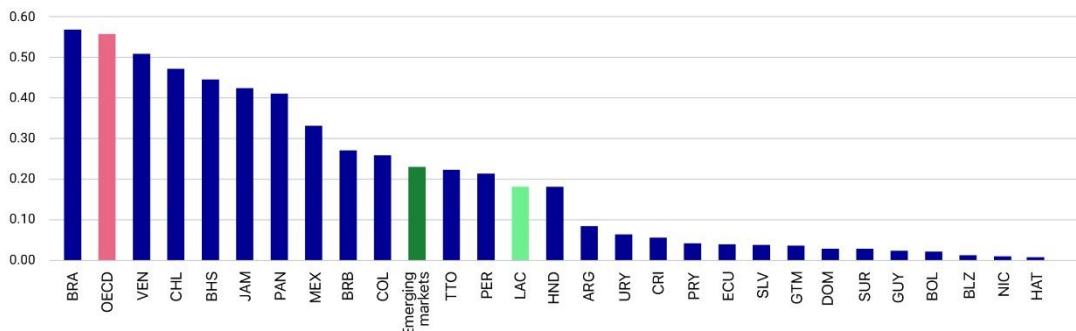
[\[Return to main text\]](#)



Source: Beck (2016).

**Figure 3. Financial depth index, 2020**

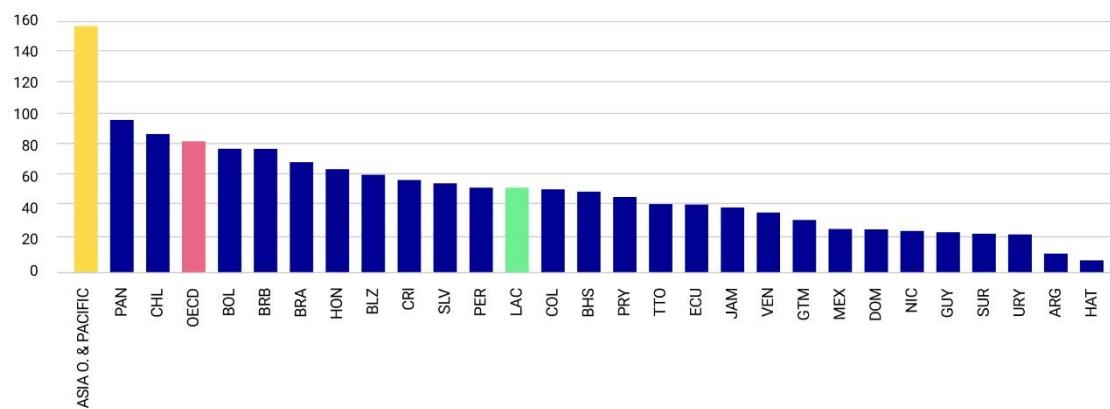
[\[Return to main text\]](#)



Source: IMF Financial Development Index database – Financial depth subindex.

**Figure 4. Domestic credit to the private sector from banks as a percentage of GDP, 2020**

[\[Return to main text\]](#)

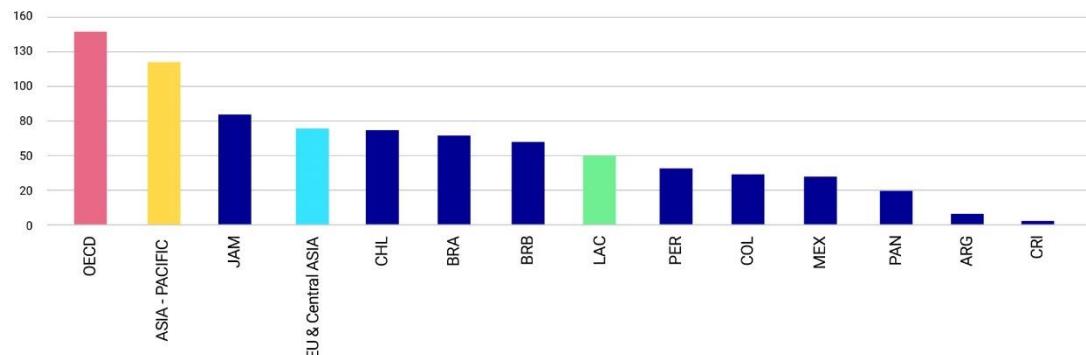


Notes: Barbados, Jamaica, and Uruguay: 2019 data; Argentina: 2017 data; Venezuela: 2014 data.

Some studies show that the marginal impact of financial depth on economic growth is negative when credit to the private sector reaches a certain share of GDP. Most studies agree that the optimal level of credit issued to the private sector hovers around 100%-120% of GDP (For example, see [IMF, 2012](#)).

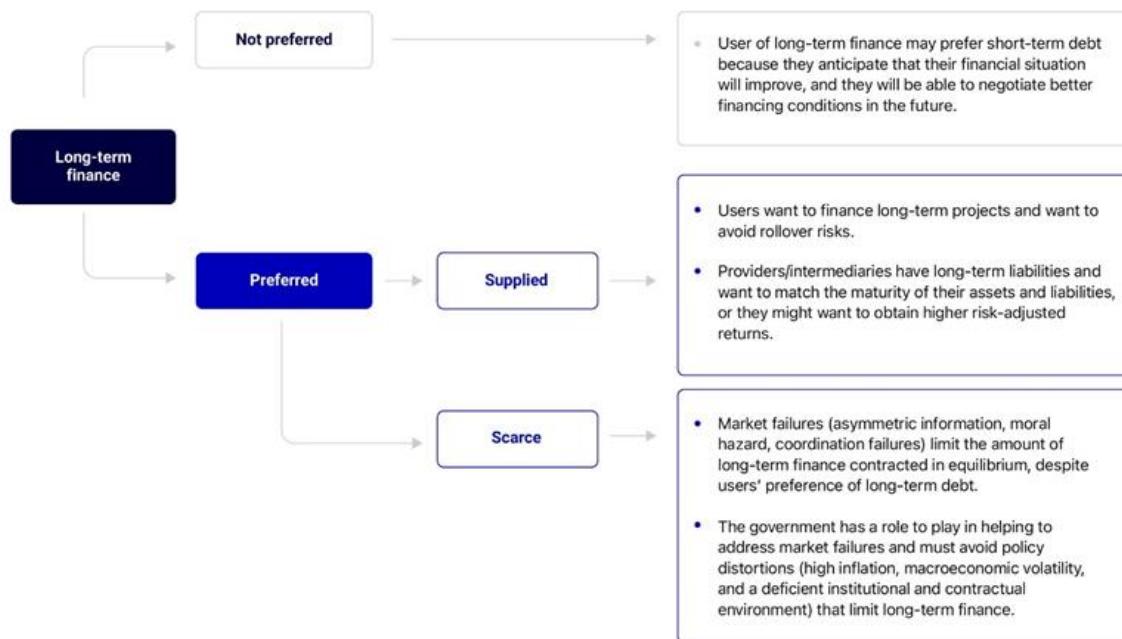
Source: World Bank. World Bank Open Data.

**Figure 5. Market capitalization of listed domestic companies (% of GDP), 2020**  
[\[Return to main text\]](#)



Source: World Bank. Global Financial Development Database (2021).

**Figure 6. Conceptual framework for understanding the use of long-term finance**  
[\[Return to main text\]](#)

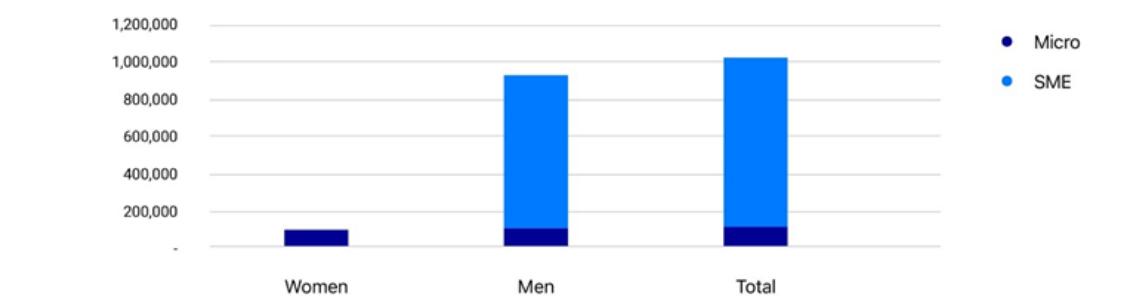


Because of market failures (such as information asymmetries and coordination problems), the amount contracted in equilibrium could be lower than desired even in situations when both users and providers of finance would ideally prefer long-term financing contracts. In that situation, there is a scarcity or shortage of long-term financing. Information asymmetries prevent the creditor from knowing the borrower's true repayment capacity and willingness to pay, thus making the creditor reluctant to agree to the amount of long-term financing requested. Coordination problems between borrowers and lenders can trigger a situation in which lenders shorten the maturity of contracts to protect their claims and shorten the average maturity of debt contracts available in equilibrium.

Source: World Bank Global Financial Development Report 2015-2016: Long-Term Finance.

**Figure 7. MSME finance gap by gender and company size in Latin America and the Caribbean (in millions of U.S. Dollars) as of 2018**

[\[Return to main text\]](#)



Source: MSME Finance Gap (2018).

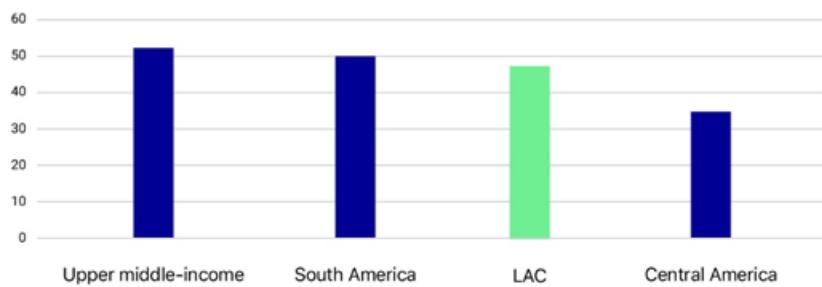
**Figure 8. Value of collateral needed for a loan (% of principal), 2020**  
[\[Return to main text\]](#)



\*OECD: Data from 2019.

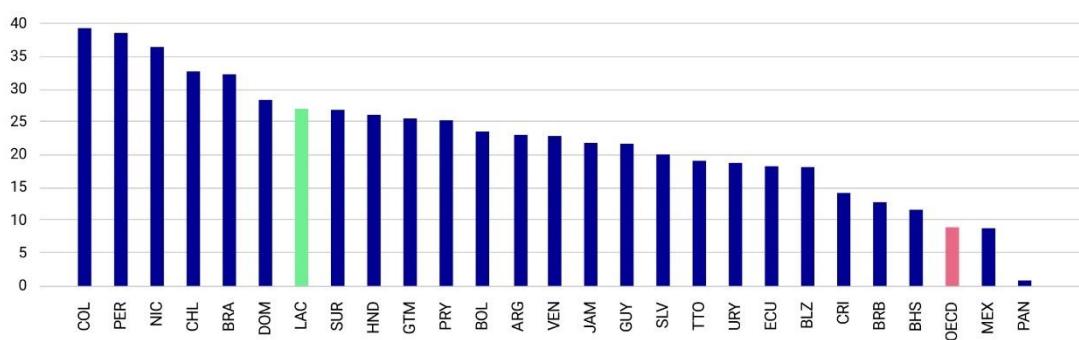
Source: World Bank. Enterprise Surveys project (2021).

**Figure 9. Percentage of SMEs with bank loans or credit lines in Latin America and the Caribbean, 2020**  
[\[Return to main text\]](#)



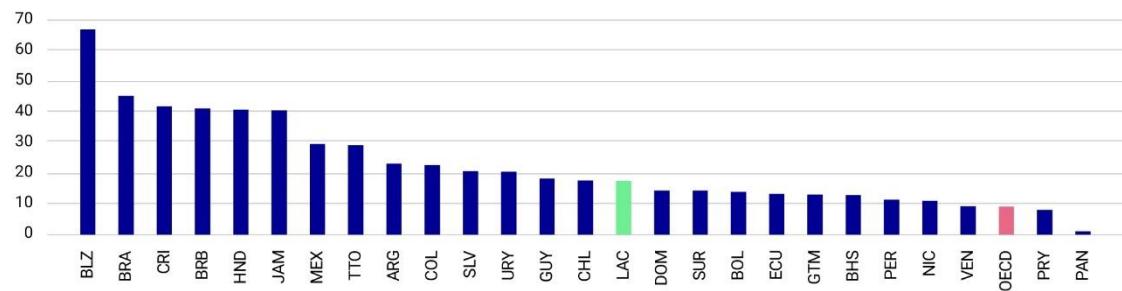
Source: World Bank. World Development Indicators (2020).

**Figure 10. Percentage of fixed asset purchases financed with bank loans, 2020**  
[\[Return to main text\]](#)



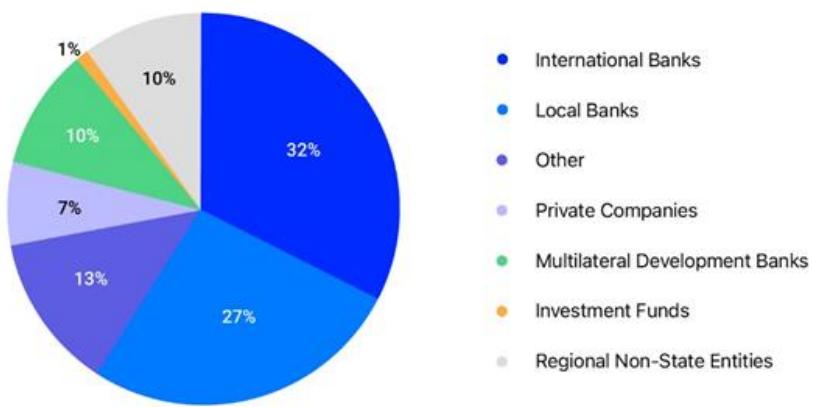
Source: World Bank. Enterprise Surveys project (2021).

**Figure 11. Percentage of companies identifying access to finance as a significant constraint, 2020**  
[\[Return to main text\]](#)



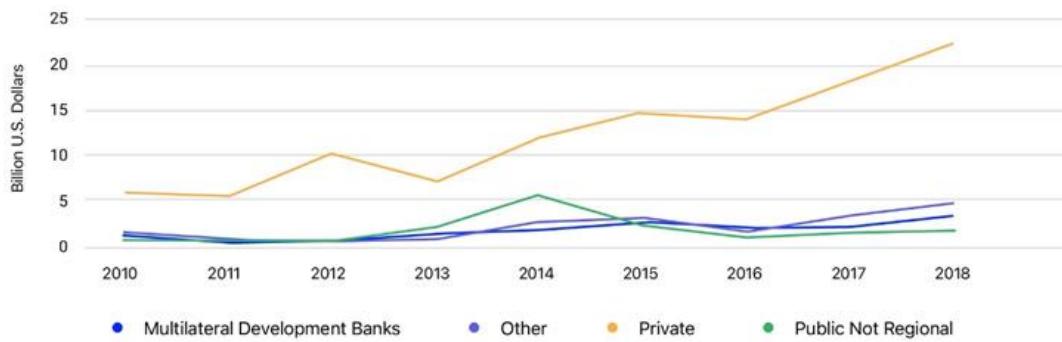
Source: World Bank. Enterprise Surveys project (2021)

**Figure 12. Providers of infrastructure financing in Latin America and the Caribbean, 2019**  
[\[Return to main text\]](#)



Source: IDB Macroeconomic Report (2019).

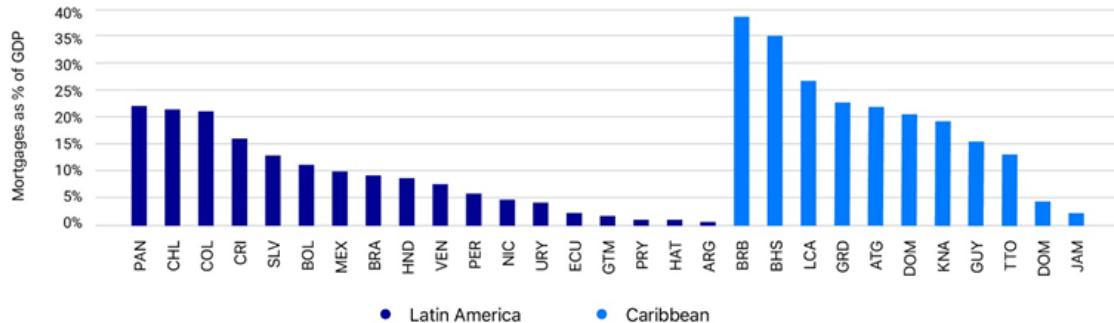
**Figure 13. Private infrastructure investment in Latin America and the Caribbean, 2010-2018**  
[\[Return to main text\]](#)



\*MDBs play an important role in the region and contribute nearly 7% of infrastructure financing.

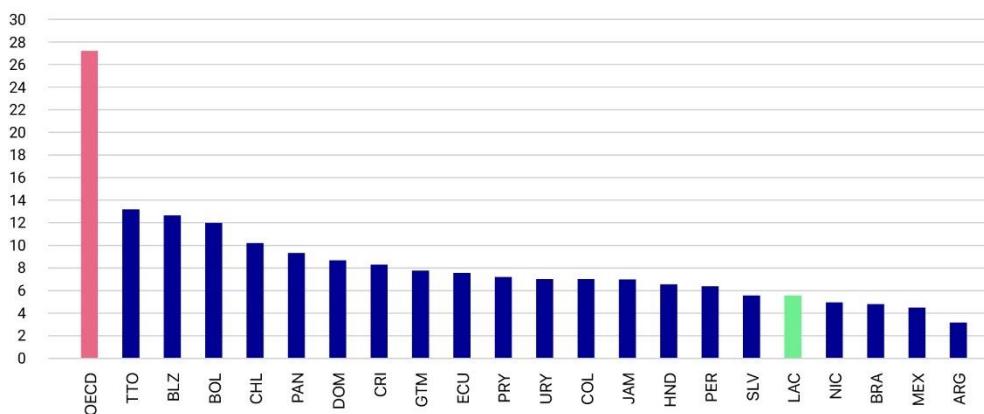
Source: Building Opportunities for Growth in a Challenging World. Latin American and Caribbean Macroeconomic Report (2019).

**Figure 14. Home mortgage loans as a percentage of GDP, 2014-2016**  
[\[Return to main text\]](#)



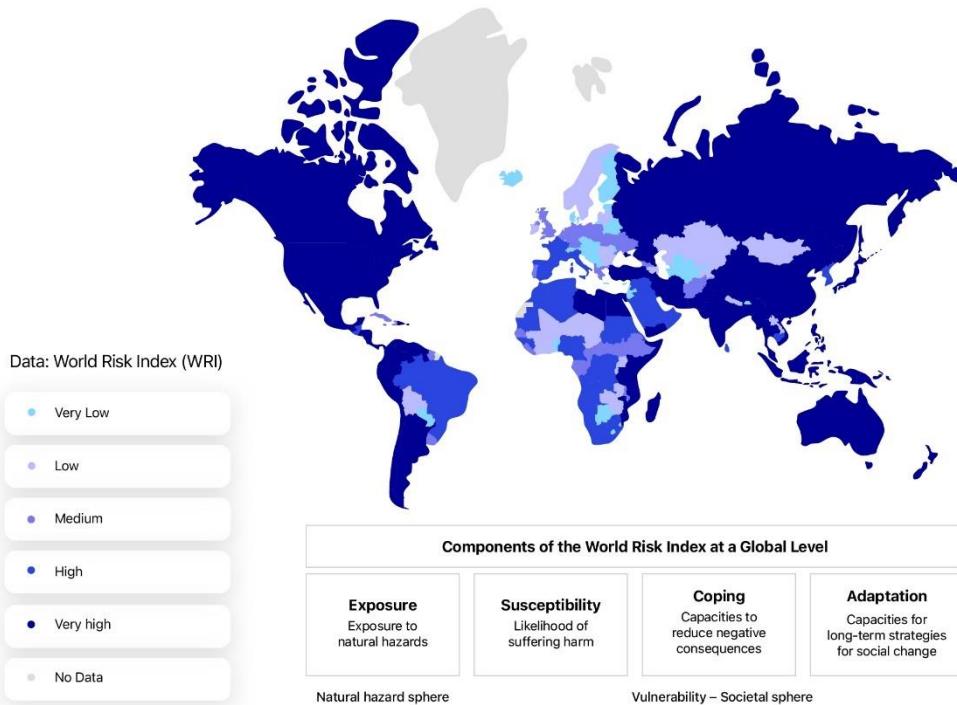
Source: Central banks and [www.hofinet.org](http://www.hofinet.org) (2016).

**Figure 15. Percentage of adults with a housing loan, 2017**  
[\[Return to main text\]](#)



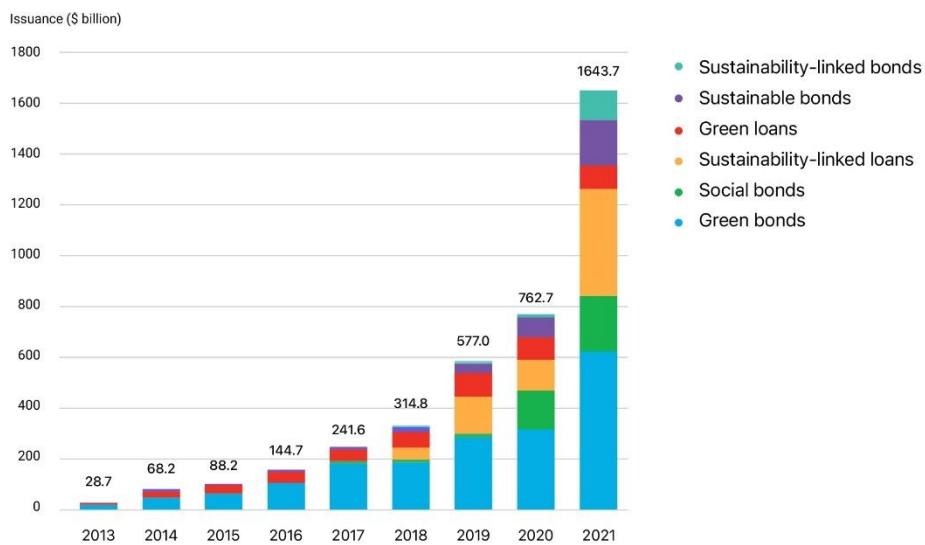
Source: World Bank. Global Financial Development Report 2017 database.

**Figure 16. Global Climate Risk Index, 2022**  
[\[Return to main text\]](#)



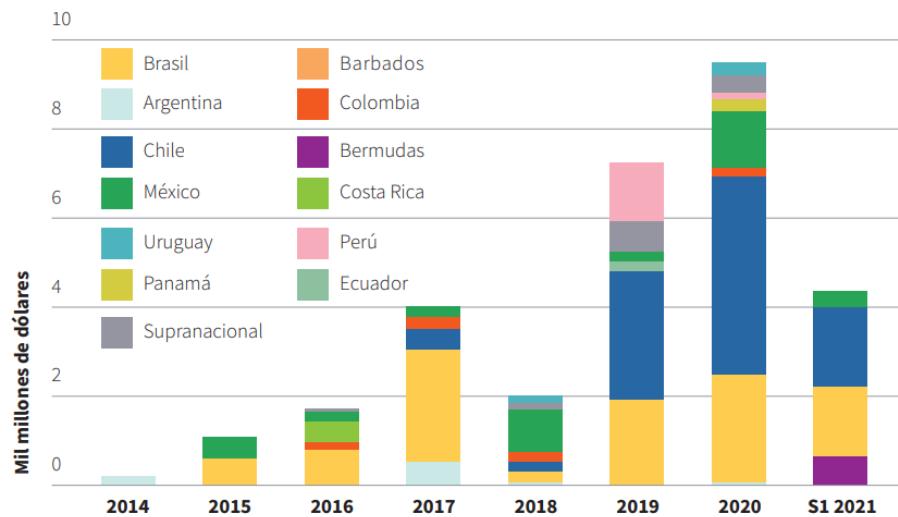
Source: World Risk Report (2022).

**Figure 17. Trends in the volume of sustainable issues by instrument type, in billions of U.S. dollars**  
[\[Return to main text\]](#)



Source: Financial Times, Bloomberg NEF (2021).

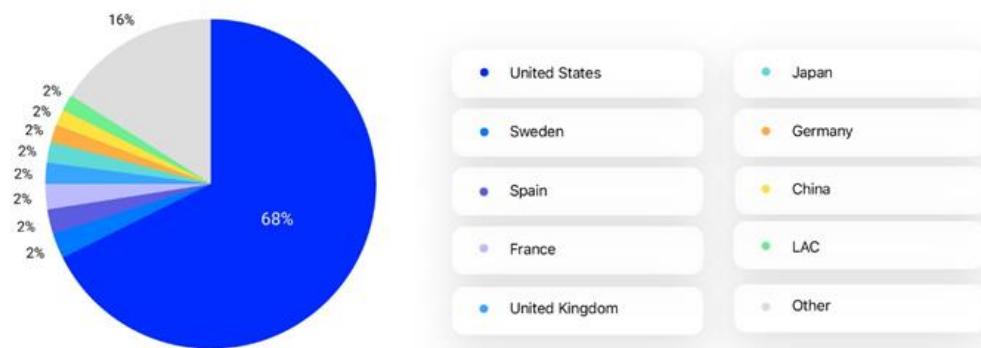
**Figure 18. Evolution of green bond issues in Latin America and the Caribbean by issuer type, 2014-2021**  
[\[Return to main text\]](#)



Note: Brazil accounts for 48% of the total for the region, followed by Mexico (16%) and Chile (13%).

Source: Climate Bond Initiative (2021).

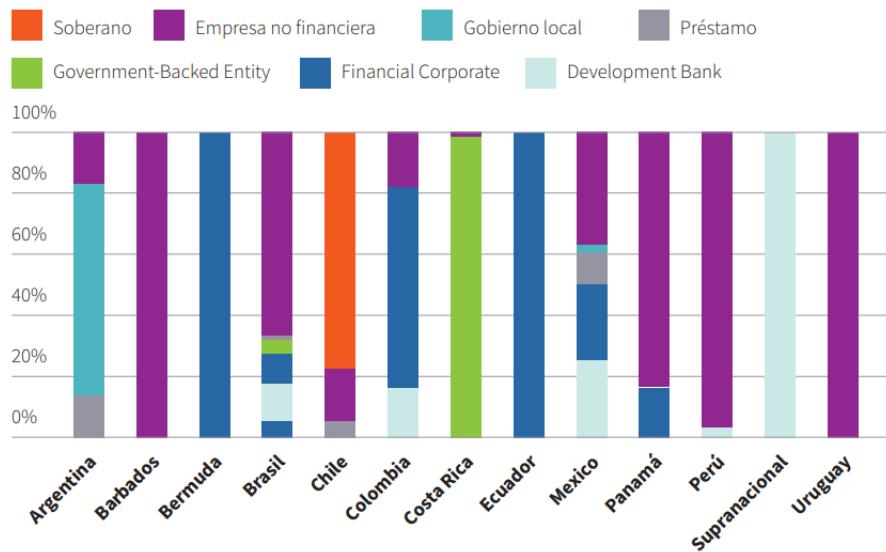
**Figure 19. Breakdown of global green issues by country and region, 2020**  
[\[Return to main text\]](#)



Source: Bloomberg NEF Thematic Issues (2020).

**Figure 20. Green issues in Latin America and Caribbean countries by issuer type, 2021 (in billions of U.S. dollars)**

[[Return to main text](#)]

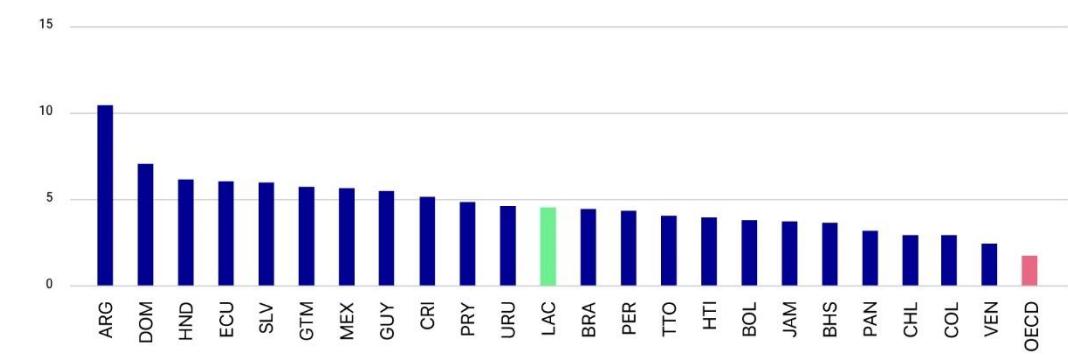


Note: Issues in Argentina are predominantly issues by local governments, in Brazil they are predominantly issues by nonfinancial corporations, in Mexico they are predominantly issues by PDBs, and in Chile they are predominantly sovereign issues.

Source: Climate Bond Initiative (2021).

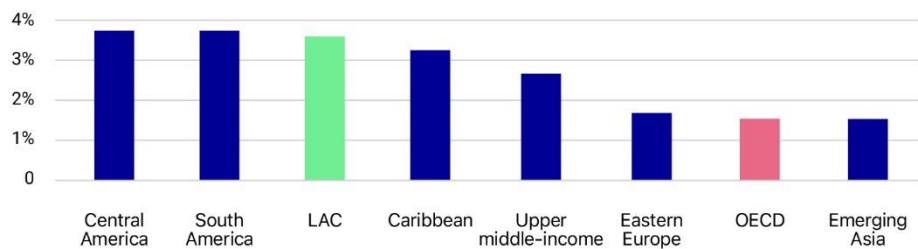
**Figure 21. Bank net interest margin (%), 2021**

[[Return to main text](#)]



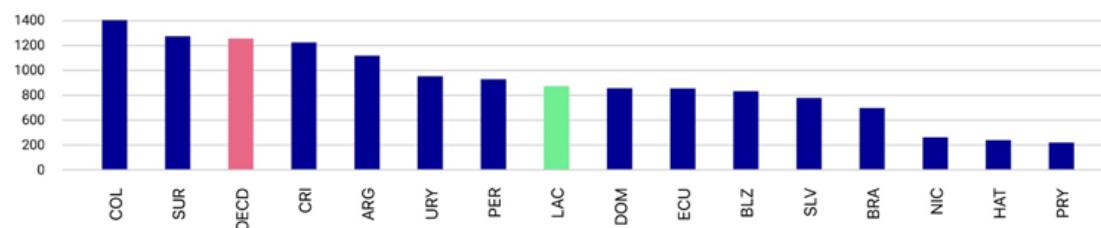
Source: World Bank. Global Financial Development Database (2022).

**Figure 22. Bank overhead costs to total assets (%), 2021**  
[\[Return to main text\]](#)



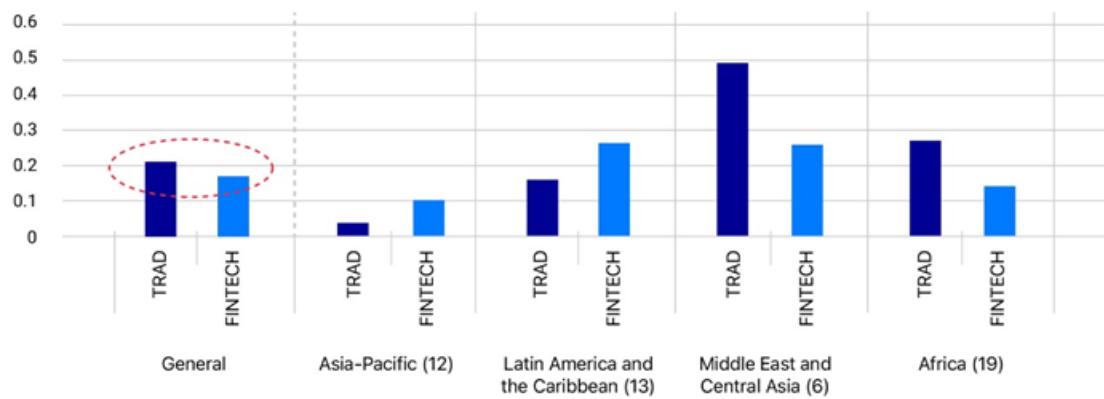
Source: World Bank. World Development Indicators (2021).

**Figure 23. Bank accounts per 1,000 adults, 2021**  
[\[Return to main text\]](#)



Source: World Bank. World Development Indicators (2021).

**Figure 24. Gender gap in traditional financial inclusion vs. gender gap in digital financial inclusion, 2017**  
[\[Return to main text\]](#)

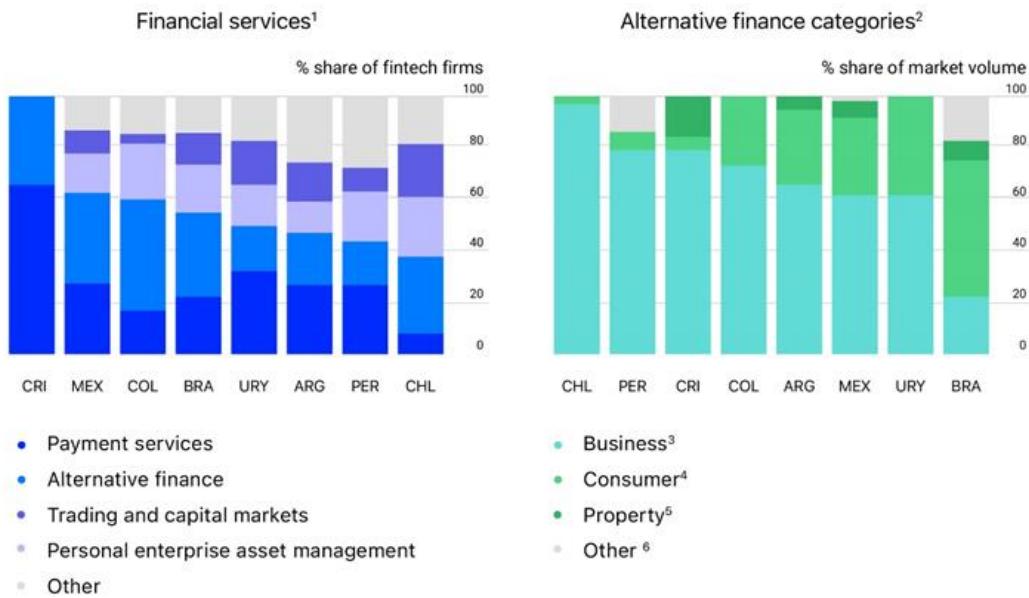


Source: Estimates prepared by IMF staff.

Note: "Trad" = traditional financial inclusion. The gender gap is the percentage difference between the financial inclusion rate among men and the rate among women. Higher values indicate that there is a larger gender gap.

Source: Sahay et al. (2020).

**Figure 25. Fintech firms in Latin America and the Caribbean: Financial services and customer types, 2020**  
[\[Return to main text\]](#)



<sup>1</sup> Alternative scoring platforms are included in the alternative finance category. "Other" includes enterprise technologies for financial institutions, insurance, and digital banks.

<sup>2</sup> Data for Uruguay and Costa Rica as of 2017; data for the rest of the countries, as of 2018.

<sup>3</sup> Sum total of balance sheet business lending, equity-based crowdfunding, invoice trading, lending platform (P2P)/marketplace business lending, community shares, revenue/profit-sharing crowdfunding, and reward-based crowdfunding.

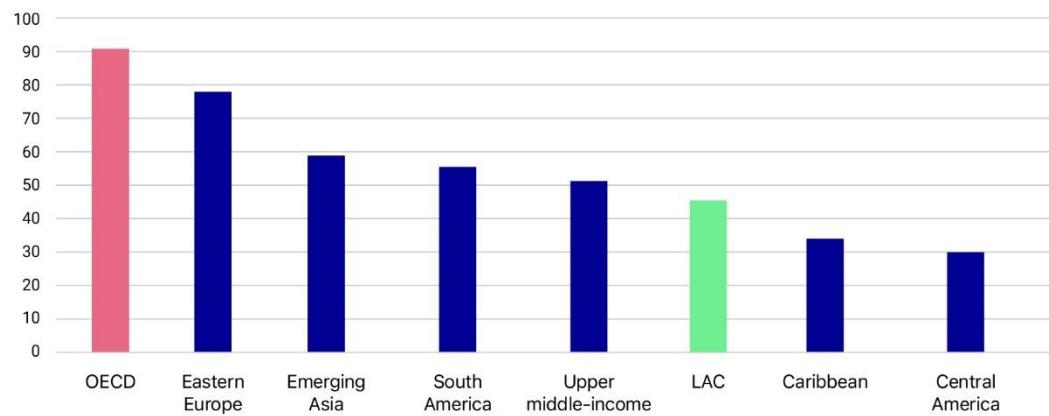
<sup>4</sup> Sum total of balance sheet consumer lending, donation-based crowdfunding, and P2P/marketplace consumer lending.

<sup>5</sup> Sum total of balance sheet real estate lending and P2P/marketplace real estate lending.

<sup>6</sup> Sum total of debentures, mini-bonds, and other.

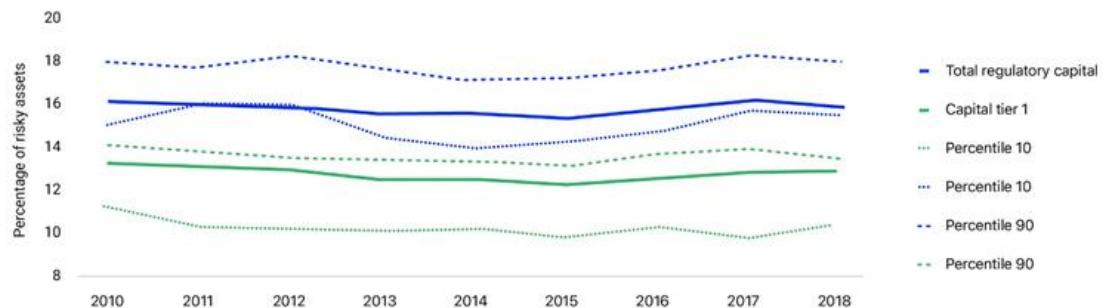
Source: [BIS](#) (2020).

**Figure 26. Percentage of digital payments by people aged 15 or older in the last year, 2021**  
[\[Return to main text\]](#)



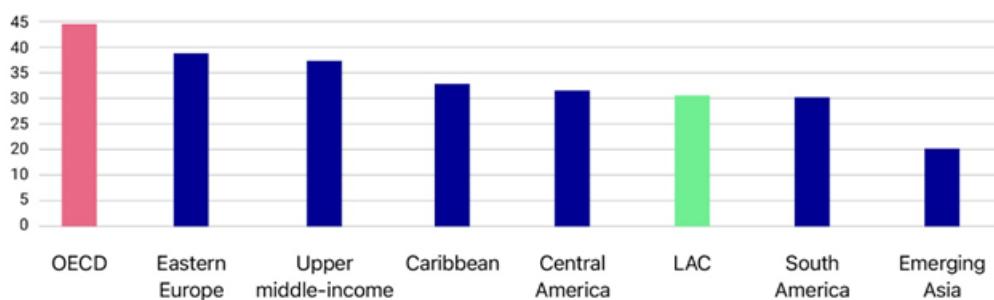
Source: World Bank. World Development Indicators (2022).

**Figure 27. Trends in capital to risky assets ratios in the region, 2010-2020**  
[\[Return to main text\]](#)



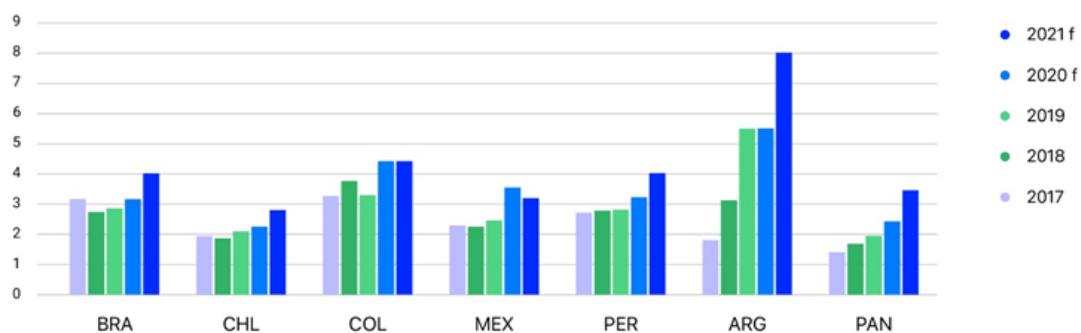
Source: IDB (2020).

**Figure 28. Percentage of liquid assets to deposits and short-term funding, 2020**  
[\[Return to main text\]](#)



Source: World Bank. Global Financial Development Database (2020).

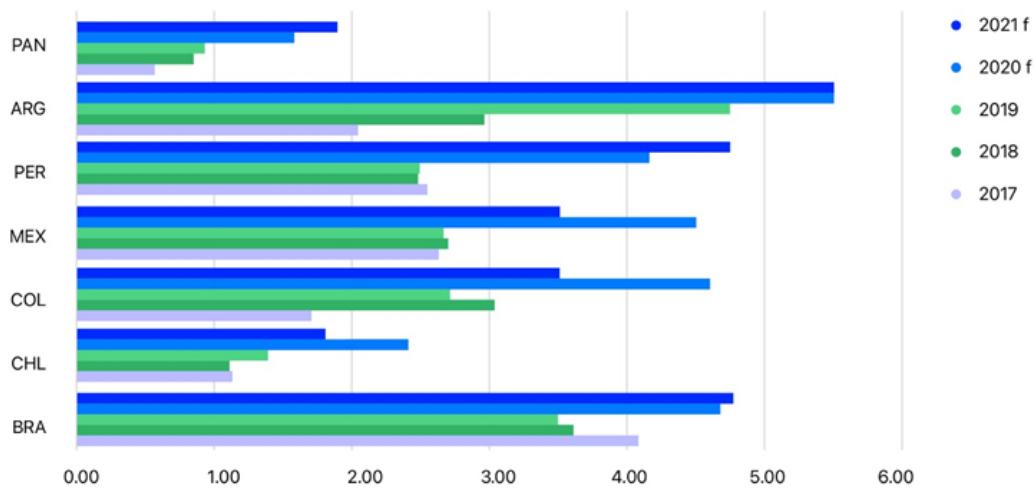
**Figure 29. Trends in the past-due portfolio as a percentage of total loans by country, 2020**  
[\[Return to main text\]](#)



For 2020 and 2021, f = forecast.

Source: S&P Global Ratings (2021).

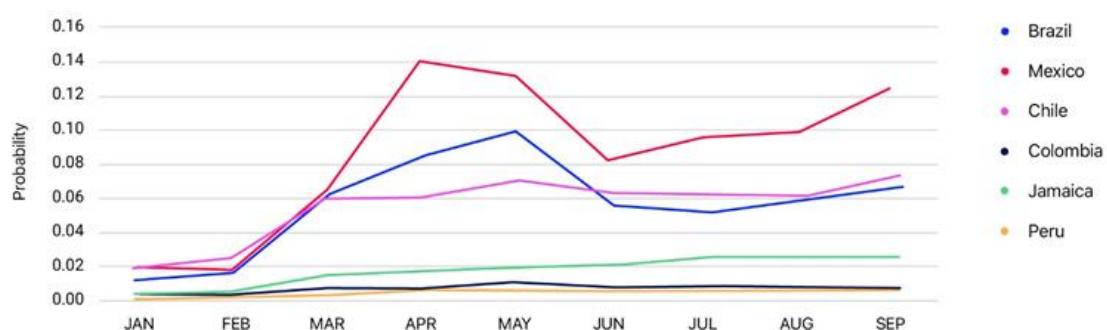
**Figure 30. Trends in losses as a percentage of total loans by country, 2020**  
[\[Return to main text\]](#)



For 2020 and 2021, f = forecast.

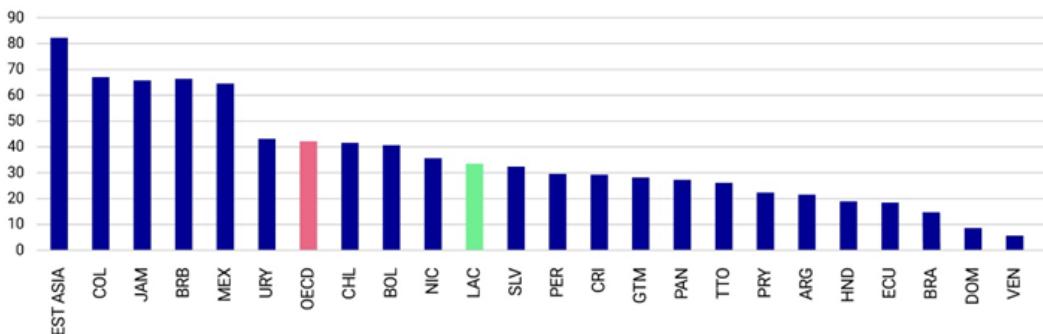
Source: S&P Global Ratings (2021).

**Figure 31. Risk of insufficient bank capital in Latin American and Caribbean countries, 2020**  
[\[Return to main text\]](#)



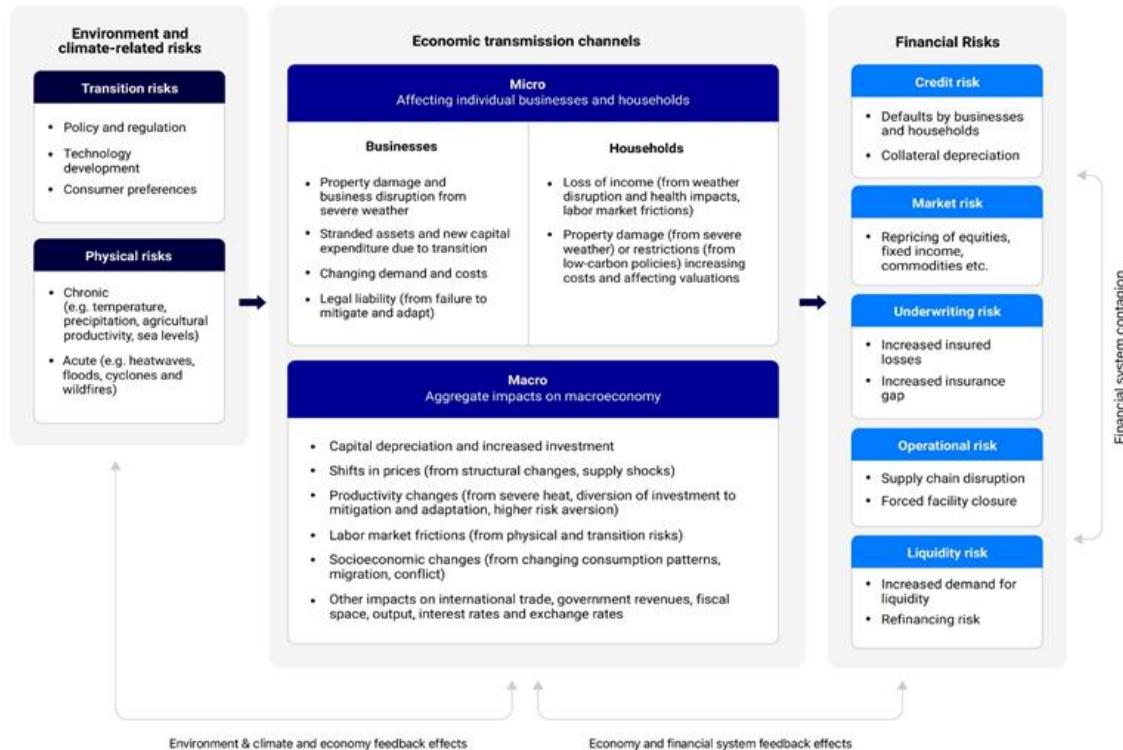
Source: IDB. Macroeconomic Report (2020).

**Figure 32. Insolvency recovery rate (cents to the dollar), 2019**  
[\[Return to main text\]](#)



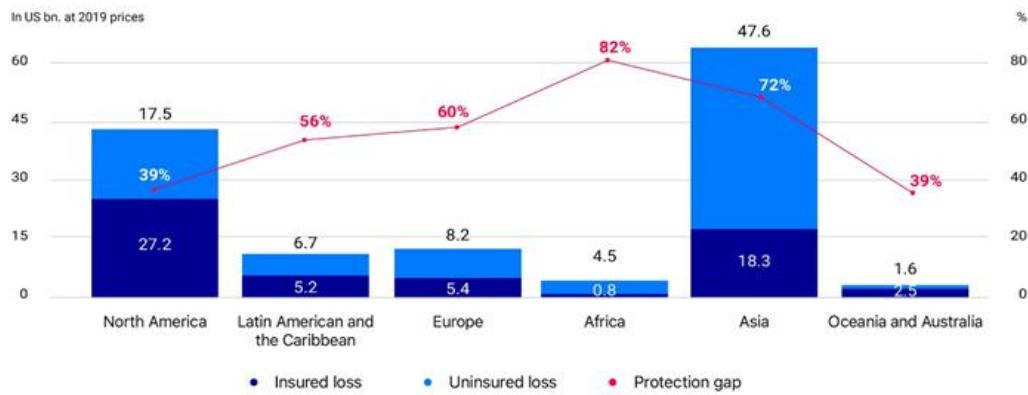
Source: World Economic Forum data. Global Competitiveness Index 4.0 (2019).

**Figure 33. Transmission of environmental risks to financial risks**  
[\[Return to main text\]](#)



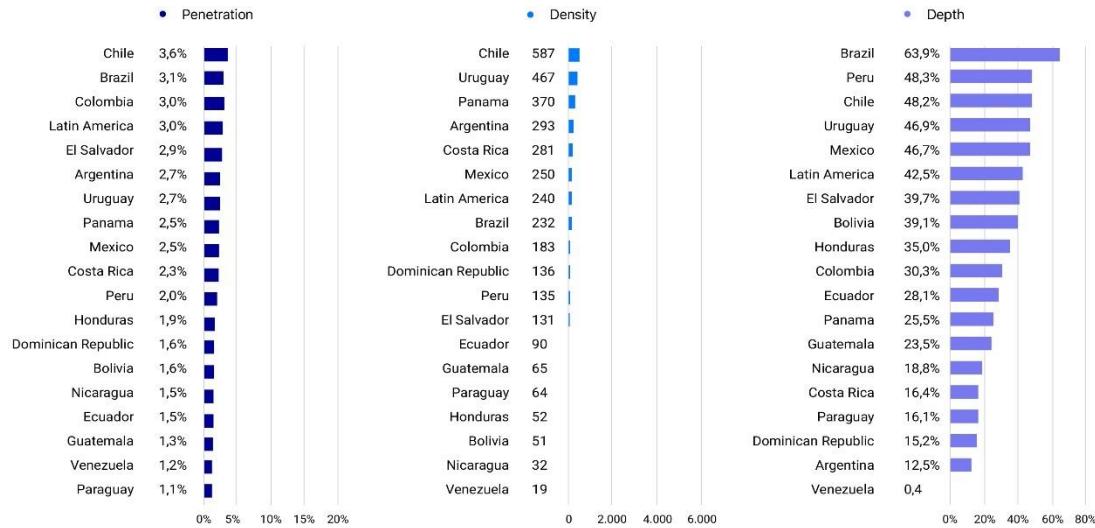
Source: Adapted from NGFS (2020).

**Figure 34. Insured and uninsured losses from natural disasters, 2019**  
[\[Return to main text\]](#)



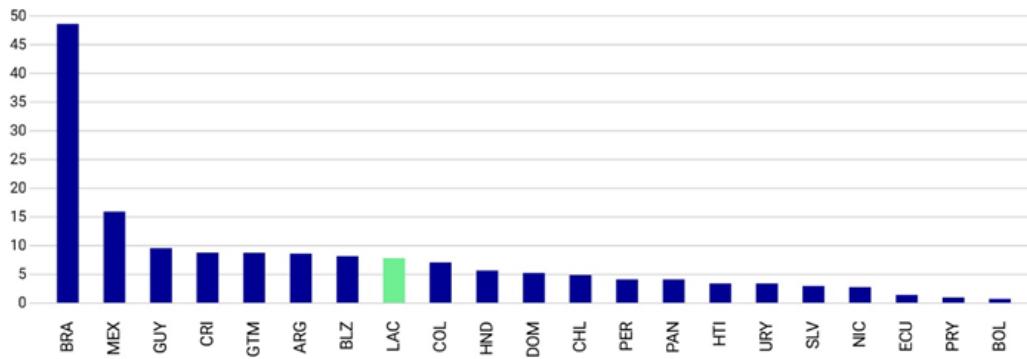
Source: SwissRe (2019).

**Figure 35. Insurance markets in Latin America and the Caribbean: Penetration, density, and depth indicators, 2020**  
[\[Return to main text\]](#)



Source: MAPFRE Economics (2022).

**Figure 36. Credit issued to the government and state-owned enterprises (% of GDP), 2021**  
[\[Return to main text\]](#)



Source: World Bank. World Development Indicators (2021).

**Figure 37. NGFS recommendations for central banks and supervisors for integrating climate-related and environmental risks**

[\[Return to main text, paragraph 3.26\]](#)  
[\[Return to main text, paragraph 3.51\]](#)

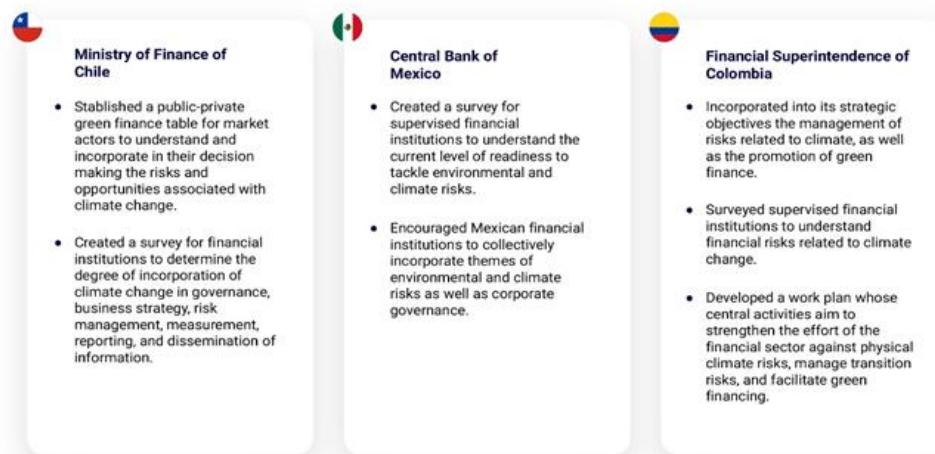
- 1 Determine how environmental and climate risks are transmitted in economies and financial sectors. Identify the probability for these risks to materialize in supervised entities.
- 2 Develop a clear strategy. Establish an internal organization and assign adequate resources to address environmental and climate risks.
- 3 Identify the exposures of supervised entities that are vulnerable to environmental and climate risks. Evaluate potential losses in case that these risks materialize.
- 4 Establish supervision expectations to create transparency in financial institutions according to the criteria of the supervisor in relation to climate and environmental risks.
- 5 Ensure adequate management of environmental and climate risks from financial institutions and take mitigation steps when required.

Source: Prepared by the authors based on NGFS (2020).

**Figure 38. Overview of regulator initiatives in the region to integrate climate-related and environmental risks**

[[Return to main text, paragraph 3.29](#)]

[[Return to main text, paragraph 3.52](#)]



Source: Ministry of Finance 2020, Risks and opportunities associated with climate change in the financial sector of Chile 2019; Financial Superintendence of Colombia 2019, Risks and opportunities of climate change; Central Bank of Mexico 2020, *Climate and Environmental Risks and Opportunities in Mexico's Financial System*.

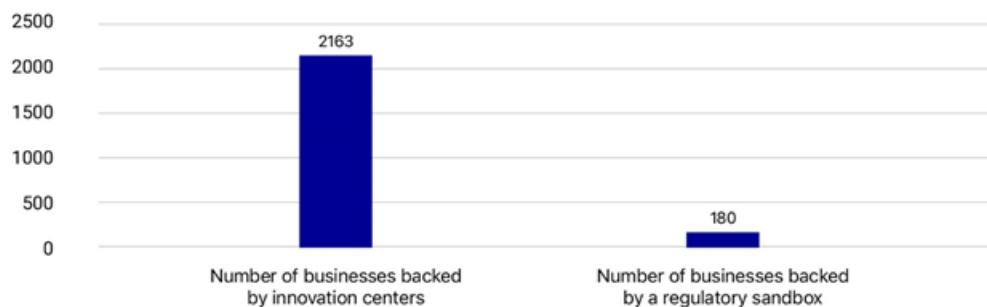
**Figure 39. Key nonbinding sustainable finance initiatives**

[[Return to main text](#)]



Source: United Nations Environment Programme (UNEP) Finance Initiative.

**Figure 40. Businesses backed by innovation centers and regulatory sandboxes, 2019**  
[\[Return to main text\]](#)



Source: Adapted from Appaya and Gradstein (2020).

**Figure 41. Challenges to financial sector development in the region and associated public policies and action plans**  
[\[Return to main text\]](#)

CHALLENGES	• Low depth	• Lack of digitalization	• Resiliency gaps
PUBLIC POLICIES	<ul style="list-style-type: none"><li>• Development of financial markets: macro, legal, information</li><li>• Active policies for financial access</li></ul>	<ul style="list-style-type: none"><li>• Enabling policies: connectivity</li><li>• Promotion (fintech ecosystem)</li><li>• Fintech regulation</li></ul>	<ul style="list-style-type: none"><li>• Regulation and supervision: Basel and Solvency</li><li>• Policies for short-term resiliency: effects of COVID</li><li>• Regulation of long-term risks: climate change</li></ul>
ACTION PLANS	<ul style="list-style-type: none"><li>• Increase depth and diversification for greater and better access to productive financing</li></ul>	<ul style="list-style-type: none"><li>• Leverage the benefits of new technology for a more efficient and inclusive sector</li></ul>	<ul style="list-style-type: none"><li>• Ensure a more stable sector to effectively carry out intermediation tasks independent from economic cycles</li></ul>
ULTIMATE OBJECTIVE	Contribute to the sustainable growth of the region and reduce inequality and poverty through an efficient, inclusive, and sustainable financial sector		

Source: Prepared by the authors.

**Figure 42. Main focus of the action plans guiding the IDB Group's work in financial sector development**

[[Return to main text](#)]



Source: Prepared by the authors.

### III. BOXES

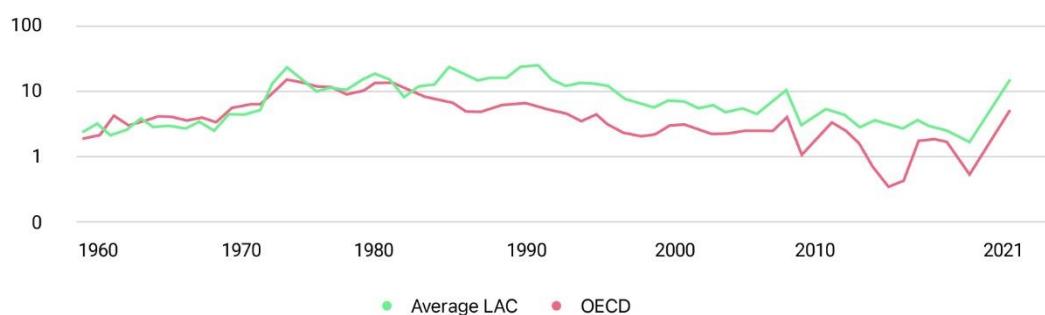
#### Box 1. The importance of transaction costs for financial depth [\[Return to main text\]](#)

Fixed transaction costs in financial service provision decrease as the number or size of transactions increases. The resulting economies of scale are a key reason why financial intermediation costs are typically higher in smaller financial systems. They also explain the limited capacity of small financial systems to expand by reaching out to clients that need smaller transactions (such as through loans to SMEs). Transaction costs can explain the high level of formal financial exclusion in many developing countries. High transaction costs can also explain the lack of capital markets in many small developing economies (Beck, 2016).

#### Box 2. Main market failures in the provision of long-term financing in Latin America and the Caribbean [\[Return to main text\]](#)

**High, volatile inflation rates increase transaction costs and undermine lenders' and borrowers' willingness to commit to financial contracts**, especially long-term contracts. Economies with stable, low inflation rates spur the development of local financial markets with greater depth (Burger and Warnock, 2006). In recent decades, many countries in the region have experienced episodes of inflation rate volatility that partly explain their financial sectors' lack of depth.

#### Year-on-year inflation in OECD and Latin American and Caribbean countries (average, 1960-2020)



**Inefficient judicial systems, creditor rights, and contract enforceability increase uncertainty, thereby raising the cost of financing** and constraining collateral-based financing (such as structured financing). Banks increase credit supply, especially long-term credit supply, in countries with more efficient contract enforcement (Bae et al., 2009). Institutions that can efficiently and effectively ensure enforcement of financial contracts are associated with the development of broader, more liquid credit and capital markets (Djankov et al., 2007). In the region, there are weaknesses in the recovery of assets after credit defaults, which limits the sector's financing supply. Many countries have weak regulatory frameworks for insolvency, and asset recovery rates are low.

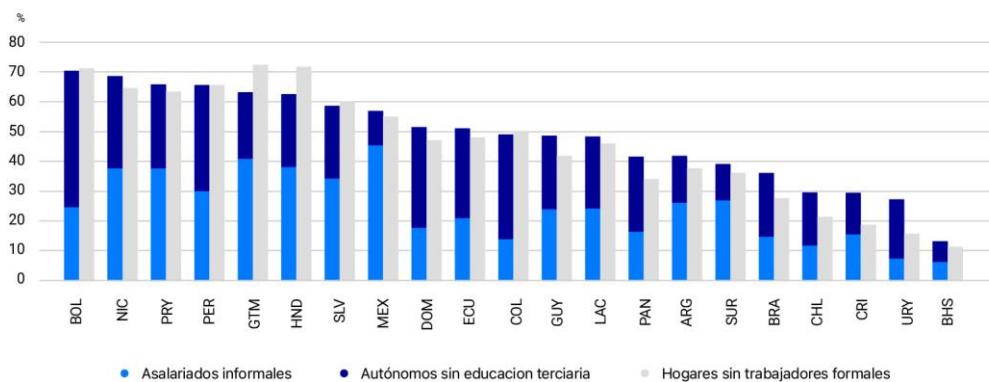
**A lack of information increases selection and monitoring costs and risks to borrowers, thereby restricting supply of financing and increasing its cost.** Financial markets need an environment with reliable, accessible information, which reduces information asymmetry and helps banks and capital market agents (pension funds, investment funds, etc.) be able to make long-term lending and investment decisions in the best informed way possible, increasing their ability to detect projects with the best risk-return profile. The region has made progress in the last decade in generating data through mechanisms like public credit registries, but there are still limits on the production of quality financial information (for example, financial, accounting, and audit statements for public and private companies).

**Box 3. Economic informality, financial development, and access to productive credit in Latin America and the Caribbean**

[\[Return to main text\]](#)

Informal employment rates are high in the region. Information and contract enforcement problems are more serious in environments with high rates of economic informality in which economic agents do not have incentives to transparently report part of their revenues, employees, or assets. These situations give rise to higher transaction costs for financial intermediaries and increase financing costs considerably. Given the importance of access to finance for economic growth, informality generates a pernicious cycle in which high rates of informality lead to low development of the sector and low levels of financing, which limits the economic growth potential of the economies.

**Informal employment in Latin America and the Caribbean (% of labor force), 2018**



Fuente: Cálculos del personal del BID basados en "Encuestas de hogares armonizadas de América Latina y el Caribe" del BID. Los datos son para 2018 para todos los países, salvo Bahamas (2014), Chile (2017), Surinam (2017) y Nicaragua (2014).

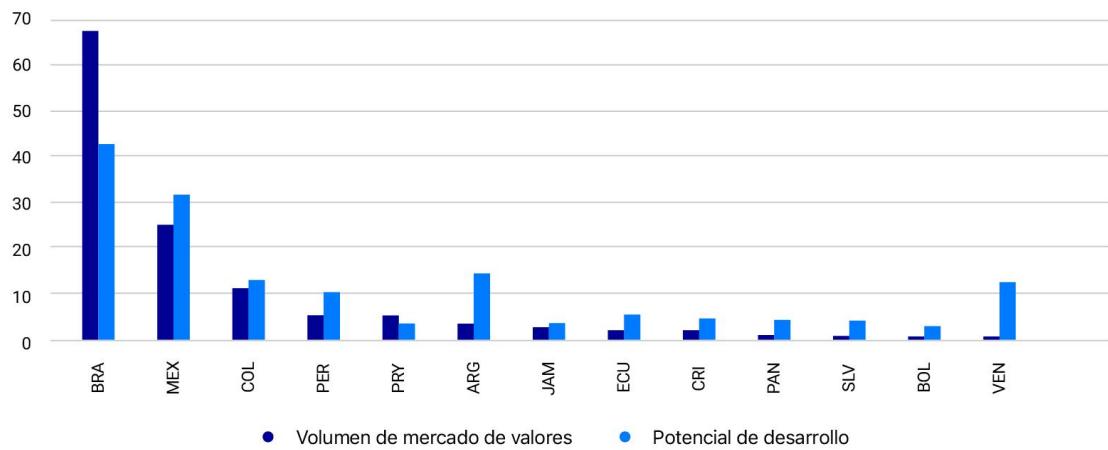
At the productive level, studies conducted for the region indicate that the high rate of informality of SMEs is a key obstacle to accessing finance through the banking system. Informality manifests itself in the inability to demonstrate that a company exists and in accounting records that do not properly reflect the reality of a company, thereby hindering the correct evaluation of financing projects and the associated level of risk (Kulfas, 2009; ECLAC, 2011; La Porta and Shleifer, 2014; Dabla-Norris et al., 2015).

**Box 4. Capital market development in Latin America and the Caribbean**  
[\[Return to main text\]](#)

The region's **fixed-income securities markets** have grown over the past two decades, but this growth has not kept pace with emerging Asia and OECD countries, so these markets remain relatively small (in 2017, public and private domestic debt amounted to 48% of GDP in the five Latin American and Caribbean countries that have the most developed fixed-income securities markets, compared to 72% in emerging Asia and 93% in OECD countries). Growth of these markets has been fueled primarily by two drivers: public debt issues and issues in U.S. dollars by a handful of large corporations. With regard to the former, local currency bond markets have increased their volume and extended yield curve maturities. The most positive trend in the region is the construction of reference interest rate curves with longer term issues of domestic public debt, which has facilitated development of the corporate debt market. As for the latter, corporate bond markets have grown but remain limited in scope: very few companies issue bonds, and the average corporate bond issue in Latin America and the Caribbean is less than 2% of GDP. Conditions vary from country to country within Latin American and the Caribbean. Bond markets in Peru and Colombia amount to 22% and 28% of GDP, respectively, while the market in Brazil is over 104% of GDP.

Meanwhile, **equity markets** (stocks and other) are still small and not very liquid. Capitalization of stock exchanges in the region is no more than 36% of GDP, versus over 71% in OECD countries and 95% in emerging Asia. There are disparities in market development across the region: depth is 93% and 43% in Chile and Brazil, respectively, while in Costa Rica it is below 5% and in many other countries securities exchanges are practically nonexistent. Beck (2016) shows that stock market liquidity levels are low, in many cases below potential for the economies. For example, it should be around 15% in Argentina (versus 2.5%), around 32% in Mexico (versus 24%), and around 10% in Peru (versus 5%).

**Untapped stock market development potential in Latin America and the Caribbean  
(as a percentage of GDP, 2016)**



Source: Beck, T. (2016).

The lack of development of securities markets in the smaller economies of the region can be attributed to the dearth of corporations large enough to go public (Borensztein et al., 2006) and the lack of long-term institutional investors to provide the liquidity these markets require. Lastly, derivatives markets are practically nonexistent in the region except in Brazil, Chile, and Mexico, which have modest volumes of operations of interest and exchange rate hedging instruments (BIS, 2019).

Source: Data from World Bank Development Indicators (2019).

**Box 5. Constraints on financial institutions' ability to provide long-term finance**  
[\[Return to main text\]](#)

Lack of long-term funding is one of the main limitations on financial intermediaries' ability to offer long-term financing in banking systems in the region. Financial intermediaries fund their lending activities with deposits from savers and local and foreign corporate debt to offer credit to the economy. Financial intermediary deposit bases are mainly short-term (up to 90 days), which limits their ability to offer longer financing terms without running into term mismatch risks. This is due to high informality rates and low levels of use of the formal financial system to channel savings. Financial intermediaries also fund themselves with corporate debt, but most of this debt is short- and medium-term (up to five years), which hinders the ability to finance long-term projects. This can be attributed to: (i) the low level of development of domestic debt markets with investors willing to take on longer-term debt; (ii) the lack of an international risk rating that limits outflows to international markets; (iii) the lack of access to risk management mechanisms to control exchange risk exposure in the case of long-term debt in foreign currency; and (iv) the scarcity of securitization mechanisms whereby financial intermediaries can mobilize funding if they have long-term credit on their balance sheets. Other drivers associated with preferences for shorter term financing from financial intermediaries include greater uncertainty stemming from market risk and macroeconomic volatility with implications for the long term and greater regulatory capital requirements for longer term loans.

**Box 6. Main constraints in the region on capital markets' and institutional investors' participation in infrastructure financing**  
[\[Return to main text\]](#)

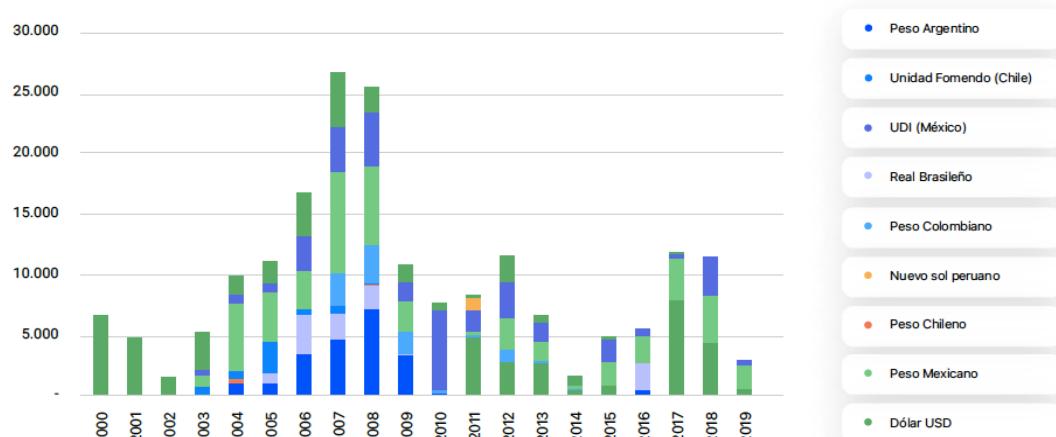
Financial-sector-related obstacles to greater involvement of private investors in the region notably include: (i) low sovereign, sub-sovereign, and public service company ratings, which increase counterparty risks; (ii) lack of long-term sovereign debt issues that provide a point of reference for evaluating long-term assets; (iii) difficulties in issuing listed bonds without first having a financial history for a special purpose entity; (iv) taxes on special purpose entities that make the financial structure unattractive; and (v) lack of legal protections for infrastructure investment as an asset class.

**Box 7. Securitization markets in Latin America and the Caribbean**

[[Return to main text](#)]

As a whole, Latin America and the Caribbean is a very residual part of the global securitization market. In 2018, the region accounted for 6.0% of global GDP and just 0.9% of the total securitized volume that year (Schopflocher et al., 2019). Within the region, conditions vary widely in terms of development and volume of asset securitization markets. Mexico, Brazil, and Argentina account for 75% of the regional securitization market in the last decade. Securitization is very spotty in all other countries except Colombia, Peru, and Chile. Mexico issues the most mortgage-backed securities by volume, followed by Colombia. Brazil, Chile, and Argentina have issues, but generally the average size of those issues is low, and there is no liquid secondary market.

**Securitization volume in Latin America and the Caribbean (in millions of U.S. Dollars), 2000-2019**



Fuente: Dealogic y Fitch (2019)

The main drivers of the limited presence of securitization markets are the limited depth of the interbank market and the lack of long-term interest rate yield curves with positive slopes. Another factor that constrains development of securitization in Latin America and the Caribbean is the lack of private savings channeled to securitization products, either due to low coverage of pension systems or guidelines or regulations that do not let pension funds invest.

Source: Prats, (forthcoming, 2021).

**Box 8. Barriers to development of green bond markets in the region**

[[Return to main text](#)]

There are three specific barriers to this financial instrument, namely: (i) higher transaction costs; (ii) lack of standardization; and (iii) high monitoring costs. First, higher transaction costs are only justified for larger issues, which are also preferred by institutional investors, which dominate bond purchases in this market. Second, there is a lack of knowledge and consensus about issue procedures. The lack of standards and taxonomies for green issues reduces incentives of potential issuers to enter the market. On the demand side, there is also a lack of knowledge on how to incorporate these products in their investment decisions. Third, reporting on projects carried out with the funds raised is still at an early stage, which reduces the transparency required by the market and therefore impairs debt market development.

Source: EU-LAC Foundation (2020).

**Box 9. Impact of fintech companies on sector competitiveness in the region**  
[\[Return to main text\]](#)

Digital financial service offerings bring models of collaboration and competition between established players and new actors. So far, competition has not been high because fintech companies tend to focus on providing services (payments and loans) to market niches (low-income groups and MSMEs), where the traditional financial sector has less of a foothold. Most fintech companies in the region focus on loans to under- and unserved segments of companies, so they have had a very limited disruptive impact on traditional bank operations. Services offered by fintech companies are services that banks do not offer to their smaller corporate clients. For that reason, there is complementarity, and digital solutions are, for now, occupying a space not served by traditional financial institutions. That said, competition between traditional and nontraditional providers, though nascent, is emerging. For instance, purely digital banks are cropping up, directly competing for traditional bank customers and attracting new ones due to their technological advantages and low-cost services. Similarly, digital lenders now compete directly with informal money lenders, microfinance institutions, and small banks in both payment and credit, for low-income individuals and MSMEs.

Source: Sahay et al. (2020).

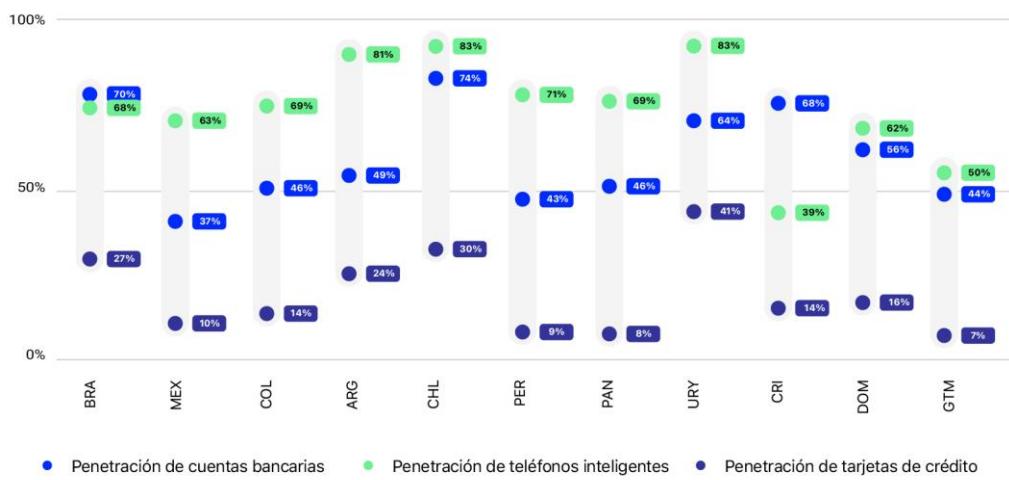
**Box 10. Digital payments and remittances in Latin America and the Caribbean**  
[\[Return to main text\]](#)

Fintech has the potential to improve efficiency and lower the cost of international transfers. Remittances are a significant source of revenue for many countries in the region, especially smaller countries (El Salvador, Haiti, Honduras, and Jamaica), which receive remittances in excess of 15% of their GDP. In Latin America and the Caribbean, banks are the most expensive way to send money at 10% of the amount sent, while money transfer operators entail a cost of 6.2%. One of the SDG targets set by the United Nations is the reduction of transaction costs for remittances (to less than 3% and the elimination of remittance corridors with costs higher than 5% by 2030). In 2017, the region received US\$80.5 billion in remittances, so decreasing the cost of sending remittances would entail a significant increase in the resources received in the region. Despite the high volume of remittances to the region, fintech activity related to international payment solutions remains limited. Though digital payment solutions are very important for fintech companies in the region, just 13 companies work with international payments (4% of the total). Limited use of mobile money services and low levels of fintech activity mean that the cheapest ways of sending remittances are not widely available in the region. An enabling regulatory environment would help stimulate the development of fintech solutions for remittances in Latin America and the Caribbean. Some global fintech companies that focus on international payment services have launched operations in the region, such as World Remit (from the United Kingdom), which already operates in nearly all countries in the region, and TransferWise (from the United States), which operates in Brazil, Chile, and Mexico, which is helping provide more cost-efficient payment alternatives.

**Box 11. Fintech and digital financial inclusion improvement channels**  
[\[Return to main text\]](#)

Fintech development improves digital financial inclusion through several channels. First, fintech facilitates market entry of new, nonbank players that offer financial products more tailored to customers who are unbanked or underserved by the traditional banking system. Second, use of AI [machine learning](#) and big data makes it faster and less expensive to evaluate the risks of credit applications (Jagtiani and Lemieux, 2018). Data collected digitally, including e-commerce and data from transactions using mobile phones, can complement or replace traditional methods for identifying and assessing credit risk and improving credit opportunities for low-income groups or groups operating in the informal economy, through alternative credit evaluation algorithms whose development continues to show great promise. At the productive level, lowering financing costs benefits MSMEs in particular, which use bank loans less than large corporations because of their high interest rates and fees (Martínez-Peria and Singh, 2014). Third, fintech provides services that are simpler and more efficient for users, which helps develop business models to serve underserved markets.

The state of financial and digital inclusion in Latin America, 2019



Source: World Bank Global Findex, GSMA, local sources, and Americas Market Intelligence (AMI) analysis.

**Box 12. Gender gaps in financial inclusion and access to finance**  
[\[Return to main text\]](#)

Financial inclusion of women remains a challenge. Despite efforts to increase financial inclusion in recent years, estimates indicate that just 52% of women in Latin America and the Caribbean have a bank account, 37% have a debit card, 10% have formal savings, and 9% have taken out a loan from a financial institution ([Global Findex, 2022](#)). The region has the largest share of self-employed women worldwide, and one third of the companies in the region are women-led ([IFC, 2011](#); [Elam et al., 2019](#)), so improving women's financial inclusion so they can invest in their families and companies and better respond to emergencies without having to sell accumulated assets is key to improving their financial empowerment and economic growth ([World Bank, 2016](#)). Furthermore, narrowing gender gaps in access to finance would foster greater stability and resilience in the banking system, enhance long-term economic growth, and contribute to more effective monetary and fiscal policy ([Sahay and Cihak, 2018](#)). However, many traditional financial products do not have value propositions that are attractive to unserved women, whose demand is highly sensitive to rates and lack of proximity ([Financial Alliance for Women – FAFW, 2016](#)). Understanding the limitations of supply and demand is vital to addressing the financial exclusion of women. Along those lines, there is a systematic lack of sex-disaggregated data at both the public- and private-sector levels. This adversely affects efforts to improve financial inclusion ([Pailhe, 2016](#); [Andrade, 2019](#)). Easy-access, low-cost digital financial services, especially payments, provide a solution to these challenges, enabling women to change to formal financial services that are better tailored to their needs and represent an opportunity for tapping the economic and social benefits of reducing the gender gap and improving women's financial inclusion ([ICRW, 2017](#); [GPFI, 2020](#)).

**Box 13. Use of mobile money in Latin America and the Caribbean**  
[\[Return to main text\]](#)

Mobile money penetration in the region is low; just 7% of adults in the region say they have a mobile money account, which is the lowest rate of all emerging regions. In 2021, the region had 27 mobile money services with 26 million open accounts, but only 13 million accounts were active ([Global Findex, 2022](#)). Though most Latin American and Caribbean countries have some enabling regulation for mobile money, the ease of opening a mobile money account varies, including simplified remote opening, and the region has not built ecosystems that facilitate digital transactions. The rapid proliferation of smartphones in the region means that developers can design better products than those that can operate through text messaging on low-end phones. Coupled with the rise of dynamic fintech, this poses an opportunity for the region to jump to more sophisticated digital transaction platforms with an ecosystem approach that addresses the weak points of all stakeholders in the digital payment chain. One example of this trend is the boom in e-wallets, offered by both fintech companies and banks.

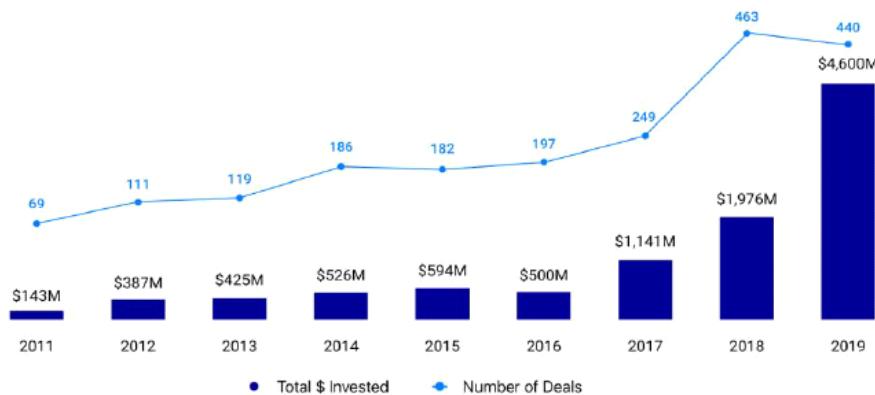
**Box 14. The impact of economic crises on fintech companies in the region**  
[\[Return to main text\]](#)

COVID-19 was the first significant test of the long-term sustainability and solvency of many of the region's fintech companies, which had not previously experienced an economic crisis. The main financial and operational difficulties faced by fintech companies are: (i) tighter funding conditions, especially for companies with more limited liquidity; (ii) decrease in consumption, which entails a drastic decline in revenue for many companies; and (iii) digital lending's strong focus on small lenders, the segment most adversely affected, relatively speaking, due to the crisis, where portfolios can deteriorate significantly. This can lead to a consolidation process that results in a more concentrated fintech sector, which could entail a decrease in access to finance for low-income individuals and microenterprises. In some cases, it could mean that some companies become insolvent or suspend financial services, which could jeopardize the progress made in digital financial inclusion.

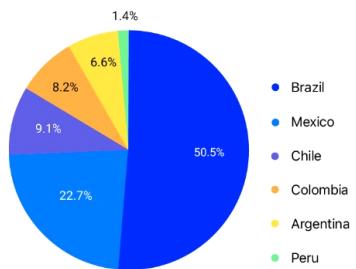
**Box 15. Fintech and venture capital in Latin America and the Caribbean, 2019**  
[\[Return to main text\]](#)

Venture capital and venture debt are still both very limited in the region, but at the same time the region's largest fintech companies have had financing rounds worth multiple millions since 2019.

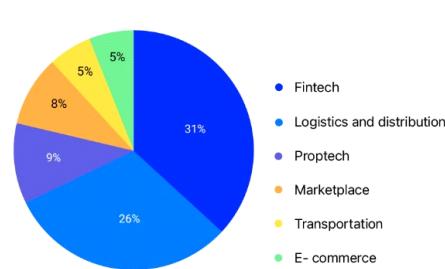
Investments through venture capital have been growing in the region.



Concentrated in 5 countries



Fintech is the most capitalized sector



Source: The Latin America Private Equity and Venture Capital Association (LAVCA).

**Box 16. Access to finance and labor formalization**

[\[Return to main text\]](#)

**Information and contract enforcement issues are more severe in environments where informal economic activity is high,** where economic agents do not have incentives to transparently disclose a portion of their revenues, workers, or assets. In these situations, financing costs can be very high. Given the importance of access to finance for productivity gains and decreasing informality, this can generate a vicious cycle of low levels of financing and productivity and high informality rates.

**Evidence shows that increasing access to finance is associated with greater formalization in the region.** In the case of Peru, Morón et al. (2012) find an effect of credit growth on formalization only for the self-employment category and firms with more than 10 workers. For Colombia, Caro et al. (2012) find that a 10% increase in the ratio of credit to sector output increases labor formality by 0.76-1.14 percentage points. Meanwhile, Gandelman and Rasteletti (2017) suggest that financial restrictions affect investment decisions in Uruguay: a one-percentage-point increase in credit translates into a one-half percentage-point increase in investment. Though their results suggest that informality does not have a direct impact on firms' decisions, they do find that it has an indirect effect through the financing channel.

**Box 17. Evidence of policies for improving access to finance by instrument type**

[Return to main text, paragraph 3.8]

[Return to main text, paragraph 3.10]

**Guarantee instruments have been shown to have a positive impact on access to finance.** Larraín and Quiroz (2006) evaluated the Guarantee Fund for Small Business Owners (FOGAP) in Chile and found that the guarantee increased the likelihood that a small business would obtain a loan from banks participating in the program by 14%. Meanwhile, Giuliodori et al. (2019) examined the effect of guarantee programs on SMEs in Argentina, through mutual guarantee companies. They found that these guarantees have a positive impact, increasing the probability of having a loan from a financial institution by between 7.9 and 27.3 percentage points, depending on the term. They also found that medium- and long-term guarantees had an impact on a firm's survival probability and job creation.

**Partial guarantee arrangements can also have a positive impact on company development.** Companies that access credit through national guarantee funds, as in the case of Colombia, showed that they were able to grow more in terms of production and employment (Arraiz et al., 2014).

**Blended finance, as an approach to structuring investment, can take many forms and aims to mobilize additional financing** (Convergence, 2019). Funds and facilities are launched by public and private investors to finance—using debt or equity—private sector projects that have both a positive development impact and expected positive financial returns. The mobilization of additional financing toward sustainable development is facilitated by three core features of blended finance,<sup>2</sup> namely, its ability to: (i) mitigate the risk of the investments (through guarantee or first-loss mechanisms); (ii) enhance the risk-adjusted return for investments (earnings can be distributed to each investor in a waterfall structure, with previously agreed differing levels of returns); and (iii) improve the capacity and knowledge of the investees (thanks to the implementation of technical assistance programs).

**Support for blended finance can help develop long-term resilience, make the recovery more sustainable, and, ultimately, align it with the SDGs and the Paris Agreement (OECD, 2018).** Blended finance is an important window for supporting SMEs in low- and middle-income countries, given the scale of the reconstruction effort required in the recovery stages (Attridge and Lengen, 2019; Baudino, 2020). Blended finance has also been identified as a fundamental catalyst for disseminating innovation, particularly the adoption of climate technologies, digital technologies for various sectors, enabling companies to leverage efficiency gains in their day-to-day business, improve resilience, and in turn, increase their access to potential private investors (FAO, 2020, [Tonkonogy et al., 2018](#)).

**Financial instruments have certain merits with respect to fiscal policies such as being considered capable of generating a better return, market-oriented, and able to leverage additional private funds** (Bondonio and Greenbaum, 2014). The attraction of these mechanisms, compared to support in the form of subsidies, has been widely studied, identifying lower cost levels (Begg, 2016), the potential to do more with less (Dąbrowski, 2015) and to serve as a more sustainable policy execution modality according to evaluations by the European Union (Wishlade et al., 2016).<sup>3</sup> While the potential adverse effects that can arise include the crowding out of the private sector, or capture by the private sector, and the fiscal cost (implicit or explicit), if they are carried out at below-market prices. Therefore, the interventions associated with these policies should properly correspond to the targeted market failure to thus maximize the economic development effect of the fiscal resources devoted to these policies.

<sup>1</sup> Blended or concessional finance is defined as financing from donors or third parties alongside development financial institutions' normal own account finance and/or commercial finance from other investors, to develop private sector markets, address the SDGs, and mobilize private resources ([DFI, 2022](#)).

<sup>2</sup> See the development of the finance institutions' principles of blended finance at [link](#).

<sup>3</sup> For this reason, they have been strongly promoted by international institutions like the European Commission.

**Box 18. Policies and programs to improve financial inclusion**  
[\[Return to main text\]](#)

In general terms, financial inclusion policies aim to provide access to individuals or companies to useful and affordable financial products that meet their needs—transactions, payments, savings, credit, and insurance—provided in a responsible and sustainable manner. With respect to access to credit, these policies are aimed at specific segments where the aforementioned constraints on access and market failures are exacerbated. Thus, vulnerable and poor populations turn to informal channels or their own resources for a large part of their financial transactions, including investing in education, tapping productive opportunities, or dealing with shocks (Allen et al., 2012). These alternate channels, outside the financial sector, end up being much more costly; thus, financial inclusion policies aim to promote formal credit. [Table 16](#) shows examples of public policy in the region beyond transfers to enhance inclusion in the financial market.

Inclusion policies can be aimed at specific segments, such as rural or remote areas. The aforementioned market failures impacting the credit markets in general are accentuated in rural areas, particularly with regard to the costs of information and contract enforcement (Hoff and Stiglitz, 1993), even more so for small loans. That makes it hard for banks and other financial institutions to be able to structure products that generate a return to offer them to a set of geographically dispersed business owners with wide-ranging activities, giving rise to another type of intermediary with greater local knowledge and different credit technologies that minimize the problems of information asymmetry and contract enforcement. Nonetheless, since the number of transactions is moderate, the average amount is low (due to the customers' low income levels), and transaction costs are quite high (given the geographic dispersion), the return for the financial institutions is low.

Some financial intermediaries have proven to be a fundamental channel for promoting rural credit in low amounts or microcredit, particularly in remote areas. However, they face numerous hurdles for expanding and serving their target market, despite their solid knowledge of producers' needs and their presence in the provinces, municipios, or towns. Given the low return, the equity of these institutions is insufficient, especially during their early stages of formation, so they do not meet the minimum requirements for the supervisory institutions. At the same time, creating and maintaining information systems on customers in the rural sector with robust technology platforms is costly due to the amount and number of transactions involved (there are no economies of scale), although this is gradually changing with technological advances through mobile channels. Lastly, the institutions not subject to supervision lack certainty about the flow of funds they will have in the future or security regarding the ultimate costs of the funds obtained. The foregoing factors lead to a low penetration by the financial system in the rural economy, particularly in sparsely populated areas.

The credit models associated with microcredit are based on multiple sources of income for a rural family unit (employment or production) and do not represent a single cash flow stemming from a rural productive project. These intermediaries generally do not ask for collateral in the form of real property, and the issue of land ownership rights loses relevance. The borrower's use of the loan or economic activity is also unrestricted, allowing the lender to wait until the results are satisfactory in terms of providing the rural population with access to financial products. The effects of the financing on formality lead to improvements in productivity, since they enable companies to expand, modernize, and innovate (OECD, 2015).

There is ample evidence on the impact of microfinance for increasing investment in assets, making it possible to start or grow a business, create greater opportunities, and diversify sources of income for households, as well as improve the management of consumption over time and the management of risks. Many evaluations and studies have been published over the last decade. The most recent in this area, as summarized in the bibliography, include Banerjee (2013); Banerjee et al. (2015); and Woutersen and Khandker (2014). There is evidence for Uruguay on the impact of bank credit on informality in employment; Néstor Gandelman finds that the effect is greater in the case of women and young workers.

**Box 18. Policies and programs to improve financial inclusion (continued)**  
[\[Return to main text\]](#)

There is also empirical evidence on the impact of public credit and technical assistance programs on financial inclusion. Thus, the probability of the beneficiary population accessing a loan increases with the credit and technical assistance programs. The impact evaluation of the San Juan II program shows that SMEs increased their probability of accessing credit by 23.6%, increased the amount of the loans once they had credit by 62.1%, and increased the number of banks to which they had access to debt by 70.1%. At the same time, the companies that took part in the program with the credit had a 3.4% decrease in default compared to the companies in the control group.

The market failures related to information asymmetries for risk assessment and insufficient collateral as guarantees are more severe in the case of MSMEs owned or led by women. For example, women tend to have fewer assets in their name and tend to be concentrated in the services sector, which impacts the availability of guarantees. Women also face specific barriers on both the supply and demand sides, further limiting their ability to access the financing necessary to start or grow their businesses. The supply-side limitations include: (i) lack of information from credit bureaus, which lack positive information; and (ii) gender biases of the financial institutions, both conscious and unconscious. The demand-side limitations include: (i) time and mobility constraints, limited access to information and networks; and (ii) lack of services with a value proposition adequate for women, due to the lack of data disaggregated by sex and the underestimation of women's preferences and attitudes toward finance.

The reduction of the financing gap for women is related to the impacts on the growth, development, resilience, and stability of the financial system. The most inclusive financial systems, in turn, can magnify the effectiveness of fiscal and monetary policies by expanding the financial markets and the tax base (Sahay and Cihak, 2018). In addition, reducing the financing gap for women improves their productivity, through better economic opportunities, since it gives them more control and privacy to manage their resources and allows them to invest in their families and businesses, and better address emergencies without having to sell accumulated assets (Kasts and Pomeranz, 2014). The evaluations on the effectiveness of programs that aim to empower women show differences in the effects based on characteristics such as age, economic level, and social restrictions. Nonetheless, these limitations, in addition to those faced by women, can be overcome by means of adjustments in the program designs to reduce family and social pressure (Buvinic and Furst-Nichols, 2014).

There are recent programs to address and reduce gender inequality. The financial institutions that have designed and implemented programs for MSMEs owned and led by women, according to the best practices to meet their needs, have shown that increasing the proportion of women-led MSMEs in the total loan portfolio does not reduce its quality or increase the risk of its overall portfolio. To the contrary, women-led MSMEs represent a valuable business opportunity for financial service providers (Financial Alliance for Women, 2019). For example, the default rate for women was 2.7% compared to 4.5% for men in the small business segment and 1.7% for women versus 3.3% for men in the medium-sized enterprise segment.

Among the policies for promoting gender inclusion, gender bonds are a promising financing vehicle for institutions committed to addressing and reducing gender inequality by improving women's access to finance, leadership positions, and equality in the labor markets. Gender bonds are any type of debt instrument where the proceeds are applied exclusively to finance or refinance, in whole or in part, eligible new or existing social projects (ICMA, 2020). They establish a framework of rules that ensure that the proceeds are used exclusively to achieve these objectives, as well as to fulfill the four components of the Social Bond Principles of the International Capital Market Association: (i) use of proceeds; (ii) process for project evaluation and selection; (iii) management of proceeds; and (iv) reporting. Therefore, gender bonds can increase the availability of resources for financing women-led MSMEs and contributing to the achievement of various SDGs. One advantage of gender bonds, like other thematic bonds, is that they make it possible to generate an impact without sacrificing financial returns, which facilitates the mobilization of private investment for sustainable projects and development.

**Box 18. Policies and programs to improve financial inclusion (continued)**  
[\[Return to main text\]](#)

The effect of fintech on development inequity comes from economies of scale. Recent evidence shows that as a result of digital innovations and technology-enabled business models in the financial sector, the fixed costs of intermediation are being reduced, favoring greater access to financial systems by those excluded (Philippon, 2019) helping to reduce inequity. While the use of Big Data and Machine Learning could reduce the bias toward certain minorities (Berg et al., 2019; Buchak et al., 2018), improving predictions with respect to credit bureaus, it could also cause a loss of effectiveness of current regulatory protection policies (Philippon, 2019).

**Box 19. The problem of market failures and MSMEs**  
[\[Return to main text\]](#)

Some of the problems of information asymmetries for SMEs are based on: (i) the lack of transparency of information from emerging companies and MSMEs (Berger and Udell, 1998; Cassar, 2004); and (ii) the lack of financial statements, financial audits, tax returns, or publicly available contracts with staff and suppliers (Carpenter and Peterson, 2002). In addition, most MSMEs lack collateral to offset inherent information asymmetries (Avery et al., 1998). Consequently, MSMEs cannot access traditional forms of financing, such as bank loans (Cosh et al., 2009) and in their place, they access internal sources or seek financing alternatives (Robb and Robinson, 2014; Rostamkalei and Freel, 2016). Internal sources of financing are sometimes limited and may hinder the company's growth (Binks and Ennew, 1996; Carpenter and Peterson, 2002; Beck and Dermiguc-Kunt, 2006). While the theory of market failures does not suggest that all companies should obtain capital, situations may arise where companies that could obtain financing in a perfectly functioning market do not. The meta-analysis in Cravo and Piza (2016) provides a summary review of studies on the impact of SME support measures and presents evidence that these interventions could improve company performance and create jobs.

**Box 20. Finance policies and instruments to eliminate restrictions on credit in the rural sector**  
[\[Return to main text paragraph 3.18\]](#)

**Among vertical policies, those targeting the agricultural sector aim to eliminate restrictions on credit in the rural sector and show impacts including increased investment and productivity.** In particular, this market is characterized as incomplete, and constraints on access to credit increase due to the confluence of some of the following circumstances: (i) high income volatility, resulting from price variations or as an effect of climate change; (ii) high operating costs for banks, limiting the returns on small loans; (iii) lack of linkages between small and medium-sized producers and the markets (limiting the possibility of generating credit information from the producer's income flow) and very small-scale crops generating low returns; and (iv) lack of credit products aligned with the generation of income from the crops. Available evidence shows the positive effects of eliminating restrictions on credit in the agricultural sector while facilitating the availability of working capital for investment in equipment and infrastructure and the adoption of technologies and practices aimed at improvement, leading to an increase in sales and productivity. Thus, Guirkinger and Boucher (2008) show that, in the case of Peru, access to credit increased productivity by 26%. Sidhu et al. (2008) also show the positive correlation between credit, investment, and productivity in India.

**Technical assistance has played a strategic role in the development of blended finance in the agrifood sector.** The dissemination of information, knowledge, innovation, and capacity-building among borrowers can reduce the risk of investments in a sector characterized by a high level of uncertainty and volatility (with respect to time, the market, and the climate). These technical assistance programs are generally financed or cofinanced through subsidies and may take the form of training, advisory support, studies, platforms, or facilitation of dialogue between key actors in a specific agrifood value chain. However, the idea of blending concessional finance with nonconcessional finance faces challenges such as reaching the "last mile" and impacting small farmers, and leveraging additional private capital, not just the capital from public development finance institutions (DFIs) (Attridge and Lengen, 2019). In 2018, the agriculture, forestry, and fisheries sectors represented 3.3% of all private sector investments mobilized by blended finance, or US\$1.4 billion (OECD, 2020).

**Public banks play a significant role in channeling resources to specific segments.** Recent studies on the **impact of credit on the agricultural sector** show effects in terms of improvements in the standard of living and poverty, employment and productivity, through the provision of financing through the intervention of public banks. Aparicio et al. (2021) evaluated the effectiveness of loans granted by a DFI to rural producers in Mexico and found significant positive effects on the value of the production and sales per hectare. This evaluation explored the potential difference in the effects between working capital and loans for fixed assets; it found that credit increased the probability that the producers would grow and sell their production, intensified the use of improved inputs, and drove a shift from unpaid to paid labor. Given that most of the effects seem to be driven by loans for working capital, this suggests that lack of liquidity is a more significant constraint for rural producers than financing for new investments. For their part, Echavarría et al. (2017), who studied the impact of credit programs on coffee producers in Colombia, through data from Colombia's National Agricultural Census, indicated that access to credit increased their productivity by 12%, while helping to reduce poverty by 0.3%. Other evaluations outside the region include Banerjee and Duflo (2014), who estimated the impact of a public bank's expansion of credit for medium-sized companies in India; Zia (2007) researched the impact of a reduction of subsidized credit on private companies; and Jiménez et al. (2017) estimated the effects of government loans to companies during a credit crisis.

**Box 21. Public policy measures in response to crises such as the COVID-19 pandemic**  
[\[Return to main text\]](#)

In general, the region's monetary, financial, and fiscal authorities addressed the arrival of the COVID-19 crisis with active policies to support liquidity in the short term, lowering interest rates and statutory reserve requirements, injecting liquidity by purchasing public and private debt instruments (bonds), and even supporting special lines of credit to financial institutions to finance and refinance SMEs affected by the pandemic. The region's financial authorities also approved a greater tolerance and transitory provisions to respond to default. Some examples of measures adopted in the context of this crisis are presented below.

**Measures to support flexibility in monetary policy:**

In addition to the traditional measures used by central banks, the measures to support flexibility in monetary policy can create or increase liquidity in the economy, such as the reduction of monetary policy rates, the purchase of public debt, or the reduction of interest rates on rediscount lines; this crisis has driven the implementation of more innovative policy measures that help enhance the impact of the conventional measures.

The following are examples of measures that can be amplified by the innovations:

**1. REPURCHASE AGREEMENTS**

With the acceptance of corporate bonds, insurance, and commercial paper to offer greater liquidity, the focus is on large corporations. MSMEs struggle to access financial instruments in times when there are no crises. During financial or economic crises, or both, financing for these types of firms becomes even more scarce, and at times reaches a point of there being no access to traditional lenders. All of the measures proposed below assume that the financial supervisor/regulator will allow the use of countercyclical buffers to increase credit when they are applied to private banks. The main idea is to mitigate the damage to the economy, reverse the measures when necessary, create sunset clauses, draft clear regulations, and allow companies to survive as if there were no crisis or help them prepare to deal with it. A series of policy instruments that could be considered is presented below.

**2. SWAP LINES FROM LOCAL BANKS IN LATIN AMERICA AND THE CARIBBEAN TO THE UNITED STATES**

With the United States Federal Reserve, ensuring greater liquidity through the exchange of holdings in U.S. Treasury securities for loans in dollars.

**3. BACKING FOR BRIDGE LOANS**

Central Banks could act as a support mechanism for fiscal measures, which would entail coordination with the respective authorities.

**4. GUARANTOR OF LOANS FOR MICROENTERPRISES AND SMALL BUSINESSES**

Issue money to lend to local governments in Latin American and Caribbean countries or through a national development bank or government agency, to disburse specific loans for microenterprises and small businesses, with maturities of up to five years at subsidized rates.

**5. FINANCIAL MEASURES AND INSTRUMENTS**

Proposals to combine and direct resources that involve the public and private sectors, implemented through an established or temporary development agency. Some examples are: a window for managed bridge loans; formal facilities for microenterprises; restructuring facilities; lines for the repurchase of assets and guarantee funds; loans for restructuring, lines for amortization of loans; or lines for capital injection.

For a more exhaustive review of measures adopted in response to the COVID-19 crisis in the region, see: Diego Herrera (2020).

**Box 22. Evidence for housing and infrastructure financing policies**

[[Return to main text paragraph 3.24](#)]

[[Return to main text paragraph 3.25](#)]

Among public policies to promote **financing for housing** are those aimed at developing the mortgage market and those that increase the supply of financing. The former are explained by the limited development of the financial market in the area of housing, due to the lack of deep capital markets and access to financing for housing (Prats, 2020). The areas of action in the primary market include: (1) the supply of products such as: (i) mortgage insurance or first-loss guarantees, to mitigate the risks of financial intermediaries' customer portfolios (Rojas and Medellín, 2011); (ii) securitization of mortgages or "covered bonds," to reduce the levels of reserves and capital required on financial intermediaries' balance sheets; (2) prudential regulation that promotes benefits with respect to financial institutions' levels of reserves to promote participation and credit for housing; (3) regulations to attract domestic and foreign institutional investors over a long-term horizon: pension funds,<sup>4</sup> insurance companies, and investment companies (see Table A below, for a description of the actions by country); and (4) promotion of the secondary mortgage market, where the government's role consists in providing incentives to encourage originators and other participating agents to meet certain standards that help create a stock of mortgages that can be securitized; and provide government guarantees (González Arrieta, G. M., 2005). There is evidence of the impact of policy reforms, such as those of the pension system and mortgage securities market in Chile, to reduce the housing deficit (Ruprah and Marcano, 2007).

To increase the **supply of finance for infrastructure**, a distinction is made between the **provision of instruments** for the financial sector that include the risk profile of the financing; and the **attraction of private sources of financing** (Prats, 2020). Among the former, public development banks provide medium- or long-term loans, mortgage insurance and guarantees that preferably promote the construction and purchase of low- and middle-income housing (see Table B below). In their role of attracting private investment, public development banks rediscount mortgages and promote the issue of mortgage securities, making funds available on the mortgage market under more favorable conditions in terms of maturity and cost, and encouraging participation by private lenders, while reaching population segments with a more limited ability to pay (Obregón C., 2001).

<sup>4</sup> One well known model is the incorporation of resources aimed at housing development in the pension system portfolio, as is the case of the Pension Fund Administrators (AFORES) in [Mexico](#) and [Chile](#).

**Box 22. Evidence for housing and infrastructure financing policies (continued i)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A1. Examples of public policies to improve access to financing for housing in Latin America and the Caribbean**

Country	Program	Beneficiaries	Fiscal resources used	Characteristics
Costa Rica	Addition to Law 7558, the Basic Law of the Central Bank of Costa Rica, to exempt from the minimum legal reserve deposits used to finance long-term mortgage loans. Law 9149 of 2013.	No data	No data	This law applies to financing for housing credit in those cases where deposits have a maturity of no less than eight years. The deposit funds are used both to finance housing loans and to finance the loans considered in Law 7052 as amended for purchase, construction, promotion, improvement, or rehabilitation.
Peru	Bonos Familiares Habitacionales [family housing bonds] disbursed. "Programa Techo Propio"	20,644 households	US\$129,800,853.49	This is a program that provides financing for the purchase, construction, or improvement of housing for lower-income families. Aimed at families with monthly household incomes of less than US\$641.89 to purchase, build, or improve their home, which will have basic services of electricity, water, and sewer.
Peru	Techo Propio supplementary financing	883 households	US\$5,689,900.43	These families are included in the disbursed family housing bonds.
Peru	New Mivivienda credit	11,906 households	US\$506,401,137.98	Product of the Mivivienda fund offered through various financial institutions on the local market. Enables the purchase of any new or used housing with a value between US\$18,421.05 and US\$92,105.26, with a payment term of 10 to 20 years.
Argentina	Programa de Crédito Argentino (ProCreAr) urban development	34,000	US\$750 million Funds of the National Social Security Administration (retirement and pensions)	Middle-income population, Procrear Trust, Trustee: Banco Hipotecario, National Government
Argentina	Programa de Crédito Argentino – Individual loans	70,000	US\$1.3 billion Funds of the National Social Security Administration (retirement and pensions)	Middle-income population, Procrear Trust, Trustee: Banco Hipotecario, National Government
Panama	Preferential interest law	13,000	US\$65 million	Every dollar produced or generated in its operation has a multiplier effect of 3.31 on the economy.
Panama	Real property exemption law	8,850	US\$25 million	Applies to all land and construction improvements on that land in the national territory.
Panama	Housing Solidarity Fund (Subsidy of US\$5,000.00 per family for their first home)	4,300	US\$21.5 million	Low-income and preferential housing with sales prices of up to US\$40,000.
Brazil	Financial System for Housing - SFH/FGTS (Time of Service Guarantee Fund)	Low- and middle-income public.	Average of US\$6 billion in fiscal resources per year (US\$2 billion per year in discounts generated by the FGTS). Private source of compulsory savings	Income of US\$1,106 to US\$1,473 and real property of up to US\$40,500 with an annual interest rate of 6%. Income of US\$1,474 to US\$2,250 and real property of up to US\$85,500 with an annual interest rate of 8.16 %. Commitment of 30% of income. Regulated by the National Monetary Council and the FGTS Board of Trustees.
Brazil	SFH/SBPE (Brazilian Savings and Loan System)	Middle-income public.	Does not include fiscal resources. (Private source of voluntary savings)	Real property of up to US\$337,500. Commitment of up to 30% of income. Interest rate limited to 12% per year. Regulated by the National Monetary Council.
Brazil	SFI (Real Property Financial System)	Middle-income public.	Does not include fiscal resources. (Private source – market)	Real property of over US\$337,500. Market interest rate (free). Regulated by the National Monetary Council.
Uruguay	Rental Guarantee Fund (FGA)	-	-	The FGA is a fund used to improve access to rent for maximum amounts of US\$632.90. The beneficiary should receive liquid income of between US\$449.60 and US\$3113.10, the guarantee should not exceed 30% of income, and the person may not be the owner. The cost of the guarantee is equivalent to 3% for the beneficiary and 3% for the lessor.

**Box 22. Evidence for housing and infrastructure financing policies (continued ii)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A1. Examples of public policies to improve access to financing for housing in Latin America and the Caribbean**

Country	Program	Beneficiaries	Fiscal resources used	Characteristics
Uruguay	Low-income housing law	-	-	Seeks to create an incentive for private investment in housing, in low- and middle-income sectors, for both sales and rentals. This law provides an exemption for a set of taxes for construction works and for the purchase of housing for rentals. About 238 projects have been development and approximately 9,392 housing units have been delivered.
Chile	Housing Solidarity Fund (FSV)			Established in 2002, this instrument allocates housing subsidies targeting the most vulnerable households.
Brazil	National Low-income Housing Fund (FNHIS)			The objective was to promote access to decent housing, starting with a comprehensive and participatory approach, for the low-income population that represented over 85% of the country's housing deficit. The program arose after 13 years of civil society mobilization advocating for the creation of a special fund for housing improvements for low-income groups.
Brazil	Minha Casa Minha Vida (My House My Life) program			In 2009, the Minha Casa Minha Vida (MCMV) program was created with the initial target of building 1 million homes, but it was subsequently increased to 2 million between 2011 and 2014.
Peru	Techo Propio (My own roof) program			The Techo Propio program provides the most vulnerable groups (with monthly incomes below US\$600) with a subsidy (Bono Familiar Habitacional [family housing subsidy]) that can cover between 40% and 90% of the price of the home, depending on its value and the selected modality (buy, build, or improve).
Peru	Fondo Mi Vivienda (My housing fund)			Promotes access to 30-year mortgage loans, with the possibility of covering up to 90% of the home's value. This fund provides about 6,000 loans annually, representing 25% of the country's mortgages.
Uruguay	Mutual Assistance Housing Cooperatives			"Housing cooperatives are those with the main purpose of providing adequate, stable housing to their members, through the construction of housing themselves, with mutual assistance, direct management, or contracts with third parties, and providing supplementary services."
Mexico	Housing Improvement Program (PMV)			The PMV was designated as a top priority above the new housing program and operates through the allocation of a loan to improve or expand housing. Each family is assigned an architect who provides specialized advisory support and administrative facilities in terms of permits and licenses.
Chile	Neighborhood Recovery Program			This program was designed in 2006 with the purpose of reversing the unwanted outcomes of prior housing policy periods in Chile. It is presented as a medium-term, comprehensive and participatory, cross-sector intervention in neighborhoods experiencing social and urban decline, but with installed social capacity.
Colombia	Metrovivienda			Create the conditions to facilitate access to formal land and affordable housing for the most vulnerable population in a way that is able to compete with the informal or illegal supply of land. Metrovivienda's strategy was to create a bank of properties with the mission of promoting the construction of low-income housing in the city.

Source: Inter-American Federation of the Construction Industry (FIIC) - Secretariat - Commission on Housing and Urban Development (Available [here](#)) and ECLAC (2015), Towards universal social protection. Latin American pathways and policy tools (Available [here](#)).

**Box 22. Evidence for housing and infrastructure financing policies (continued iii)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A.2. Examples of housing sector programs in public development banks in Latin America and the Caribbean**

Country	Public development bank	Programs
<b>Specialized in the housing sector</b>		
Mexico	Sociedad Hipotecaria Federal ( <a href="#">SHF</a> )	Microfinance for housing, financing for assisted self-production, financing for small rehabilitation and improvement projects.
Mexico	Institute for the National Worker Housing Fund ( <a href="#">Infonavit</a> )	Green mortgage, Sustainable housing: Infonavit comprehensive life, Fund to increase density and location of housing, Smart communities, quality coverage, Comprehensive credit (housing construction in Line III packages), and Mortgage with services.
Peru	<a href="#">Mivivienda Fund</a>	Techo Propio program, New loans for MIVIVIENDA, MICONSTRUCCION, MISMATERIALES.
Panama	<a href="#">Banco Hipotecario Nacional</a>	Mortgage Loans.
Costa Rica	<a href="#">Banco Hipotecario de la Vivienda</a>	Credit programs, Comprehensive Housing Finance Program for Middle-income Families.
Honduras	<a href="#">Banco de la Producción y la Vivienda (Banprovi)</a>	First tier long-term investment loan programs and second tier credit and rediscount programs for home purchase, construction, or improvement.
<b>Multisector programs that serve the housing market</b>		
Colombia	Financiera de Desarrollo Territorial ( <a href="#">Findeter</a> )	Credit and rediscount.
Paraguay	Agencia Financiera de Desarrollo ( <a href="#">AFD</a> )	First home, Mi Casa.
Brazil	Banco Nacional de Desenvolvimento Econômico e Social ( <a href="#">BNDES</a> )	Plan Brasil Mayor (PBM).
Uruguay	Banco República del Uruguay ( <a href="#">BROU</a> ) and Banco Hipotecario del Uruguay ( <a href="#">BHU</a> )	Mortgage loans.
El Salvador	Banco de Desarrollo de El Salvador ( <a href="#">Bandesal</a> )	Trust for the Economic Recovery of Salvadoran Enterprises (Firempresa).
Chile	Banco del Estado de Chile ( <a href="#">Banco Estado</a> )	Financing for new or used homes.
Ecuador	Banco de Desarrollo del Ecuador B.P. ( <a href="#">BDE</a> )	Low-income housing projects, mixed housing projects.

Source: Prepared by the author.

**Box 22. Evidence for housing and infrastructure financing policies (continued iv)**

[[Return to main text paragraph 3.24](#)]

[[Return to main text paragraph 3.25](#)]

**Public policies for the development of private investment in infrastructure distinguish regulatory policies and investment promotion in relevant infrastructure.**

In the regulatory framework, the **evolution of laws on the capital market** has helped boost investment by private investors in infrastructure assets (see Table A below). These laws include the new Capital Market Law (27,440/2018) in Argentina, the reforms of the Securities and Capital Markets laws in Chile in 1996, Colombian Law 1676 of 2013, which improved access to credit through the capital market by expanding the types of assets that can serve as an underlying asset for marketable securities, the revision of Mexico's Securities Market Law of 2019, to eliminate barriers to available instruments and revitalize and boost participation by institutional investors, and Decrees 861 and 862 of 1996, which established the Securities Markets and Investment Funds Laws in Peru. Also the development of regulatory frameworks for public-private partnerships (PPPs) (Argentina, 2017; Brazil, 2014; Chile, 1991; Colombia, 2012; Mexico, 2012, updated in 2018; Peru, 2008) has driven participation by the private sector in infrastructure projects, and reforms of the financial systems such as the Law to promote investment in capital funds in infrastructure (Brazil, 2007, with tax exemptions, the Funds Act in Chile, 2014 to align the legal obligations of different types of funds) (Feal-Zubimendi, Soledad et al., 2019), the Productivity Law (Chile, 2016) have promoted the scope of participation by institutional investors such as pension funds.

The **measures for the promotion of investment in relevant infrastructure** are aimed at reducing or financing the risks associated with the construction or operation of PPP projects through financial products and credit enhancement instruments, generally implemented through public banks. The role of the public sector is focused on retaining the minimum risks necessary to attract private financing while maintaining financial viability (Prats, J. and J. Ketterer, 2019). These include market risks associated with refinancing costs in the event of an adverse evolution of interest rates, credit or counterparty risks due to losses caused by nonperformance of contractual payment obligations, and liquidity risks to address unexpected needs due to cost overruns, shifts in demand, or others. The instruments to leverage resources include project finance platforms and shared risk guarantee funds (BNDES, Brazil), subordinated debt and long-term guarantees to improve the senior debt rating (FND, Colombia), creation of infrastructure funds (BANOBRAS-FONADIN, Mexico) to boost investment in sectors, long-term loans, and contingent credit lines (NAFIN, Mexico (see Table B below)). Meanwhile, multilateral banks are contributing with the creation of bonds and guaranteed funds, securitization of debt, syndication and pooled lending, and platforms to attract institutional investors (see Table C below).

**Box 22. Evidence for housing and infrastructure financing policies (continued v)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A3 - Analysis of the regulatory evolution of financial systems and primary instruments in Argentina, Brazil, Chile, Colombia, Mexico, and Peru**

		Regulatory evolution	Financing instruments
Argentina	2015-2016	<ul style="list-style-type: none"> <li>Development of the legal framework for the RenovAr program.</li> </ul>	<ul style="list-style-type: none"> <li>Project bonds: created to support investments in infrastructure.</li> </ul>
	2017	<ul style="list-style-type: none"> <li>Launch of a new securities exchange, Bolsas y Mercados Argentinos (BYMA).</li> <li>Approval of the PPP framework law (27,328/2017).</li> <li>New Capital Market Law (27,440/2018) to improve the local market and financing.</li> </ul>	<ul style="list-style-type: none"> <li>Infrastructure trust funds: funds established to invest in infrastructure assets.</li> </ul>
	2018	<ul style="list-style-type: none"> <li>Regulation of project bonds by law (27,440/2018) and the resolutions of the National Securities Commission (CNV) 747/2018 and 726/2018, which reduce risks in public and private infrastructure financing through the creation of special-purpose vehicles (SPV).</li> </ul>	<ul style="list-style-type: none"> <li>Fondos Comunes de Inversión Abiertos (FCIA): mutual funds that include assets related to investments in infrastructure. In 2018, in Argentina, FCIA invested US\$160 million in infrastructure assets.</li> <li>Fondos Comunes de Inversión Cerrados (FCIC): mutual funds with a fixed maximum number of shares issued. As of 2018, there is only one FCIC in the CNV that is focused on infrastructure.</li> </ul>
	2004	<ul style="list-style-type: none"> <li>Law 11,079/2004 establishes general rules for bidding and contracting by a public-private partnership in the government context.</li> </ul>	
	2007	<ul style="list-style-type: none"> <li>Law 11,478/2007 gave rise to the establishment of the Equity Funds focused on Infrastructure (FIP-IE).</li> </ul>	
	2011	<ul style="list-style-type: none"> <li>Establishment of income tax benefits through Law 12,431/2011 for bonds issued to finance infrastructure projects.</li> </ul>	<ul style="list-style-type: none"> <li>Debentures: debentures have played an increase role in the financing of infrastructure projects in the capital markets, reaching a total of 174 issues between 2012 and 2018.</li> </ul>
Brazil	2012	<ul style="list-style-type: none"> <li>Law 12,766/2012 amended various laws, including the PPP Law, which made the legal system governing PPPs more flexible, allowing subsidies to be granted before the start of service delivery.</li> </ul>	<ul style="list-style-type: none"> <li>Private Capital Infrastructure Investment Fund (FIP-IE): a closed investment fund in which at least 90% of the capital must be invested in infrastructure sectors. As of 2018, approximately US\$1.5 billion in total assets were invested.</li> </ul>
	2016	<ul style="list-style-type: none"> <li>Creation of the Special PPI Secretariat to support the development of PPP projects and better coordinate with ministries, regulatory agencies, financiers, and concession holders.</li> <li>Prioritization of infrastructure projects eligible for tax benefits.</li> </ul>	<ul style="list-style-type: none"> <li>Loans Receivable Investment Fund (FIDC): Open or closed investment funds made up of financial securities backed by loans, leases, or accounts receivable. The BNDES Renewable Energies Fund is an example of this type of investment instrument.</li> </ul>
	2017	<ul style="list-style-type: none"> <li>Provisional Measure 777 allowing the regulation of long-term rates to reduce BNDES's subsidies for long-term rates.</li> <li>The National Monetary Council (CMN) issued resolutions 4,604/2017 and 4,661/2018 regulating the limits and conditions for investment by Loans Receivable Investment Funds (FIDC) and Real Property Investment Funds (FII) to promote demand by institutional investors in infrastructure related to financial instruments.</li> </ul>	

**Box 22. Evidence for housing and infrastructure financing policies (continued vi)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A3 - Analysis of the regulatory evolution of financial systems and primary instruments in Argentina, Brazil, Chile, Colombia, Mexico, and Peru (continued)**

		Regulatory evolution	Financing instruments
Chile	1991	<ul style="list-style-type: none"> <li>The Concessions Law established the framework for the establishment of PPP structures.</li> <li>Reform of the Securities Market Law, expanding opportunities for pension funds.</li> </ul>	<ul style="list-style-type: none"> <li>Securitized bonds: investment in infrastructure on the capital markets through securitized bonds. These have been used for concessions in which the project has predictable future revenues.</li> <li>Corporate bonds: Corporate bonds have indirectly financed infrastructure and are particularly relevant for purposes of sustainability, through the issue of green and social corporate bonds.</li> <li>Investment funds: In 2015, there were 10 investment funds dedicated to infrastructure, energy, and natural resources, with a total of US\$250 million in assets under management.</li> <li>Mutual funds: investment vehicles that bring together capital from individuals and legal entities to invest in traded securities, such as stocks, bonds, mortgage notes, investment funds, etc.</li> <li>Public infrastructure fund: According to its new strategic plan (2020), the National Development Fund plans to partner with the private sector to develop projects. To date, this fund has no investments.</li> </ul>
	1996	<ul style="list-style-type: none"> <li>Reform of the Capital Market Law, eliminating the barriers to the available financial instruments so institutional investors can invest in infrastructure projects.</li> </ul>	
	1998	<ul style="list-style-type: none"> <li>Amendment of the General Banking Law to increase the investment thresholds in public infrastructure concessions from 10% to 15% of the total assets of a financial institution.</li> </ul>	
	2001	<ul style="list-style-type: none"> <li>Law 19,769 made mutual fund and insurance investments more flexible.</li> </ul>	
	2014	<ul style="list-style-type: none"> <li>The Funds Law (20,712) established a framework law for the management of funds.</li> <li>The Productivity Law (20,956) revised the law on pension funds, further expanding the scope of the instruments in which pension funds are authorized to invest, including venture capital and private equity funds.</li> </ul>	
	2016	<ul style="list-style-type: none"> <li>Update of the Pension Fund Law that authorized alternative investments for pension funds, including private equity, private debt, infrastructure, and real estate.</li> </ul>	
	2017	<ul style="list-style-type: none"> <li>Law 21,082 gave rise to the creation of Fondo de Infraestructura S.A.</li> </ul>	
	2018		
Colombia	2010	<ul style="list-style-type: none"> <li>Issuance of Decree 2555, which defines and regulates all instruments and investments on the Colombian Securities Exchange (BVC).</li> </ul>	<ul style="list-style-type: none"> <li>Project and corporate bonds: Colombia has issued fixed-income debt securities to raise capital or finance infrastructure projects. These have included five green bonds and one social bond.</li> <li>Private equity funds: As of June 2018, 11 private equity funds devoted to infrastructure were recognized under Colombian law, for an amount of US\$5.6 billion in investments, of which 64% comes from pension funds.</li> <li>Debt funds: Private equity funds are currently the only vehicle for institutional investors to participate directly in infrastructure investments.</li> <li>Local currency credit fund: Credit line in Colombian pesos administered by FDN for international investors seeking infrastructure projects in the country.</li> <li>Green credit lines: The Green Protocol launched in 2012 led to four institutions launching dedicated green credit lines (Bancóldex, Findeter, Bancolombia, and Davivienda), for more than US\$800 million dedicated to green lending.</li> </ul>
	2012	<ul style="list-style-type: none"> <li>Creation of the National PPP Law.</li> </ul>	
	2013	<ul style="list-style-type: none"> <li>Law 1676 improves access to credit through the capital market by expanding the types of assets that can serve as an underlying asset for marketable securities.</li> </ul>	
	2014	<ul style="list-style-type: none"> <li>Amendment of the pension fund system to increase opportunities in private equity funds for infrastructure through Decree 816.</li> <li>Reduction of the withholding rate at source applicable to foreign securities and loans from 14% to 5%.</li> </ul>	
	2017	<ul style="list-style-type: none"> <li>Decree 119 allowing investment by international private equity funds without establishing a local office.</li> </ul>	
	2018	<ul style="list-style-type: none"> <li>The government provided clearer guidelines for lenders in the event that the government cancels a concession agreement, reducing uncertainty for investors in PPP projects.</li> </ul>	
	2019	<ul style="list-style-type: none"> <li>Amendment of the pension fund investment system that facilitates new automatic contributions by young contributors to high-risk portfolios, which include investment in infrastructure.</li> </ul>	

**Box 22. Evidence for housing and infrastructure financing policies (continued vii)**  
[\[Return to main text paragraph 3.24\]](#)  
[\[Return to main text paragraph 3.25\]](#)

**Table A3 - Analysis of the regulatory evolution of financial systems and primary instruments in Argentina, Brazil, Chile, Colombia, Mexico, and Peru (continued)**

		Regulatory evolution	Financing instruments
Mexico	1990	<ul style="list-style-type: none"> <li>Credit Institutions Law established to regulate bank activity.</li> </ul>	<ul style="list-style-type: none"> <li>Development Capital Certificates (CKDs): The primary structured instrument through which investments are made in infrastructure. As of 2018, the equivalent of nearly US\$9 billion issued through 78 certificates was invested in infrastructure projects through CKDs.</li> </ul>
	2005	<ul style="list-style-type: none"> <li>Securities Market Law - legal framework for the capital market.</li> </ul>	<ul style="list-style-type: none"> <li>Fiduciary Guarantee Certificates for Investment Projects (CERPIs): Securities whose funds are used to finance projects and invest in stock, commercial interests, or the financing of businesses, whether directly or indirectly, through one or more investment vehicles.</li> </ul>
	2012	<ul style="list-style-type: none"> <li>The public-private partnership law established conditions for the development of infrastructure projects.</li> </ul>	<ul style="list-style-type: none"> <li>Energy and Infrastructure Investment Trust (FIBRA E): Investment trusts that issue listed securities in the form of trust bonds or trust notes for investment in energy and infrastructure.</li> </ul>
	2014	<ul style="list-style-type: none"> <li>The General Securities and Credit Operations Law to regulate credit operations and issues.</li> <li>The Investment Fund Law to regulate investments in Mexico.</li> </ul>	<ul style="list-style-type: none"> <li>Corporate and project bonds: Fixed-income debt securities issued by corporations for the purpose of financing infrastructure or other types of projects.</li> </ul>
	2018	<ul style="list-style-type: none"> <li>The last update of the regulations of the Mexican Securities Exchange (BMV), which lists and regulates all capital market instruments.</li> <li>Amendment of the provision for the pension fund regulatory body, the National Commission for the Retirement Savings System (CONSAR), allowing greater investments by Retirement Fund Administrators (AFOREs) in investments in infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Private Investment Fund (FIP): Investors in Private Investment Funds for infrastructure are primarily pension funds and insurance companies. The instrument has a general focus, but some of their investments target infrastructure projects.</li> </ul>
	2019	<ul style="list-style-type: none"> <li>Revision of the Securities Market Law.</li> </ul>	<ul style="list-style-type: none"> <li>Real Estate Investment Funds (FIRBIs) and Securitization Trust for Investment in Real Estate (FIBRA): Tax-efficient real estate investment vehicles that generate regular income through dividends.</li> <li>Corporate bonds: When offered publicly, corporate bonds are traded on the Lima Securities Exchange (BVL) targeting the general public. When offered privately, they target institutional investors.</li> </ul>
Peru	1996	<ul style="list-style-type: none"> <li>Decree 861, which established the Securities Market Law and Decree 862 for the Law on Investment Funds and their Management Companies.</li> </ul>	<ul style="list-style-type: none"> <li>Trust: On the Peruvian market, the security trust is the most common trust. This instrument has been used in all types of businesses and in all economic sectors.</li> </ul>
	2008	<ul style="list-style-type: none"> <li>Establishment of the PPP framework (Law LD-1012).</li> </ul>	<ul style="list-style-type: none"> <li>Work progress certificates: Certificates issued by the government recognizing that the concession holder has reached a relevant construction milestone for the project and therefore is entitled to receive a future payment for this progress. Once this certificate is issued, the concession holder may trade this disbursement commitment with a government guarantee on the secondary market.</li> </ul>
	2013	<ul style="list-style-type: none"> <li>Law 30,050/2013, which strengthened the Peruvian Securities Commission.</li> </ul>	
Peru	2014-2015	<ul style="list-style-type: none"> <li>Adjustments to the PPP framework that make it more attractive for private enterprises.</li> </ul>	
	2016-2017	<ul style="list-style-type: none"> <li>Creation of two financial instruments, FIRBI and FIBRA, for real estate investments regulated by Law 30,532/2016, and Resolution 16/2017 of the Superintendency of the Securities Market (SMV).</li> </ul>	
	2017	<ul style="list-style-type: none"> <li>The consolidation of the capital market, especially with respect to investment funds, intermediation agents, trading platforms, and other small-scale instruments (Law 30,708/2017).</li> </ul>	
	2018	<ul style="list-style-type: none"> <li>Protection for PPPs from the effects of corruption schemes like Lava Jato.</li> </ul>	

**Box 22. Evidence for housing and infrastructure financing policies (continued viii)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A3 - Analysis of the regulatory evolution of financial systems and primary instruments in Argentina, Brazil, Chile, Colombia, Mexico, and Peru (continued)**

Sources:

**Argentina:**

- (1) "Plan y estructura de Proyectos PPP en Argentina." 2018. Ministry of Finance. Office of the President of the Nation.  
[https://www.argentina.gob.ar/sites/default/files/presentacion\\_ppt\\_espanol\\_riesgos\\_y\\_estructura\\_v280618\\_0.pdf](https://www.argentina.gob.ar/sites/default/files/presentacion_ppt_espanol_riesgos_y_estructura_v280618_0.pdf).

**Brazil:**

- (2) Feal-Zubimendi, Soledad et al. "Country Infrastructure Briefs: Southern Cone." 2019. Inter-American Development Bank (IDB).

**Chile:**

- (3) Concession System in Chile. 2015. Ministry of Public Works.
- (4) "Desarrollo País." Infrastructure Policy Council. 2020. CPI.

**Mexico:**

- (5) "¿Cómo Invertir?" 2020. BANOBRAS. <https://www.proyectosmexico.gob.mx/como-invertir-en-mexico/financiamiento/#comercial>.
- (6) "Cambios a la Regulación Financiera de las AFORES Estimulará Mayor Inversión en Proyectos Productivos." 2018. 7) Government of Mexico.  
<https://www.gob.mx/consar/prensa/cambios-a-la-regulacion-financiera-de-las-afores-estimulara-mayor-inversion-en-proyectos-productivos?idiom=eshttps://www.gob.mx/consar/prensa/cambios-a-la-regulacion-financiera-de-las-afores-estimulara-mayor-invers>.
- (7) "Certificados de Capital de Desarrollo (CKDes): Una Alternativa Real de Financiamiento." 2014. Deloitte.

**Peru:**

- (8) "Las APP en el Perú". 2018. ProInversión.
- (9) Serebrisky, Tomás et al. "Financiamiento privado de la infraestructura en América Latina y el Caribe: Chile, Perú y Uruguay como casos de estudio." 2017. Inter-American Development Bank.

**General:**

- (10) A. Reymond et al. "Financing Sustainable Infrastructure in Latin America and the Caribbean: Market Development and Recommendations." 2020. IDB, South Pole, and SITAWI.
- (11) PPP Knowledge Lab. <https://pppknowledgelab.org/>.

**Box 22. Evidence for housing and infrastructure financing policies (continued ix)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A4 - Cases of public development banks and their role in infrastructure investment**

Institution	Country	Role in infrastructure investment
<b>Banco de Inversión y Comercio Exterior (BICE)</b>	Argentina	BICE has broad experience financing road, port, hospital, and airport infrastructure assets, with innovative financing structures tailored to the characteristics of each project. BICE provides advisory support on legal and financial matters to the various ministries and government agencies for the structuring of PPP projects, with the assistance of CAF, the World Bank, the IDB, and others for the recommendation of good practices and external validation. BICE is also a trustee of the Trust Fund for the Development of Renewable Energies (FODER), which facilitates financing for renewable energy projects through loans, capital contributions, and financing instruments.
<b>Banco Nacional de Desenvolvimento Econômico e Social (BNDES)</b>	Brazil	There are four priority areas of action: power generation, sanitation, urban mobility, and rail transportation. They were selected for their high development impact in the country and BNDES's potential to be highly competitive. BNDES's support for infrastructure can be provided through financing, stock, and the purchase of project bonds. It also assists the federal, state, and municipal governments in structuring privatization projects.
<b>Financiera de Desarrollo Nacional (FDN)</b>	Colombia	The FDN provides financial products that help reduce the financial costs of projects and facilitate access to bank and capital market financing, through long-term credit guarantees and senior and subordinated debt. Its figures for infrastructure project financing include: Col\$2.35 trillion net portfolio in 2019, Col\$3.1 trillion in cumulative disbursements, Col\$7.8 trillion in historical commitments.
<b>Banco Nacional de Obras y Servicios Públicos (BANOBRAS)</b>	Mexico	BANOBRAS provides financial solutions for the development of infrastructure and public utilities projects. It provides loans and guarantees to support the development of public-private partnerships and projects that have their own payment source from the operation of a concession or a public contract or the revenue from the service in question. The products offered by BANOBRAS include: Long-term credit, cofinancing, and syndicated loans for road and energy infrastructure; infrastructure financing through financial intermediaries (program); financial guarantees; guaranteed refinancing. BANOBRAS is also the trustee institution for the National Infrastructure Fund (FONADIN), whose purpose is to promote projects with a high social return with private sector participation.
<b>Nacional Financiera de México (NAFIN)</b>	Mexico	NAFIN has played a strategic role in the financing of renewable energy projects. To engage the private sector, it has offered a wide range of financing projects including long-term loans, contingent credit lines to cover temporary cash flow problems, guarantees, and other risk-sharing mechanisms.
<b>Corporación Financiera de Desarrollo (COFIDE)</b>	Peru	COFIDE is focused on financing investment in basic infrastructure to interconnect the country, increase its competitiveness, and improve the population's quality of life. In this sense, its objective is to contribute to the implementation of infrastructure for land transportation (road and rail), connectivity (airports and ports), energy (power plants, transmission lines, changes in the energy matrix), and basic services (drinking water and sanitation), etc. COFIDE supports financing in the infrastructure sector through various financial instruments such as: bridge loans, working capital loans, cofinancing, equity investment, enhancements and guarantees, and the purchase of debt instruments.
<b>Sources</b>		Prepared based on public information from each institution and other sources including: 1) C. Frischtak et al. "Towards a More Effective BNDES." 2017, World Bank. 2) R. Studart and K. Gallagher. "Infrastructure for Sustainable Development: The Role of National Development Banks." 2016. Global Economic Governance Initiative. Boston University.

**Box 22. Evidence for housing and infrastructure financing policies (continued x)**

[Return to main text paragraph 3.24]

[Return to main text paragraph 3.25]

**Table A5 - Examples of financial support solutions for multilateral development banks**

Instrument	Financial support solutions
Infrastructure project bonds	<b>Guarantee funds for bonds in hard currency:</b> The World Bank designed a package of measures to back the growth of the bond market for infrastructure projects in Colombia. This included the development of a new US\$70 million infrastructure fund that issues guarantees for bonds.
	<b>Guarantee funds for bonds in local currency:</b> The Credit Guarantee & Investment Facility (CGIF) is a US\$700 million guarantee fund created in 2010 with the support of the ADB as well as China, Japan, Korea, and ASEAN as part of the Asian Bond Markets Initiative.
	<b>Green Bond Facility:</b> The IDB's US\$400 million regional Green Bond Facility supports the issue of energy efficiency project bonds in local capital markets, with the support of the China Co-Financing Fund and the Green Climate Fund.
Securitization of infrastructure debt	<b>Support for credit enhancement:</b> Securitization can ease capital constraints and enable banks to expand loans for infrastructure. MDBs can help securitization by providing a credit enhancement for the underlying infrastructure loans used through guarantees, helping a financial structure secure an investment grade rating.
Syndication and pooled lending	<b>Securitization of infrastructure loans by MDBs:</b> the World Bank presented a proposal at the end of 2017 to create a refinancing mechanism for infrastructure loans in public sector infrastructure portfolios under the IBRD, financed by a combination of private investors and donors. The proposal does not use a traditional securitization model, but the results are similar. The mechanism would grant new loans to qualifying IBRD borrowers under the same terms as their original loan, whereby the borrowers would pay off their IBRD loans.
Platforms for attracting institutional investors	<b>Cofinancing platform:</b> A platform administered by an MDB in which investors, through a parallel lending platform, expect to invest in projects/programs that are fully diversified and originated by the multilateral development bank. The MDB would be the lender of record without transferring risks of default to the investors.  <b>Capital market access platform:</b> A platform that would concentrate unfunded risk participations (commitments) from the insurance market to back the issue of bonds by borrowers in the public sector, raising the credit rating of the issue to investment grade and attracting new institutional investors.
Sources	Prepared by the authors and other sources including: (1) C. Humphrey. "Channeling Private Investment to Infrastructure: What Can Multilateral Development Banks Realistically Do?" 2018. ETH Zurich Research Collection. (2) "Principles of MDBs' strategy for crowding-in Private Sector Finance for growth and sustainable development." 2017. IFA Working Group.

**Box 23. Evidence of policies for financing the alternative renewable energy sector and energy efficiency**

[\[Return to main text\]](#)

Due to the inadequate conditions and structural characteristics of the financial markets in Latin America and the Caribbean, certain sectors, such as the **alternative renewable energy sector** and **energy efficiency** are underserved or lack access to financing, limiting private investment. Studies in the area show that financing has a direct impact on increasing investment in alternative renewable energy. Brunschweiler (2010) argues that there is an intrinsic correlation between the level of investment in alternative renewable energy and the availability of financing. The study concludes that energy sector companies in less developed economies largely depend on external financing for their projects; this financing, in turn, is provided fundamentally by the banking sector, since the capital and venture capital markets are not sufficiently developed to provide funds on a large scale.

**Financial intermediation has a significant positive impact on the amount of alternative renewable energy generated, especially for wind, solar, geothermal, and biomass technologies.** A report by the United Nations<sup>5</sup> confirms that, in a crisis context, project developers in the alternative renewable energy sector scale down their investment projections, anticipating a lack of capital and higher hurdles and costs associated with access to credit. There is also evidence showing that investments in energy efficiency can provide a significant boost to overall productivity within each industry (Worrel, E. et al., 2003). For Colombia, there is evidence of gains in productivity, efficiency, and advances in innovation through new, energy-saving technologies in manufacturing by department (Pardo Martínez and Alfonso Piña, 2016). Batini, N. et al. (2021) found that investment in clean energies and conservation of ecosystems have a multiplier effect on GDP of between 2 and 7 times more than spending on nonrenewable energy sources, in addition to being more labor-intensive, thus providing an opportunity for resilience to be used in the recovery as part of the stimulus packages.

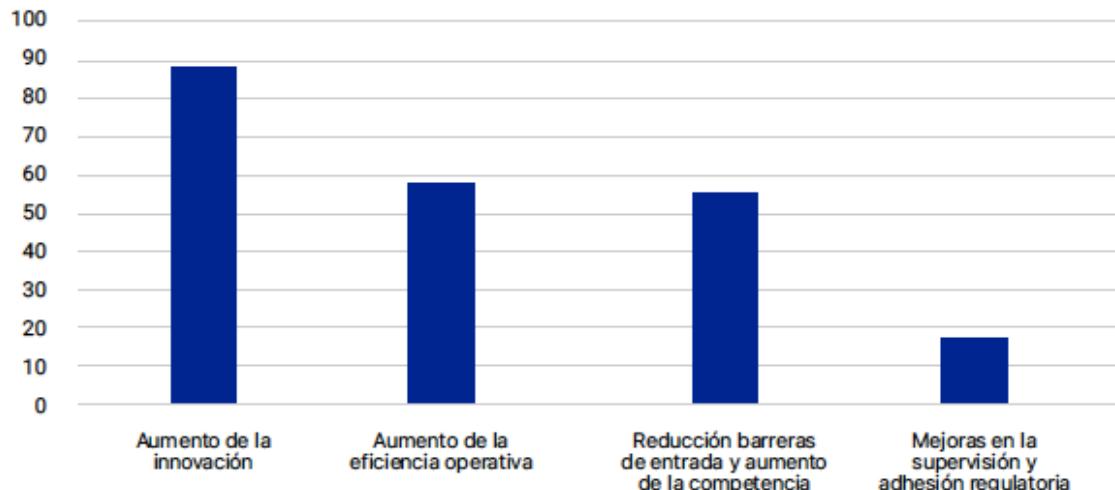
<sup>5</sup> The results are supported by empirical research based on UNEP surveys (2009).

**Box 24. Evidence on the efficacy of regulatory sandboxes**  
[\[Return to main text\]](#)

Appaya et al. (2020) review cases of implementation of regulatory sandboxes in multiple thematic areas, with digital financial services being the most prevalent (42 cases), followed by [blockchain](#) (7 cases), InsurTech (6), payment systems (6), digital financial services applied to securities (4), and others. The authors show that they can be useful for increasing regulators' understanding about new market conditions and their ability to facilitate and regulate the spectrum of fintech innovations. In particular, thematic regulatory sandboxes can be effective for stimulating the development of specific products, although they indicate that they are not the best option for evaluating innovations.

**There is no conclusive evidence on the correlation between the efficacy of a regulatory sandbox and the governing legal system** (civil law, common law, or hybrid systems). In general, from the regulator's viewpoint, regulatory sandboxes have provided an environment that is conducive to generating evidence supporting the formulation (correction, creation, definition) of policies. From the companies' point of view, they have generated an expedited way to gain a better and faster understanding of the regulatory environment and, from a macro perspective, generate a spillover onto the fintech ecosystem, favoring consumer-oriented products, while also sending a message to participants that the market is receptive to innovation. Regulatory sandboxes can also lead to new and greater risks, including the creation of artificial advantages, increased regulatory uncertainty, and the establishment of a structure whose costs exceed the benefits (particularly in markets with few participants). In the opinion of the participating regulators, as indicated by Appaya et al. (2020), 88% consider that regulatory sandboxes increase innovation; 58% believe they increase operating efficiency; reduce barriers to entry, and increase competition (55%); and enhance supervision and adherence to regulations (18%) (see figure below).<sup>6</sup> A more skeptical view with respect to the virtues stemming from the implementation of regulatory sandboxes is found in Buckley et al. (2020). They show that regulatory sandboxes are one of the possible alternatives for testing and learning, noting that major financial centers have opted not to introduce regulatory sandboxes and have turned to the use of regulatory waivers and pilot testing and evaluation mechanisms. In addition, most of the benefits attributed to the presence of a regulatory sandbox are due largely to the concomitant presence of **innovation centers**.

**Figure. Perception of benefits by regulatory bodies**



Source: Adapted from Appaya et al. (2020)

<sup>6</sup> Goo and Heo (2020) attempt a comparative and econometric analysis of countries that adopted a regulatory sandbox and a comparable control group that did not and argue that the results point to a positive effect of regulatory sandboxes on the growth of venture capital investment in fintech startups. However, the selection of the control group is supported by only one variable (World Economic Forum Competitiveness Index) and there is no statistical argument for the counterfactual validity of this group, so the analysis would be ultimately descriptive.

**Box 25. Evidence on the efficacy of macrofinancial policy instruments to favor stability in the sector**  
[\[Return to main text\]](#)

The first type of macrofinancial policy consists in the establishment of integrated management frameworks for public assets and liabilities. These allow the mitigation of the risk of destabilizing effects on financial systems caused by the set of macrofinancial risks, including contingent liabilities and those associated with natural disasters (IMF, 2012). This is achieved through the identification of disparities in the exposures on the sovereign balance sheets and the increase in resilience to risks. The interdependence of public finance makes it necessary to address these risks.<sup>7</sup> International experience in implementing these types of frameworks shows positive effects on the management of these risks. The management framework is still limited worldwide. Nonetheless, the countries that have implemented it have reported improvements in risk management on their sovereign balance sheets (Cangoz et al., 2018). Uruguay's experience stands out in the region with the implementation of a sovereign asset and liability management framework (Amante et al., 2019). This country's experience is particularly noteworthy in the control of significant exposure of fiscal revenues to variations in the exchange rate and price levels.<sup>8</sup>

The monetary policy instruments can be used in a countercyclical manner to deal with macrofinancial shocks. Thus, monetary policy can be used to support the management and regulation of liquidity risk through modifications to the provisions and capital reserves for deposits and loans by financial institutions (BIS, 2010), as well as the implementation of repo programs for securities held by banks (S&P Global Ratings, 2020). Moreover, the accumulation of international reserves by central banks during periods of capital inflows provides for greater exchange rate stability during periods of volatility. These measures enable financial institutions to have greater levels of available liquidity during episodes of macrofinancial instability, for the case of capital reserve policies; and, in the case of repo programs, to access emergency lines of finance to be able to maintain the supply of credit during episodes of low liquidity. Lastly, international reserve accumulation policies allow, through the lower volatility of the exchange rate, a reduction in the exposure of banks' and companies' foreign currency obligations, as well as contributing to the stability of prices in dollarized economies or those highly dependent on exports (Ocampo, 2009).<sup>9</sup> The recent COVID-19 crisis has shown the efficacy and scope of these measures to combat such shocks (S&P Global Ratings, 2020; Nuguer and Powell, 2020; and IMF, 2020). Most countries in Latin America and the Caribbean have implemented some type of these measures during the recent crisis.<sup>9</sup> See Table A.6 with the measures implemented by the region (S&P Global Ratings, 2020), Annex III.<sup>10</sup>

<sup>7</sup> Empirical studies show that vulnerabilities on sovereign balance sheets are associated with a greater likelihood of financial crises. Eichengreen et al. (2003).

<sup>8</sup> For this, the decision was made to distribute this risk optimally through various public sector institutions.

<sup>9</sup> See the digital repository of economic measures adopted in the region, prepared by ECLAC: COVID-19 Observatory in Latin America and the Caribbean: measures by country.

<sup>10</sup> The expansion of international reserves by most South American countries, especially Peru and Chile, particularly during 2006 and 2008, is noteworthy.

**Box 25. Evidence on the efficacy of macrofinancial policy instruments to favor stability in the sector (continued)**  
[\[Return to main text\]](#)

**A.6 Monetary policy actions adopted by Latin American and Caribbean countries to address the COVID-19 crisis**

Conventional monetary policies				
<b>Reduction of benchmark interest rates</b>	Antigua and Barbuda	Colombia	Honduras	Saint Kitts and Nevis
	Argentina	Costa Rica	Mexico	Saint Lucia
	Barbados	Dominica	Paraguay	Trinidad and Tobago
	Brazil	Grenada	Peru	Saint Vincent and the Grenadines
<b>Changes in reserve requirements</b>	Chile	Guatemala	Dominican Republic	
	Argentina	Colombia	Honduras	Trinidad and Tobago
	Barbados	Costa Rica	Jamaica	Uruguay
	Bolivia	El Salvador	Paraguay	Venezuela
<b>Special measures to inject liquidity into the financial system</b>	Brazil	Guatemala	Peru	
	Chile	Haiti	Dominican Republic	
	Argentina	Chile	Haiti	Paraguay
	Barbados	Colombia	Honduras	Peru
	Bolivia	Costa Rica	Jamaica	Dominican Republic
	Brazil	Guatemala	Mexico	
Extraordinary monetary policies				
<b>Purchase of public and private securities from financial institutions by central banks</b>	Brazil	Mexico		
	Chile	Paraguay		
	Colombia	Peru		
<b>Containment of public credit by the central banks</b>	Brazil	Mexico		
	Chile	Paraguay		
	Colombia	Peru		
	Jamaica			
<b>Direct financing of the public sector by the central banks</b>	Antigua and Barbuda	Guatemala	Saint Vincent and the Grenadines	
	Bolivia	Paraguay	Saint Lucia	
	Dominica	Dominican Republic	Venezuela	
	Grenada	Saint Kitts and Nevis		
Exchange measures				
<b>Greater intervention in the currency market by central banks</b>	Brazil	Jamaica		
	Chile	Peru		
	Colombia	Dominican Republic		
	Guatemala			
<b>Swap agreements or credit lines with external agencies</b>	Brazil (with the U.S Federal Reserve (Fed))		Dominican Republic (with the Fed)	
	Chile (with the International Monetary Fund (IMF))		Colombia (with the IMF)	
	Mexico (with the IMF and the Fed)		Peru (with the IMF)	
Macropredutive policies				
<b>Countries that adopted new measures to strengthen the stability of the financial system</b>	Antigua and Barbuda	Costa Rica	Jamaica	Saint Lucia
	Argentina	Dominica	Mexico	Trinidad and Tobago
	Bahamas	El Salvador	Panama	Uruguay
	Barbados	Grenada	Paraguay	Venezuela
	Belize	Guatemala	Peru	
	Brazil	Guyana	Dominican Republic	
	Chile	Haiti	Saint Kitts and Nevis	
	Colombia	Honduras	Saint Vincent and the Grenadines	

Source: ECLAC (2020). *Economic Survey of Latin America and the Caribbean. Main conditioning factors of fiscal and monetary policy in the post COVID-19 era*. As of July 2020.

**Box 25. Evidence on the efficacy of macrofinancial policy instruments to favor stability in the sector (continued ii)**

[\[Return to main text\]](#)

The establishment of systems of **credit insurance and other public guarantee systems, such as guarantee funds for companies and exporters**, are measures aimed at building a financial safety net in the countries' financial systems to lessen the risk of serious impacts on the balance sheets of economic agents during a financial crisis (Pombo, P. et al., 2013). These measures consist in institutional arrangements that use public funds to partially guarantee the credit obligations of companies considered to need support to reduce the risk perceived by the institutions providing the financing. There are also the **deposit insurance mechanisms**. These consist in a type of insurance that covers the value of deposits and interest due of the clients of banks or deposit-taking institutions in the event of their bankruptcy, up to a determined amount. In financial crisis situations, these instruments help preserve the stability of the financial system by lessening the losses of banks for past due loans, runs on the banking system, as well as the survival of companies by covering part of their short-term obligations. In other words, they allow risk to be spread among various agents of the economy in order to reduce each one's exposure to macrofinancial shocks (Freedman, 2004). There is empirical evidence of the impact of these programs in the region. For example, Colombia's National Guarantee Fund was found to have positive effects on access to credit of beneficiaries, as well as on their employment and production (Arraiz et al., 2014). The same effects were found in an evaluation of Chile's Guarantee Fund for Small Business Owners (FOGAPE) (Benavente et al., 2006). Deposit insurance is broadly implemented throughout the region (Ortiz, 2008). While theoretically, these mechanisms have been shown to help reduce the likelihood of runs on the banking system (Diamond and Dyvig, 1983), empirical studies show that they should be accompanied by adequate regulation ensuring discipline in the use of the deposits by the banks (Imai, 2006).

Other policy instruments that help manage contingent fiscal liabilities include **countercyclical reserve funds and credit lines to protect against natural disasters and public health emergencies**. These instruments allow governments access to emergency funds to finance the public spending necessary to address the effects of financial crises, natural disasters, and/or public health emergencies and thus mitigate the economic and fiscal costs as a result of the losses of savings, human and physical capital, and the functioning of the intermediation system (Demaestri and Moskovits, 2015). More specifically, these instruments can include: contingent credit lines for economic and financial shocks, contingent credit lines and credit facilities for emergencies caused by natural disasters. The contingent nature of these instruments allows the governments to have rapid access to funds upon meeting certain conditions associated with the covered events. The use of these instruments has been successfully implemented in many countries in the region, including Colombia, Costa Rica, Mexico, and Peru (OECD, IBRD, World Bank (2019)).

**Box 26. Recent IDB experiences mitigating macroeconomic shocks in Latin America and the Caribbean**  
[\[Return to main text\]](#)

The Bank has provided rapid and flexible support for financing requests following macroeconomic shocks, using instruments such as contingent loans for natural disaster emergencies or programmatic policy-based loans (PBPs) with a deferred drawdown option (DDO), helping countries improve their financial resilience in times of stress. The IDB's intervention in the Manabí earthquake (Ecuador) in 2016 is noteworthy, with a disbursement of US\$300 million that covered the country's liquidity needs to address the immediate emergency following the earthquake ([EC-00006](#)). The main lessons learned are the importance of: (i) an innovative design with parametric triggers that properly gauged the financial impact of the earthquake and ensured rapid access to the Bank's resources; and (ii) joint financial planning with the country to supplement the IDB's contingent loan with other financial instruments. The value of the DDO also stands out in the framework of the economic crisis caused by COVID-19. Uruguay approved several PBPs with a DDO during the 2017-2019 period that in 2020 allowed the country to make use of more than US\$1 billion for programs to respond to the economic and health crisis, with the IDB providing low-cost, long-term financing. The main lesson learned is the importance of engaging in public financial planning that includes countercyclical instruments to be able to increase public spending and favor a rapid economic recovery without generating macrofinancial imbalances that could adversely impact economic growth and the resilience of the financial sector.

Source: Prepared by CMF and KIC.

## DATABASES CONSULTED

[\[Return to the table of contents\]](#)

[\[Return to main text – Footnote 10.\]](#)

Institution	Database	Description	Publication date	Link
World Bank	Doing Business	This World Bank publication is the 17th edition in a series of annual studies evaluating the regulations that enhance business activity and those that constrain it.	2020	<a href="#">Link</a>
World Bank	World Bank Open Data	Free and open access to data and indicators on economic and social development worldwide.	2022	<a href="#">Link</a>
World Bank	Global Financial Development Database	The Global Financial Development Database is a dataset of financial system characteristics for 214 economies. It contains annual data from 1960 on. It was last updated in September 2019 and contains data through 2017 for 109 indicators, capturing various aspects of financial institutions and markets.	2022	<a href="#">Link</a>
Bank of International Settlements (BIS)	BIS Statistics Explorer	BIS statistics, compiled in cooperation with central banks and other national authorities, are designed to inform the analysis of financial stability, international monetary spillovers, and global liquidity.	2022	<a href="#">Link</a>
Dealogic Ltd.	Dealogic	Dealogic is a platform for financial markets information designed to offer services to financial firms. It focuses mainly on banking, capital markets, trade, and institutional investing.	2022	<a href="#">Link</a>
World Bank	Global Findex database	The Global Findex database is the world's most comprehensive data set on how adults save, borrow, make payments, and manage financial risk. Launched with funding from the Bill & Melinda Gates Foundation, the database has been published every three years since 2011.	2022	<a href="#">Link</a>
World Bank	Financial Soundness Indicators	The Financial Soundness Indicators were developed by the IMF, together with the international community, with the aim of supporting analysis and assessing strengths and vulnerabilities of financial systems. They are indicators of the financial health and soundness of the financial institutions in a country. They include both aggregated individual institution data and indicators that are representative of the markets in which financial institutions operate.	2022	<a href="#">Link</a>

Institution	Database	Description	Publication date	Link
Fitch	Fitch Solutions	Fitch Solutions is a database that offers data, research, and analysis. It is used for credit risk management, obtaining data on debt and bond markets, and obtaining information on the macroeconomic environment.	2022	<a href="#">Link</a>
International Monetary Fund	Financial Development Index	This dataset contains nine indexes on financial institution and market development for over 180 countries on annual frequency from 1980 on.	2022	<a href="#">Link</a>
World Economic Forum	Global Competitiveness Report 2020	This report is the most recent edition of a series launched in 1979 that provides an annual evaluation of the drivers of economic growth and productivity over the long term.	2020	<a href="#">Link</a>
International Finance Corporation (IFC)	MSME Economic Indicators	The MSME Economic Indicators 2019 database records the number of formally registered MSMEs across 176 economies.	2019	<a href="#">Link</a>
IFC	Enterprise Finance Gap	The IFC's Enterprise Finance Gap study primarily uses data from the World Bank Enterprise Surveys to estimate the number of MSMEs in the world and determine the degree of access to credit and use of deposit accounts for formal and informal MSMEs. The resulting database currently covers 177 countries.	2018	<a href="#">Link</a>
BNEF	Bloomberg New Energy Finance	BNEF is a strategic research provider covering bond and equity markets in the energy, transportation, industry, real estate, and agriculture sectors.	2022	<a href="#">Link</a>
<i>Bündnis Entwicklung Hilft</i>	World Risk Index	This report estimates risk of and exposure to natural disasters and climate change, as well as economic and social vulnerability in terms of a population's susceptibility and their capacity for adaptation.	2022	<a href="#">Link</a>
IJGlobal	IJGlobal	IJGlobal provides information on financial structure, policy, pricing, and key players influencing transactions and market trends in infrastructure financing worldwide.	2022	<a href="#">Link</a>
Housing Finance Information Network (HOFINET)	HOFINET	HOFINET is a website that consolidates global housing finance information.	2019	<a href="#">Link</a>
MAPFRE Economics	MAPFRE Economics	Reports on the state of the insurance market and financial risk management for Europe and Latin America.	2022	<a href="#">Link</a>

**Regional classifications of countries used in the consulted databases**

Region	Countries
Central America	Panama, Costa Rica, Honduras, Belize, El Salvador, Nicaragua, Guatemala, and Mexico.
Emerging Asia	China, India, Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam.
South America	Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, and Venezuela.
Caribbean	Bahamas, Barbados, Haiti, Jamaica, Dominican Republic, and Trinidad and Tobago.
Eastern Europe	Bulgaria, Croatia, Czech Republic, Poland, Romania, Slovakia, Slovenia, Turkey, and Ukraine.
Upper-middle-income	Albania, Algeria, Armenia, Azerbaijan, Belarus, Belize, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, China, Colombia, Costa Rica, Dominican Republic, Ecuador, Fiji, Gabon, Guatemala, Guyana, Iraq, Jamaica, Jordan, Kazakhstan, Lebanon, Libya, Malaysia, Mauritius, Mexico, Montenegro, Namibia, Macedonia, Paraguay, Peru, Romania, Russian Federation, Serbia, South Africa, Thailand, Turkey, and Venezuela.
Latin America and the Caribbean (member countries of the IDB)	Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Suriname, Trinidad and Tobago, Uruguay, and Venezuela.
OECD	Germany, Australia, Austria, Belgium, Canada, Chile, Colombia, South Korea, Costa Rica, Denmark, Slovakia, Slovenia, Spain, United States, Estonia, Finland, France, Greece, Hungary, Ireland, Iceland, Israel, Italy, Japan, Latvia, Lithuania, Luxembourg, Mexico, Norway, New Zealand, Netherlands, Poland, Portugal, United Kingdom, Czech Republic, Sweden, Switzerland, and Turkey.

### ANNEX III. SME FINANCING

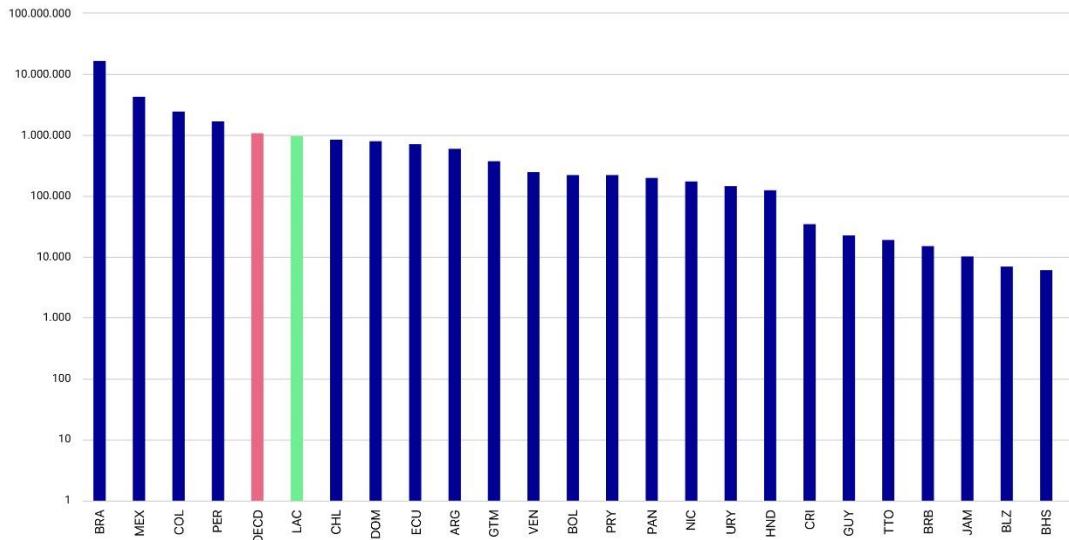
[[Return to the table of contents](#)]  
[[Return to main text, paragraph 3.13](#)]

This annex presents detailed information regarding the status and terms of financing for SMEs in Latin America and the Caribbean. The following are some of the relevant results from the regional and country-by-country analysis: (i) the average volume of MSMEs in the region is similar to that of MSMEs in OECD countries taken as a whole, as revealed by the number of companies in the region ([Figures A.1](#) and [A.2](#)); (ii) on average, less than 30% of microenterprises in the region are women-owned, with that figure being higher in certain countries like Nicaragua ([Figure A.3](#)); (iii) the size of the region's MSMEs in terms of sales volume is smaller than in developed countries, except in Brazil and, to a lesser extent, Peru and Mexico ([Figures A.4](#) and [A.11](#)); (iv) the MSME finance gap in Latin America and the Caribbean, measured as the difference between existing supply and the potential demand that financial institutions could meet, is similar to the gap in the OECD, with Colombia, Argentina, and Panama being countries with similar gaps, and potential demand from the region's SMEs is also similar to levels in OECD countries ([Figures A.5](#), [A.12](#), and [A.13](#)); (v) when analyzing the finance gap by sex, there is a wide difference between the gap faced by women-owned SMEs in the region and the gap in OECD countries, but the finance gaps for SMEs owned by men are similar ([Figures A.6](#) and [A.10](#)); (vi) Latin America and the Caribbean is characterized by high informal employment rates, with the informal employment to formal employment ratio exceeding 60%, which is double the figure for developed countries. However, this varies widely by country, with informality rates being highest in Bolivia, Panama, and Peru ([Figure A.7](#)); (vii) it is more difficult for SMEs in the region to obtain credit than it is for SMEs in OECD countries, either due to loan applications being rejected or because the companies are dissuaded from applying by loan terms or application requirements ([Figure A.8](#)); and (viii) fewer than 70% of companies have no credit restrictions, versus over 80% in OECD countries, except in the cases of Chile, Bolivia, and Nicaragua, where companies face fewer constraints, either because they have enough of their own capital or because their loans have been approved ([Figure A.9](#)).

The team analyzed the recent performance (from 2007 to 2020) of portfolios in a select group of countries (Brazil, Colombia, Chile, Mexico, and Peru) and compared it with performance in OECD countries. Some features of these trends indicate that: (i) SMEs in OECD countries receive a greater share of credit (nearly 45% of all business loans) than SMEs in the Latin American and Caribbean countries analyzed (less than 30%), with the exception of Brazil. This trend is on the decline for the countries of the region analyzed, with the exception of Chile, where it has peaked at an all-time high of 21.4% of all business loans, and Peru, where it has increased to 32.74% after the pandemic, partly due to the growth of new SMEs accessing credit (18.5% more) in 2020 ([Figures A.14](#) and [A.15](#)); (ii) the past-due portfolio for the countries of the region as a whole is lower than that of developed countries (around 2% versus 3%) despite trending upward between 2007 and 2020, especially in countries like Colombia and Peru. This gap holds in the case of SMEs, with rates in excess of 6% for the OECD versus rates around 4% in the region, according to data from 2020. Trends in variation in default rates among SMEs in Latin America and the Caribbean are on the rise except in the case of Chile. However, SME sector performance improved in 2020 as a result of pandemic-related moratoria, and default rates fell in Peru (7.83% to 6.6%), Chile (6% to 4.7%), and, to a lesser extent, Brazil (3.55% to 2.7%) and Colombia (3.73% to 3.60%) ([Figures A.16](#) and [A.17](#)); (iii) terms for SME loans in Latin America and the Caribbean differ greatly from those in OECD countries when considering interest rates (around 5% versus more than 10%) in 2020, except in Chile and Brazil ([Figures A.18](#) and [A.20](#)). However, this has been on the decline since 2007 in line with interest rate trends, except in Mexico. This trend holds for loans to large corporates, though terms for those loans are closer to terms in OECD countries ([Figure A.19](#)); and (iv) the figures below offer more detailed information on loan terms (amount by business size and effective rates by business size) in Peru, Mexico, and Brazil ([Figures A.21a](#), [A.22a](#), [A.21b](#), [A.22b](#), [A.22c](#), and [A.23](#), respectively).

**Figure A.1. Number of MSMEs**

[\[Return to main text of Annex III\]](#)

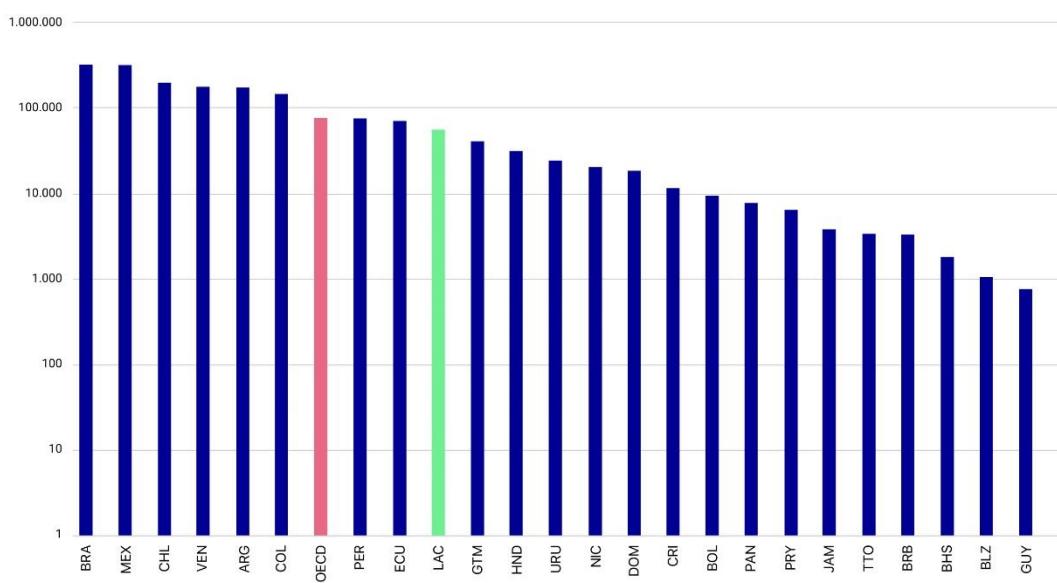


Data: 2018.

Source: Adapted from MSME Finance Gap, IFC (2021).

**Figure A.2. Number of SMEs**

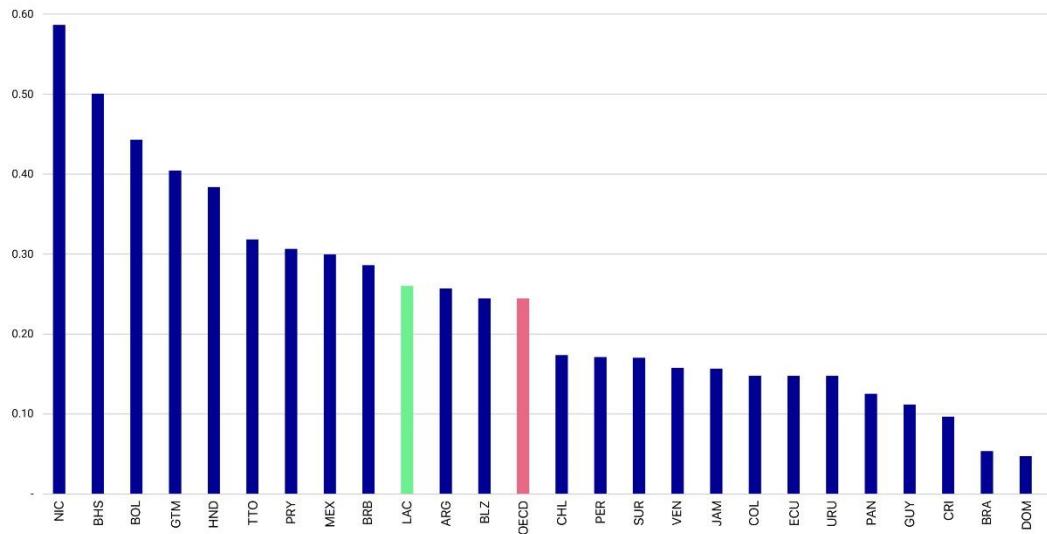
[\[Return to main text of Annex III\]](#)



Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

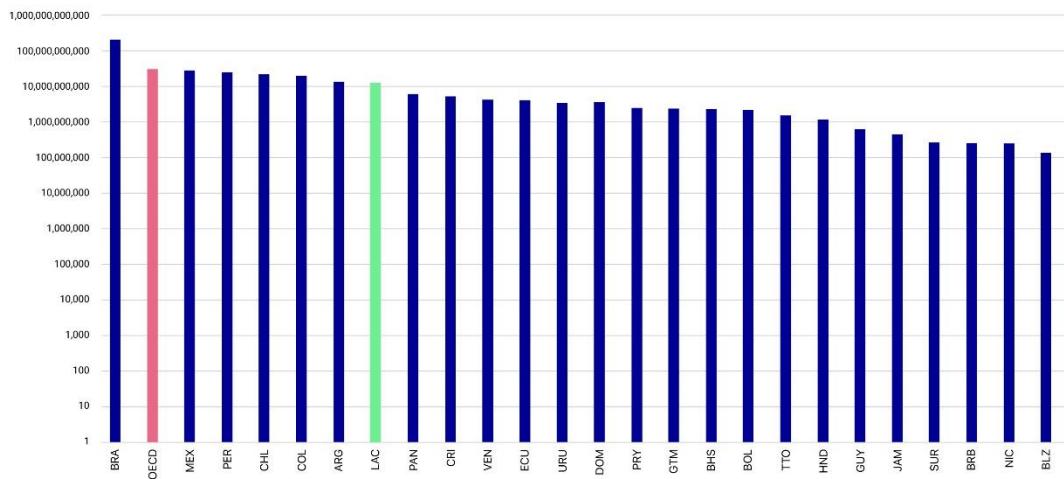
**Figure A.3. Percentage of microenterprises owned by women**  
[\[Return to main text of Annex III\]](#)



Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.4. MSMEs: Current sales volume (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)

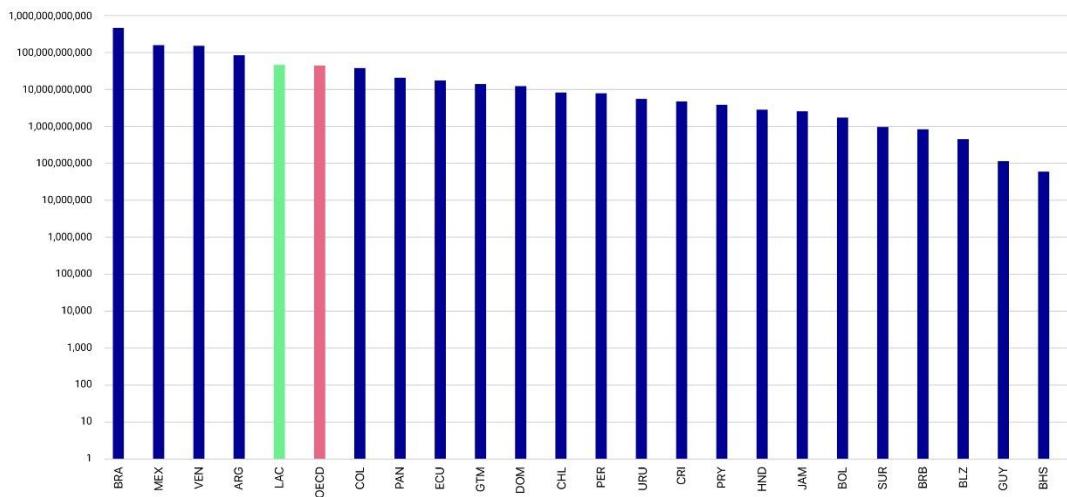


Current sales volume of MSMEs (companies with fewer than 10 employees).

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.5. MSME finance gap (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)

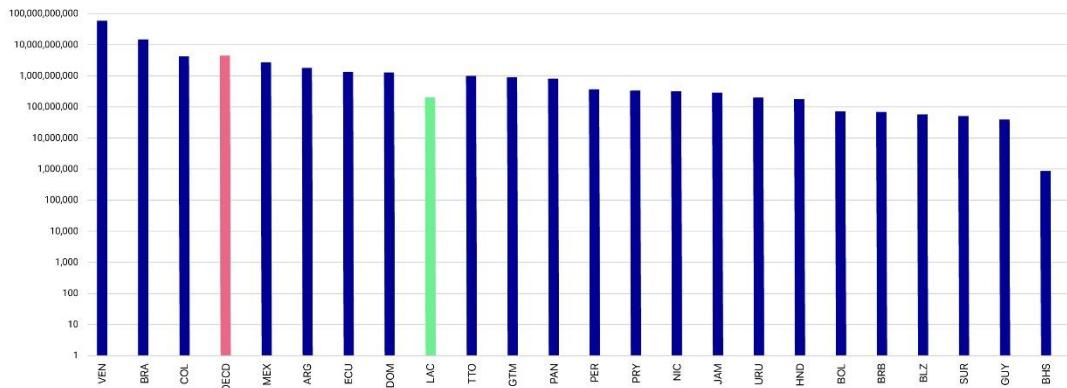


The MSME finance gap is calculated as the difference between existing supply and potential demand that could be met by financial institutions. The MSME finance gap assumes that companies in a developing country have the same borrowing capacity and willingness as their counterparts in developed credit markets and operate in comparable institutional environments and that the intensity of financial institution lending is similar to that of their peers.

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.6. Finance gap for women-owned SMEs (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)

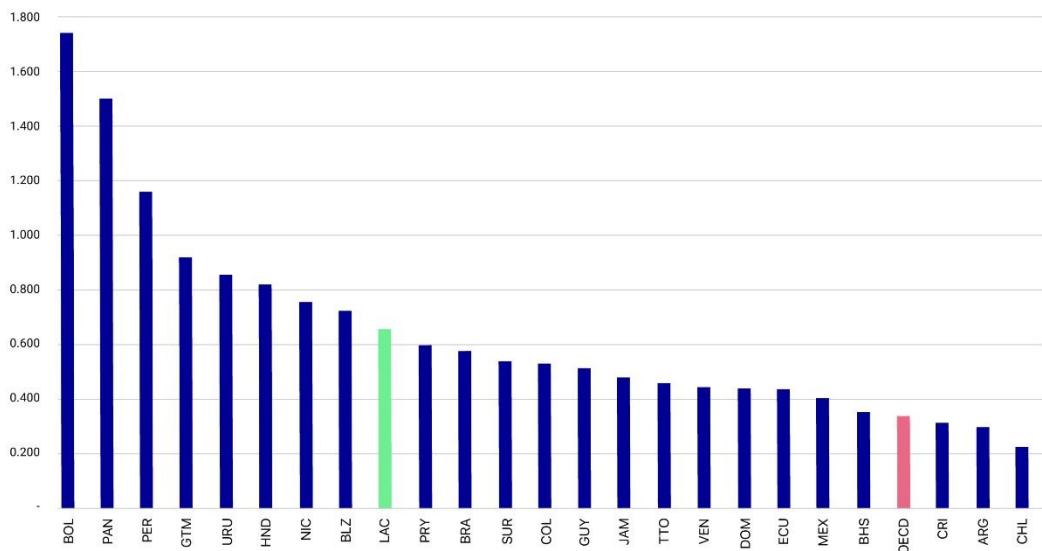


Companies in which at least 50% is owned by women, women-owned sole-proprietorships, and companies in which women are involved in ownership and senior management (the top manager is a woman).

Data: 2018.

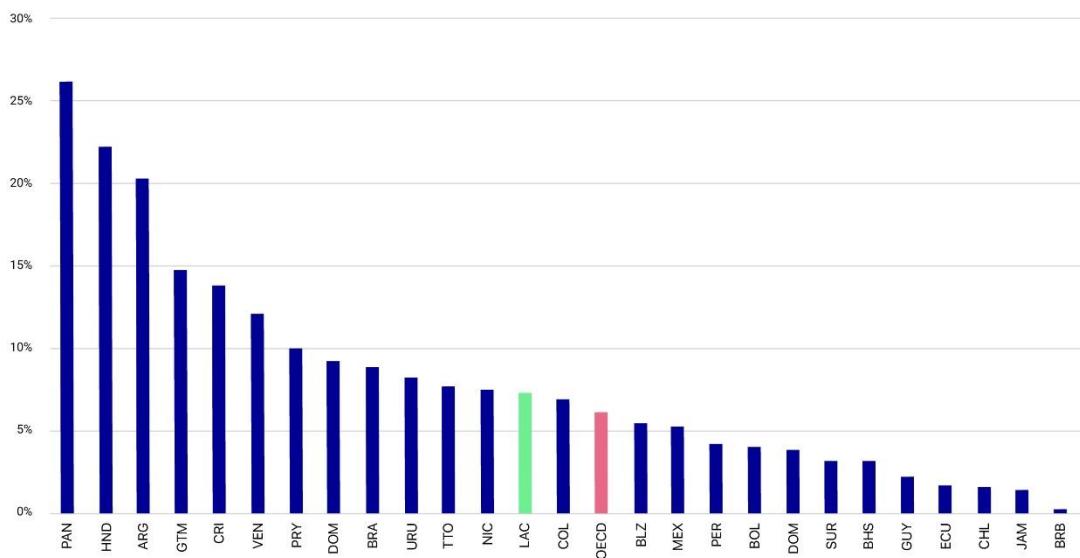
Source: Adapted from MSME Finance Gap, IFC.

**Figure A.7. Informal employment as a percentage of formal employment**  
[\[Return to main text of Annex III\]](#)



Data: 2018.  
Source: Adapted from MSME Finance Gap, IFC.

**Figure A.8. SMEs with fully restricted credit (%)**  
[\[Return to main text of Annex III\]](#)

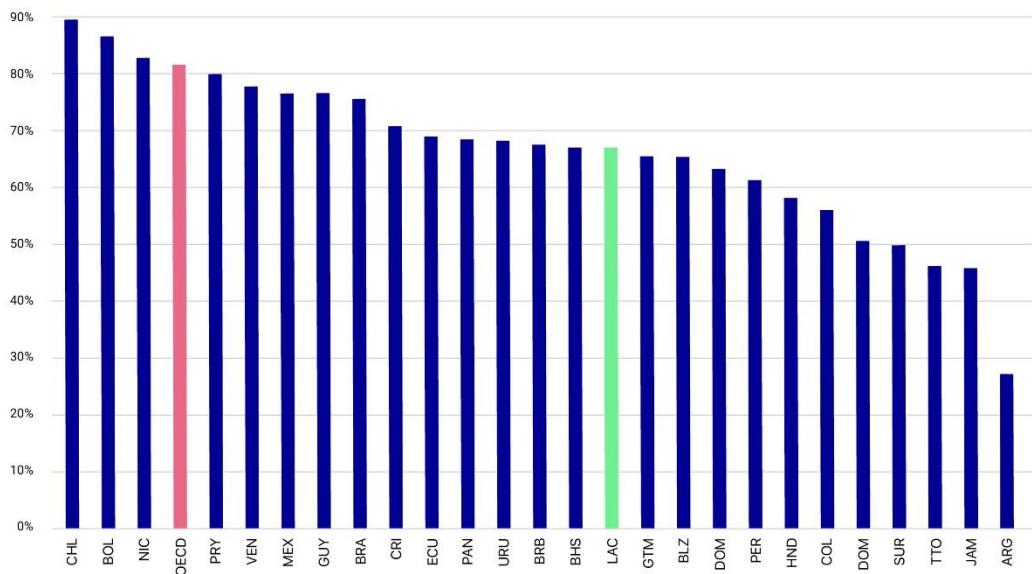


A company's credit is considered fully restricted if the company has difficulty obtaining credit. These are businesses that do not have external financing sources. In general, they can be divided into two categories: companies that have applied for a loan and were rejected; and companies that have not applied due to unfavorable terms and conditions or because they did not think their application would be approved. Terms and conditions that discourage companies include complex application procedures, unfavorable interest rates, high collateral requirements, and insufficient loan size or maturity.

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.9. SMEs with unrestricted credit (%)**  
[\[Return to main text of Annex III\]](#)

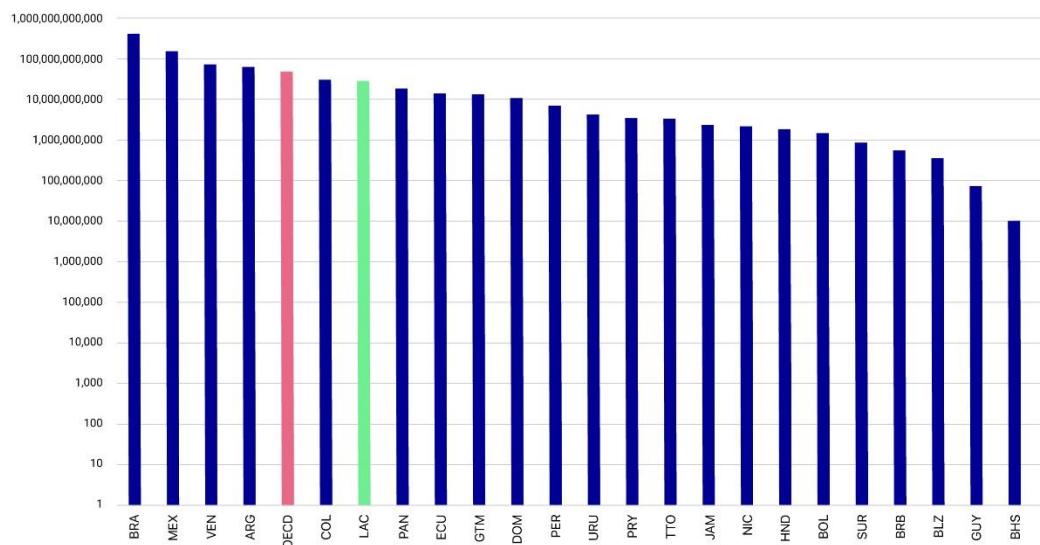


Companies with unrestricted credit are those that appear to have no difficulty in accessing credit or that do not need credit. Companies in this category include those that have not applied for a loan because they have enough of their own capital or capital from other sources. They also include companies that have applied for loans that were all approved.

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.10. Finance gap for SMEs owned by men (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)

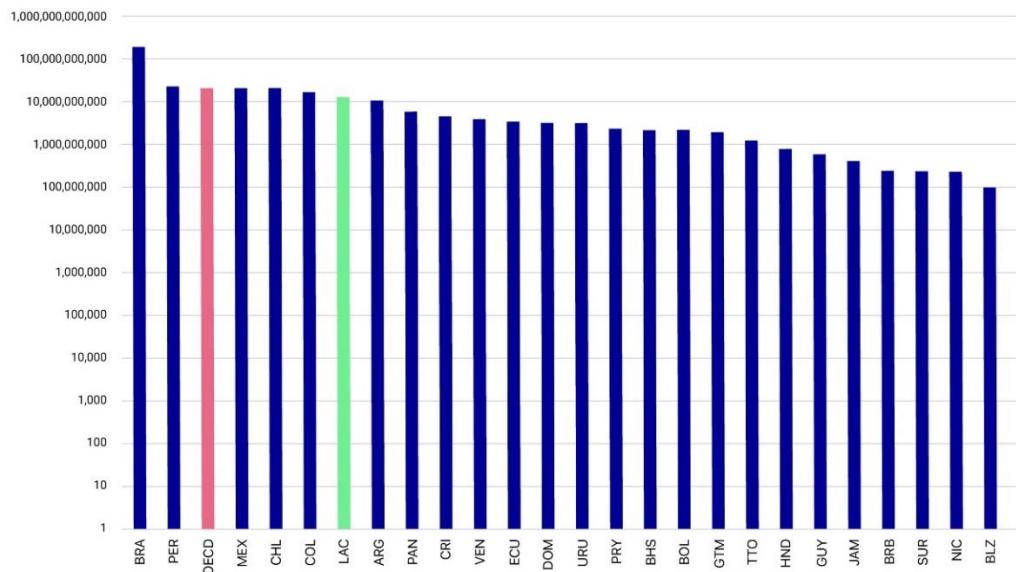


The finance gap for SMEs owned by men is calculated as the difference between existing supply and potential demand that could be met by financial institutions for companies owned by men.

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.11. SMEs: Current sales volume (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)

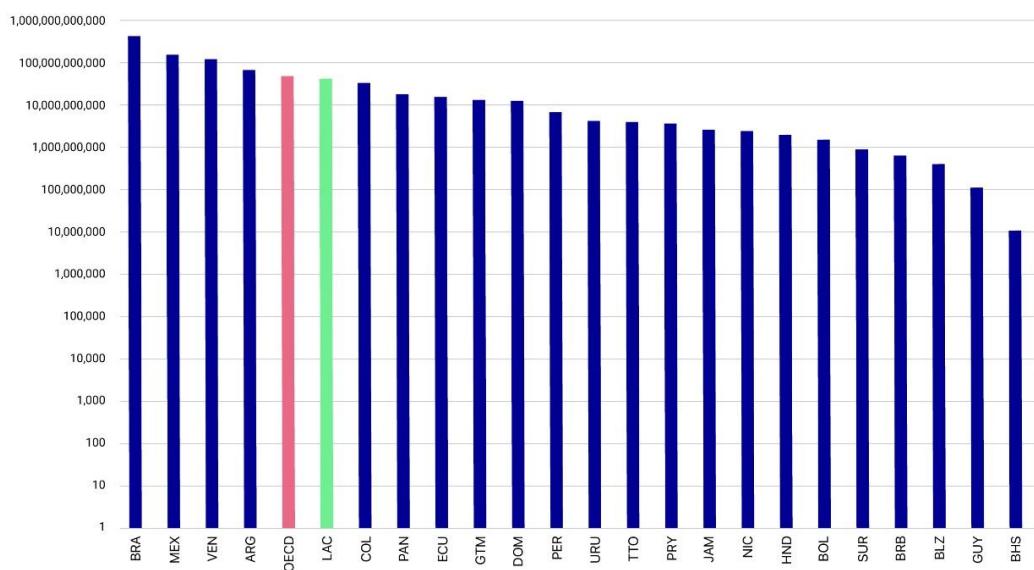


Current sales volume for SMEs (companies with between 11 and 250 employees).

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.12. SMEs: Finance gap (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)

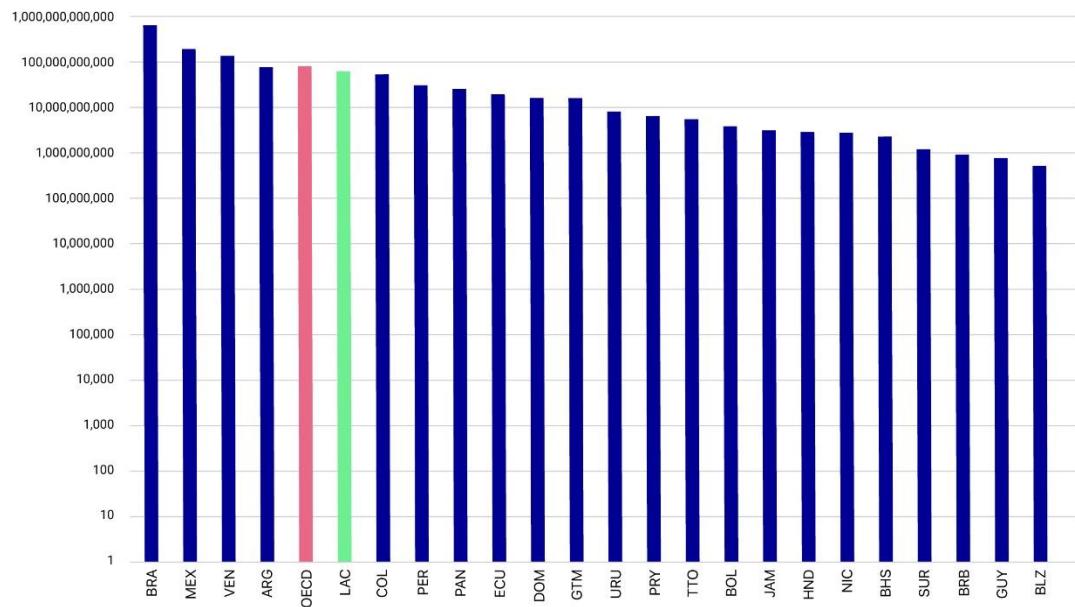


The SME finance gap is calculated as the difference between existing supply and potential demand that could be met by financial institutions. The SME finance gap assumes that companies in a developing country have the same borrowing capacity and willingness as their counterparts in developed credit markets and operate in comparable institutional environments and that the intensity of financial institution lending is similar to that of their peers.

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

**Figure A.13. SMEs: Potential demand (in U.S. dollars)**  
[\[Return to main text of Annex III\]](#)



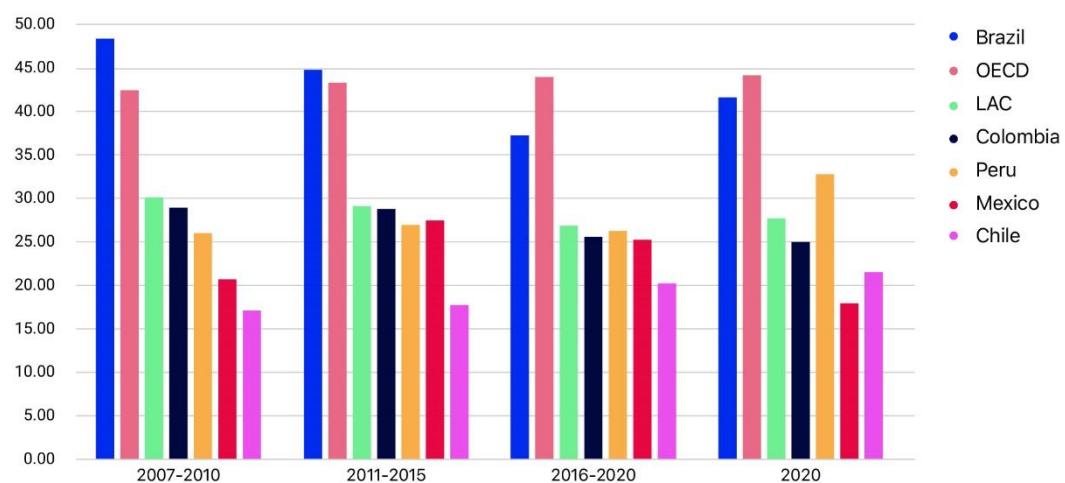
Potential demand reflects the amount of financing that MSMEs need and that could be provided by financial institutions if they were operating in better macroeconomic, regulatory, and institutional conditions.

Data: 2018.

Source: Adapted from MSME Finance Gap, IFC.

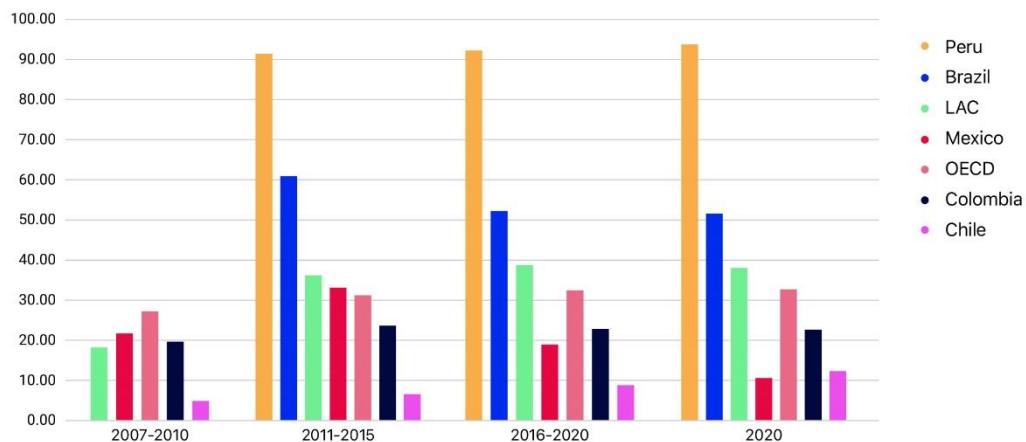
**Figure A.14. Percentage of outstanding SME loans (as a percentage of total outstanding business loans)**

[\[Return to main text of Annex III\]](#)



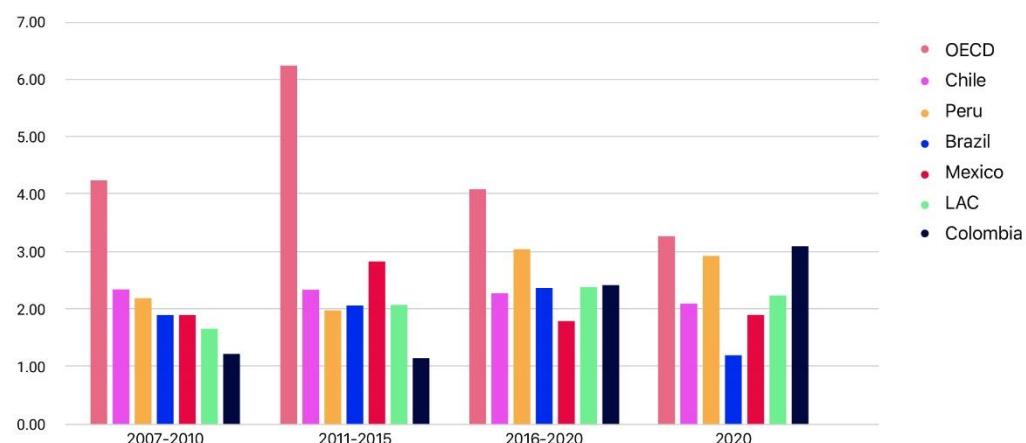
Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022, OECD.

**Figure A.15. Share of new loans issued to SMEs (as a percentage of all business loans)**  
[\[Return to main text of Annex III\]](#)



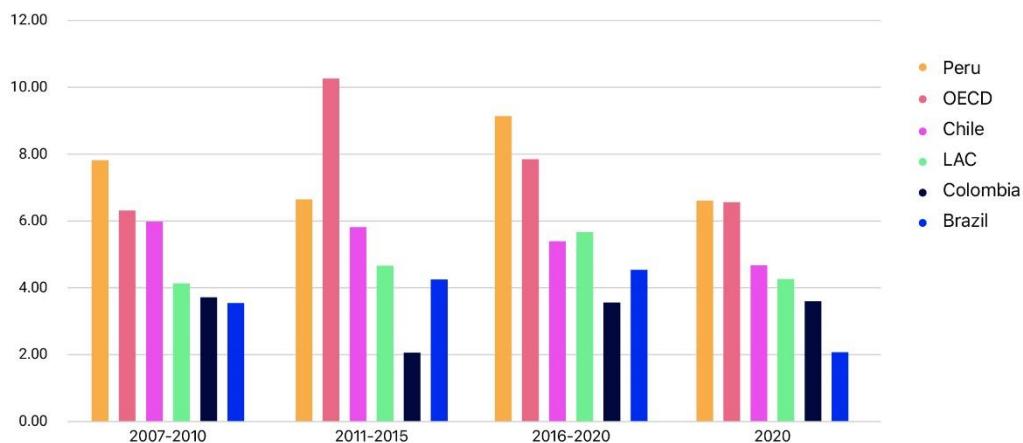
Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022, OECD.

**Figure A.16. Past-due loans, total (as a percentage of all commercial loans)**  
[\[Return to main text of Annex III\]](#)



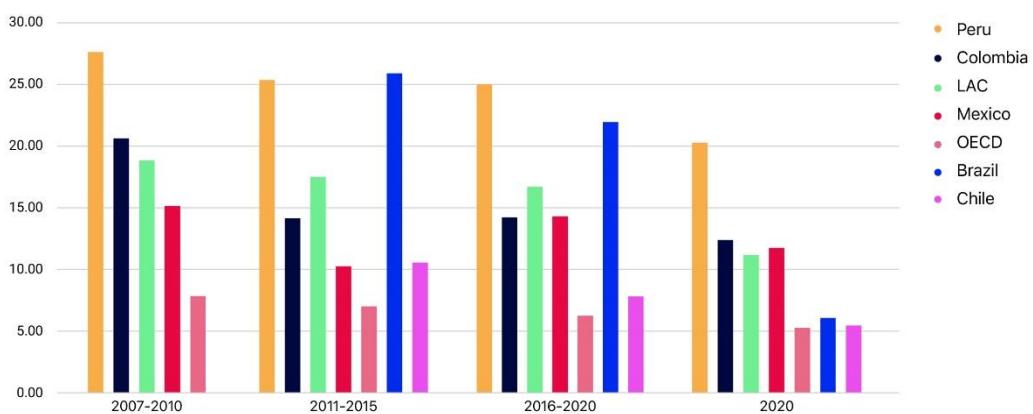
Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022, OECD.

**Figure A.17. Past-due loans, SMEs (as a percentage of all SME loans)**  
[\[Return to main text of Annex III\]](#)



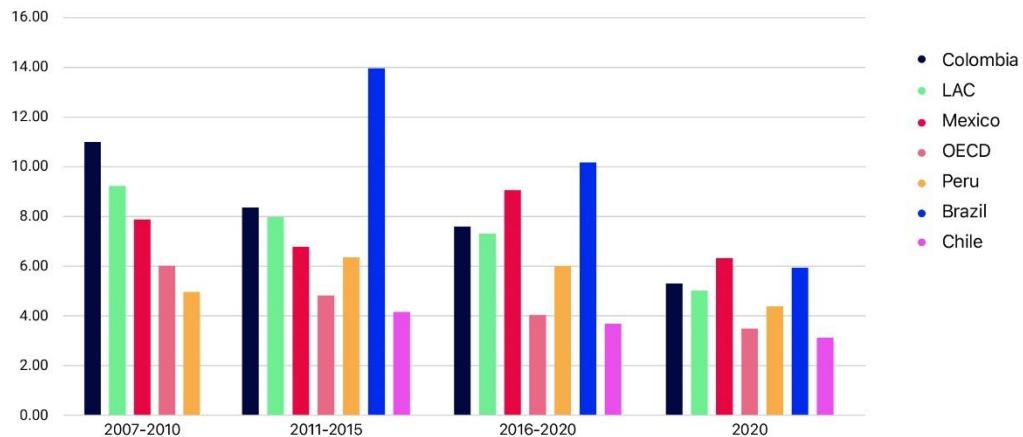
Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022. OECD.

**Figure A.18. Interest rate, SMEs (%)**  
[\[Return to main text of Annex III\]](#)



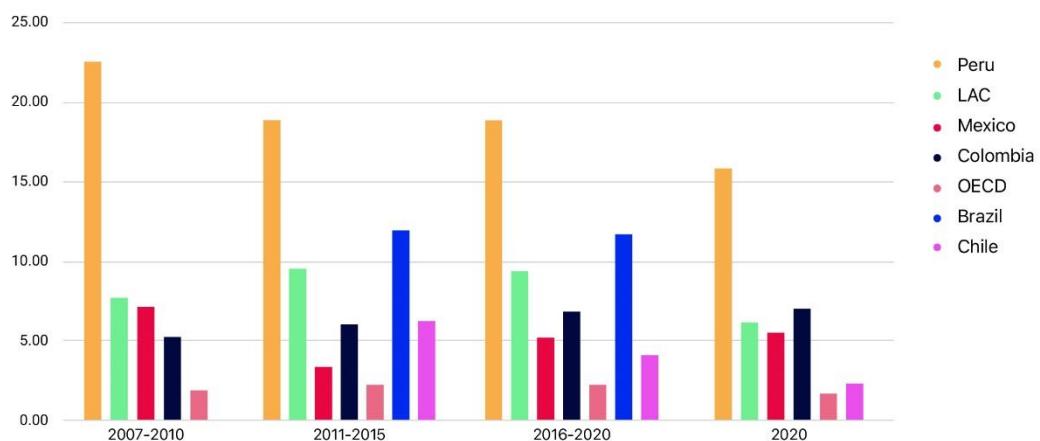
Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022, OECD.

**Figure A.19. Interest rate, large corporates (%)**  
[\[Return to main text of Annex III\]](#)



Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022, OECD.

**Figure A.20. Interest rate spread (in percentage points)**  
[\[Return to main text of Annex III\]](#)

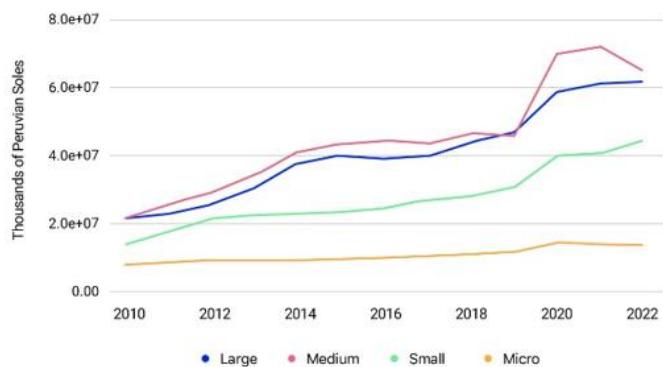


Average for Latin America and the Caribbean: Brazil, Chile, Colombia, Mexico, and Peru.  
Source: Adapted from Financing SMEs and Entrepreneurs 2022, OECD.

**Figure A.21. Peru**

**Figure A.21a. Loan amount by business size (local currency, balance at year's end)**

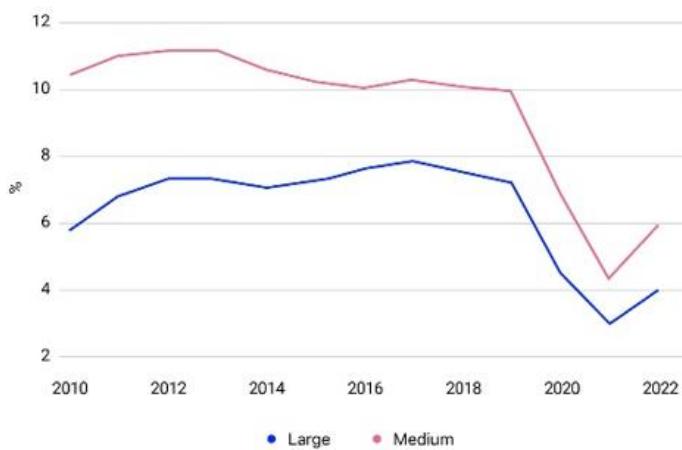
[\[Return to main text of Annex III\]](#)



Source: Superintendency of Banks, Insurance Companies, and Pension Fund Operators; Central Reserve Bank of Peru.

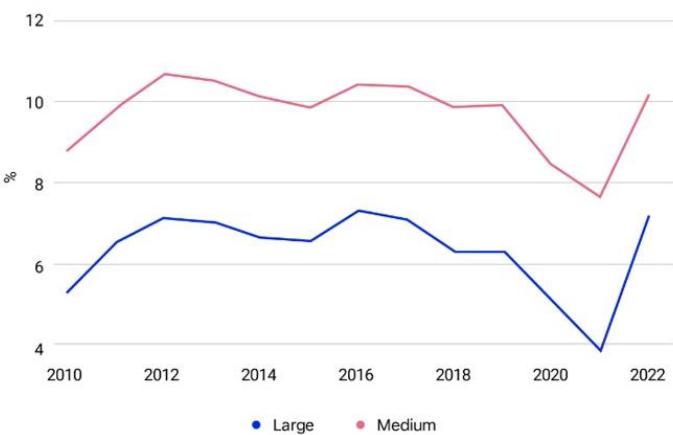
**Figure A.21b. Effective rate by business size, long-term (%, annual average)**

[\[Return to main text of Annex III\]](#)



Source: Superintendency of Banks, Insurance Companies, and Pension Fund Operators; Central Reserve Bank of Peru.

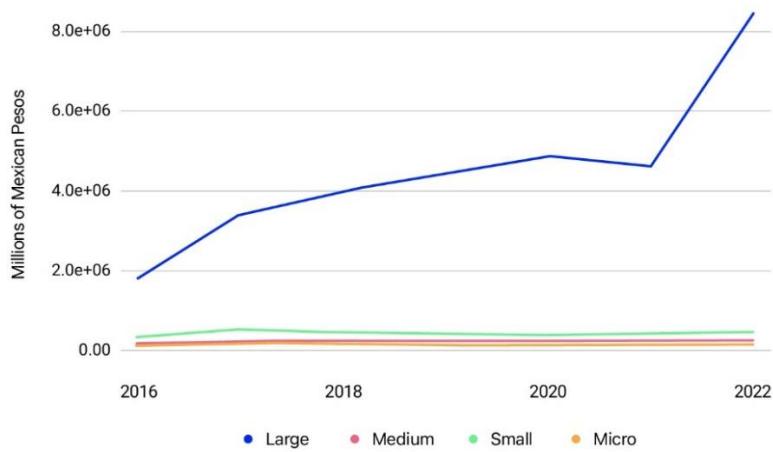
**Figure A.21c. Effective rate by business size, short term (%, annual average)**



Source: Superintendency of Banks, Insurance Companies, and Pension Fund Operators; Central Reserve Bank of Peru.

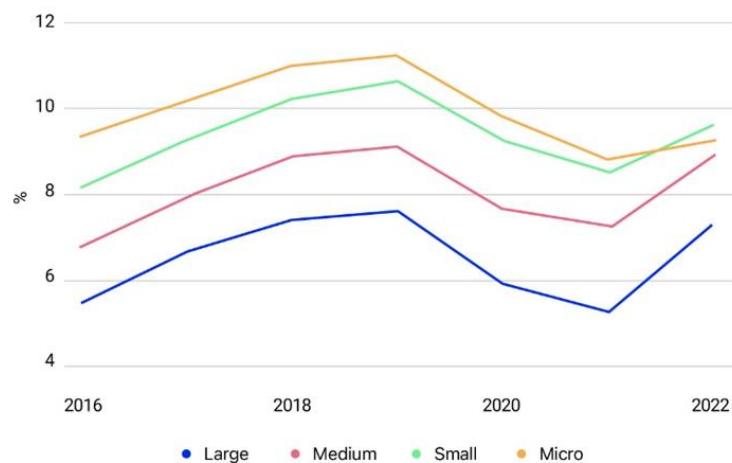
**Figure A.22. Mexico**

**Figure A.22a. Loan amount by business size (local currency, total annual balance)**  
[\[Return to main text of Annex III\]](#)



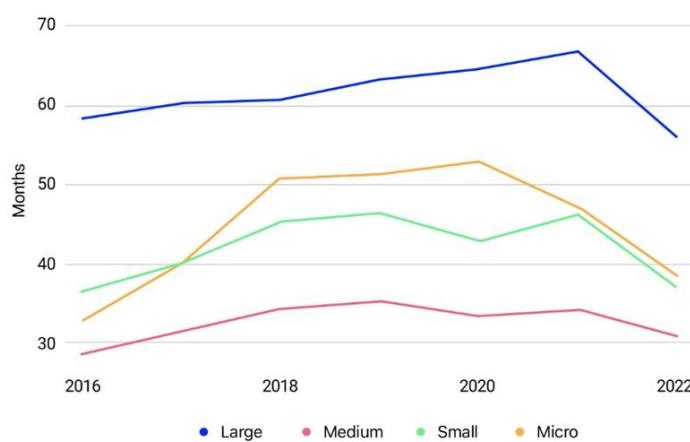
Source: National Banking and Securities Commission.

**Figure A.22b. Weighted rate by business size (%, annual average)**  
[\[Return to main text of Annex III\]](#)



Source: National Banking and Securities Commission.

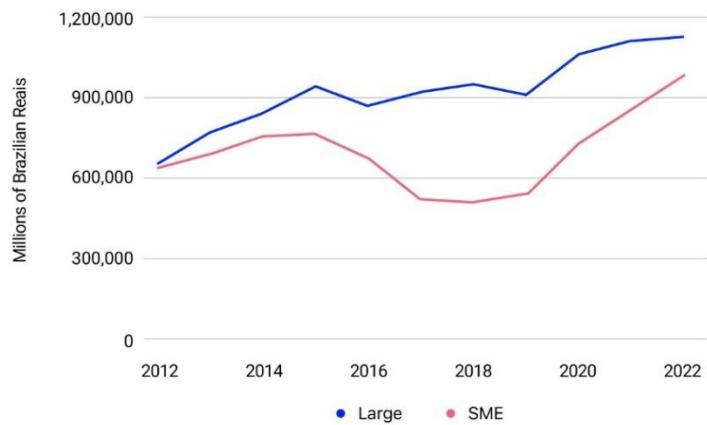
**Figure A.22c. Weighted tenor by business size (months, annual average)**  
[\[Return to main text of Annex III\]](#)



Source: National Banking and Securities Commission.

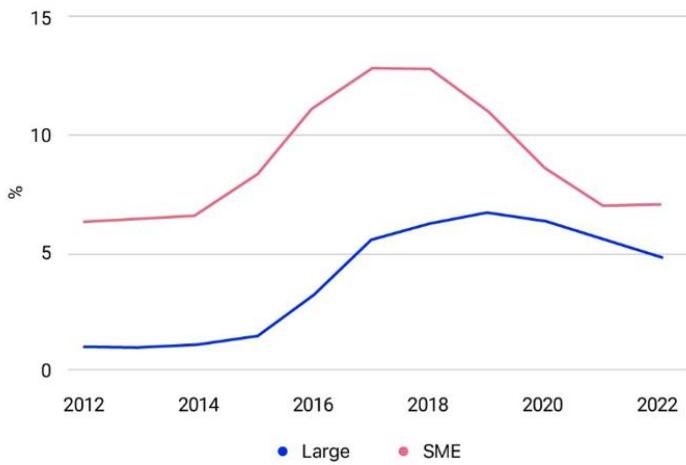
**Figure A.23. Brazil**  
[\[Return to main text of Annex III\]](#)

**Figure A.23a. Credit financed by business size (local currency, balance at year's end)**



Source: Central Bank of Brazil.

**Figure A.23b. Balance of the segment consisting of transactions with E-, F-, G-, and H-risk ratings by business size**



Risk ratings: E: 91-120 days; F: 121-150 days; G: 151-180 days; and H: >180 days.  
Source: Central Bank of Brazil.

## GLOSSARY

[\[Return to the table of contents\]](#)

Term	Definition
<b>A/B loans</b> <a href="#">[Return to main text]</a>	Under the A/B loan framework structure, the IDB Group issues an “A” loan using its own resources and acts as the lead lender and administrator of a full package consisting of “A” and “B” loans.
<b>Access to finance</b> <a href="#">[Return to main text]</a>	Access to finance refers to the ability of an individual to access financial services. It is important to make a distinction between access to financial services and use of those services. Actual use of financial services is easier to track empirically. Some individuals and companies may have access to certain financial products but choose not to use them. In other cases, an individual or company may have indirect access, for example, through another person’s bank account or a close substitute.
<b>Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) measures</b> <a href="#">[Return to main text]</a>	These activities generate financial flows that involve the diversion of resources away from economically- and socially-productive uses, and these diversions can have negative impacts on the financial sector and external stability of member states. They also have a corrosive, corrupting effect on society and the economic system as a whole.
<b>Artificial intelligence (AI)</b> <a href="#">[Return to main text]</a>	AI refers to any technology that helps computers mimic human capabilities. Thus, AI encompasses such areas as robotics, parallel computing, natural language processing, machine learning, and deep learning.
<b>Basel Accords</b> <a href="#">[Return to main text]</a>	The Basel Accords are the banking supervision accords or recommendations on banking regulations issued by the Basel Committee on Banking Supervision. They comprise the Basel I, Basel II, and Basel III Accords.
<b>Big data</b> <a href="#">[Return to main text]</a>	Data sets that are difficult or impossible to process with traditional methods due to their sheer size, speed, or complexity.
<b>Big Tech</b> <a href="#">[Return to main text]</a>	Large tech companies that have vast networks of operations, such as Google, Apple, Facebook, and Amazon in the United States and Baidu, Alibaba, and Tencent in China.
<b>Biometrics</b> <a href="#">[Return to main text]</a>	Biometrics is an identification technology based on recognition of a physical and non-transferable trait of an individual, such as fingerprints, finger vein pattern recognition, or facial recognition.
<b>Blended finance</b> <a href="#">[Return to main text]</a>	Blended finance is the strategic use of development financing to mobilize additional private financing toward sustainable development in developing countries, with additional financing that includes, for example, capital from financial development institutions.
<b>Blockchain</b> <a href="#">[Return to main text]</a>	Blockchain is an information registry distributed peer-to-peer (P2P) where participants do not have to trust each other because a consensus protocol ensures transaction security and veracity.

Term	Definition
<b>Brown penalty</b> <a href="#">[Return to main text]</a>	A penalty on capital exposed to brown (not environmentally sustainable) activities. These loans require higher risk weights, which increases the capital required to fund such loans and their cost.
<b>Cofinance provider</b> <a href="#">[Return to main text]</a>	Person or institution that joins with one or more other people or institutions to provide financing.
<b>Counterparty risk</b> <a href="#">[Return to main text]</a>	The risk that one party of a financial contract will not fulfill its payment obligations.
<b>Credit risk</b> <a href="#">[Return to main text]</a>	The likelihood that one party to a financial instrument contract defaults on its contractual obligations due to insolvency or inability to pay, resulting in a financial loss for the other party.
<b>Crowdfunding</b> <a href="#">[Return to main text]</a>	Crowdfunding initiatives are private initiatives that use collective financing to source resources to finance efforts or initiatives in support of an organization or group of people.
<b>Cryptoasset</b> <a href="#">[Return to main text (paragraph 2.42)]</a> <a href="#">[Return to main text (paragraph 3.38)]</a> <a href="#">[Return to main text (paragraph 5.14)]</a>	A virtual asset, which originates from cryptography. These are digital and intangible assets that can be exchanged for goods, services, or money.
<b>Cryptoization</b> <a href="#">[Return to main text]</a>	Widespread adoption of digital assets.
<b>Decentralized finance</b> <a href="#">[Return to main text]</a>	A set of financial applications that do not rely on central financial intermediaries such as brokerages, exchange platforms, or banks to offer traditional financial instruments, and instead use smart contracts on blockchains.
<b>De-risking</b> <a href="#">[Return to main text]</a>	The phenomenon whereby financial institutions terminate or restrict business relations with clients or categories of clients to avoid, rather than manage, risk.
<b>Digital credit</b> <a href="#">[Return to main text]</a>	Credit facilitated by automated processes powered by advanced data analysis to determine credit risk, set the price of the loan, and directly connect potential borrowers with individual or institutional investors. Once an investor is found, a contract is drawn up using the platform.
<b>Digital financial inclusion</b> <a href="#">[Return to main text]</a>	Digital financial inclusion involves the deployment of digital media to reach excluded and underserved groups with an array of formal financial services tailored to their needs and delivered responsibly at a price that is affordable for customers and sustainable for providers.
<b>Digital financial services</b> <a href="#">[Return to main text]</a>	Examples include methods for electronically storing and transferring funds, requesting and receiving payments, applying for loans, saving, taking out insurance, investing, and managing individual or company finances.
<b>Digital loan</b> <a href="#">[Return to main text]</a>	See digital credit.
<b>Digital payments</b> <a href="#">[Return to main text]</a>	A payment that is carried out digitally. This includes both online payments and payments carried out using mobile phones but does not include credit card payments.
<b>Enforcement cost</b> <a href="#">[Return to main text]</a>	The cost of financial contract enforcement arising from the time and expense required to resolve a dispute caused by breach of a financial contract using a country's legal system.

Term	Definition
<b>Fee-based</b> <a href="#">[Return to main text]</a>	When a fee is charged to a person, agency, or institution in exchange for advice or services.
<b>Financial additionality</b> <a href="#">[Return to main text, paragraph 3.9]</a> <a href="#">[Return to main text, paragraph 3.11]</a>	Financial additionality refers to the ability of financial development institutions to add impact by providing capital, mitigating risks, or offering some other benefit to a market that cannot offer such services strictly through private actors.
<b>Financial depth</b> <a href="#">[Return to main text]</a>	Financial depth captures the size of the financial sector relative to the economy. It is measured by taking the total size of banks, other financial institutions, and financial markets in a given country and comparing that to a measure of economic output. Financial depth, approximated by the ratio of private credit to GDP, has a strong statistical link to long-term economic growth; it is also closely linked to poverty reduction.
<b>Financial efficiency</b> <a href="#">[Return to main text]</a>	The ability of an institution to provide financial services at a low cost with sustainable revenues or the level of activity on a capital market. The common trend in the literature in this area is to measure financial efficiency using the net difference between loan interest rates and deposit rates, the ratio of overall costs to total assets, the ratio of nonfinancial revenue to total revenue, and other bank profitability indicators, such as return on assets (ROA).
<b>Financial inclusion</b> <a href="#">[Return to main text]</a>	Financial inclusion means that individuals and companies have access to financial services. Financial inclusion equips individuals and companies to take advantage of business opportunities, invest in education, save for retirement, and insure against risks.
<b>Financial intermediary</b> <a href="#">[Return to main text]</a>	An institution specialized in serving as a link between economic units that want to save or invest their funds and those that want to borrow. Normally a financial intermediary captures funds through current and deposit accounts and issues funds out through loans or the acquisition of stocks.
<b>Financial resilience</b> <a href="#">[Return to main text]</a>	A stable financial system is able to efficiently allocate resources, evaluate and manage financial risks, keep employment levels close to the economy's natural rate, and eliminate fluctuations in relative prices of real or financial assets that would adversely affect monetary stability or employment levels. A financial system is considered stable when it can dispel financial imbalances that arise endogenously or as a result of major crises or adverse events.
<b>Financial risks</b> <a href="#">[Return to main text]</a>	Financial risks are risks that adversely affect the stability of the financial sectors of the region. Examples include credit risk, market risk, underwriting risk, operational risk, and liquidity risk.
<b>Financial sector development</b> <a href="#">[Return to main text]</a>	The three key dimensions of financial sector development are depth, access, and efficiency. Depth measures the size and liquidity of the financial sector, access measures how easy it is for individuals and businesses to use financial services, and efficiency measures financial institutions' ability to provide financial services at a low cost while earning sustainable revenues.
<b>Financial stability</b> <a href="#">[Return to main text]</a>	The condition in which there are no systemic episodes where the financial sector fails to function (crisis). This term also refers to financial sector resilience during stress situations.

Term	Definition
<b>Financial transparency</b> <a href="#">[Return to main text]</a>	The disclosure of information on accounts and budgets approved and executed by agencies, public finances, and performance of public services. Generally speaking: (i) the information should be accessible and made available in a timely manner; (ii) the information disclosed should be accurate and relevant; and (iii) the information should be understandable. According to Transparency International, accurate government information should be made available to the public in a timely manner and in an intelligible, useful, comparable, and accessible format. The public should also have the opportunity to participate in the decision-making process, with quality (responsiveness) being a requirement for effective transparency.
<b>Fintech</b> <a href="#">[Return to main text]</a>	Tech-powered financial innovations that may result in new business models, applications, processes, or products with an associated material impact on financial markets and institutions and on the delivery of financial services.
<b>Gender lens</b> <a href="#">[Return to main text]</a>	This approach takes into account the different opportunities offered to men and women, relationships between men and women, and the various roles that are socially assigned to each gender. All of these issues influence the achievement of targets, policies, and plans of national and international organizations and thus have repercussions for the development of a society.
<b>Global value chain</b> <a href="#">[Return to main text]</a>	A process through which a group of companies in different countries work together, from product design to distribution, under the coordination of a lead company that aims to keep total system costs to a minimum.
<b>Greenflation</b> <a href="#">[Return to main text]</a>	Rising prices for metals and minerals such as copper, aluminum, and lithium, which are essential for solar and wind energy, electric cars, and other renewable technologies.
<b>Greenwashing</b> <a href="#">[Return to main text]</a>	Refers to the bad practices of some companies that present products as environmentally friendly when in fact they are not. Their objective is to clean up their image and not lose customers (or win them back).
<b>Guarantor</b> <a href="#">[Return to main text]</a>	Person or entity responsible for payment of a debt in the event that the principal debtor fails to pay it. Having a guarantor is often essential for securing a loan.
<b>Information asymmetry</b> <a href="#">[Return to main text]</a>	Information asymmetry is a condition under which one party in a transaction has more or better information than the other party. This has the potential to create a harmful situation since the buyer or seller could take advantage of their counterpart's lack of information.
<b>Information cost</b> <a href="#">[Return to main text]</a>	The expenses incurred during the process of obtaining the information required for the due diligence that financial actors must carry out when evaluating the risk and return profile of an asset or investment.
<b>Institutional investor</b> <a href="#">[Return to main text]</a>	Examples of institutional investors include public and private pension funds, life insurance companies, other insurance companies, and mutual funds.
<b>Internet of things</b> <a href="#">[Return to main text]</a>	This technology connects not only people, organizations, and information resources but also objects that have the ability to detect, process, and communicate digital information.

Term	Definition
<b>Long-term financing</b> <a href="#">[Return to main text]</a>	Long-term financing is the provision of funds over the long term to pay for capital intensive investments that have amortization periods of several years.
<b>Machine learning</b> <a href="#">[Return to main text]</a>	Machine learning is a branch of AI that provides machines with the ability to learn without being explicitly programmed to do so. It is a skill that can be used to build systems capable of identifying patterns in data to make predictions.
<b>Macroprudential regulation</b> <a href="#">[Return to main text]</a>	Macroprudential regulation considers the financial cycle and financial sector characteristics to ensure the solvency of all institutions operating in the sector.
<b>Market failures</b> <a href="#">[Return to main text]</a>	A market structure characterized by a natural concentration of supply, in which only one or very few agents provide goods and services. This allows those agents to eliminate other companies that attempt to participate in the sector and extract greater profits at the expense of consumers.
<b>Marketplace lending</b> <a href="#">[Return to main text]</a>	Online platforms that investors can use to issue loans to retail and commercial borrowers. Unlike banks, these platforms do not accept deposits or issue loans, so they do not carry any risk on their balance sheets. They earn money from fees and commissions received from borrowers and lenders.
<b>Microprudential regulation</b> <a href="#">[Return to main text]</a>	Microprudential regulation adjusts capital levels for each financial institution to ensure that each one is solvent.
<b>Mobile money</b> <a href="#">[Return to main text]</a>	A financial service offered by mobile network operators (or an institution partnered with a mobile network operator) which allows their customers to conduct transactions and store value on a mobile phone.
<b>Moral hazard</b> <a href="#">[Return to main text]</a>	Opportunistic behavior in which one party seeks individual gain at the expense of a counterparty that cannot see or is not informed of that behavior.
<b>Open data</b> <a href="#">[Return to main text]</a>	Open data are data generated by governments and made available to society, in such a way that any individual or company can use the data to generate information or knowledge and develop new services.
<b>P2P loan platform</b> <a href="#">[Return to main text]</a>	Online platforms that enable direct lending from one individual to another without the use of a bank intermediary and allow for completely digital onboarding of borrowers and lenders.
<b>Physical risk</b> <a href="#">[Return to main text]</a>	Financial risk that arises from the impact on physical assets due to weather events, the rise in sea levels, losses of ecosystem services (desertification, water scarcity, or soil degradation), or environmental incidents (chemical leaks or marine oil spills).
<b>Public-private partnership (PPP)</b> <a href="#">[Return to main text]</a>	A PPP is a long-term contract between a public-sector party and a private-sector party for the development and/or management of a public asset or service, in which the private-sector agent bears significant risk and responsibility for management of that asset or service during the contract term and compensation greatly hinges on performance and/or demand for or use of that asset or service.
<b>RegTech</b> <a href="#">[Return to main text]</a>	This term was coined to describe a group of companies that have tapped into new technologies (such as the cloud, big data, and blockchain) to create solutions to help companies in all sectors comply with regulatory requirements.

Term	Definition
<b>Regulatory sandboxes</b> <a href="#">[Return to main text]</a>	A forum (technical, physical, or legal) for experimentation to promote innovation within a safe environment that is closely monitored by the sector regulator.
<b>Relevant portfolio</b> <a href="#">[Return to main text]</a>	The relevant portfolio is determined by the segmentation of the total financial intermediary portfolio that is aligned with the target segment that the project intends to serve. The relevant portfolio is used to measure whether the operation increases access to finance in the target segment.
<b>Repo</b> <a href="#">[Return to main text]</a>	A repurchase operation in which a financial entity sells an asset to an investor with a commitment to buy back the asset on a given date at a given price.
<b>Securitization</b> <a href="#">[Return to main text]</a>	The process by which an issuing entity cedes any type of asset that generates quantifiable cashflows to a securitization vehicle or instrument that will be financed by issuing tradable securities with a different ranking that are typically classified with a rating not tied to the issuer's rating.
<b>Single borrower limit</b> <a href="#">[Return to main text]</a>	A limit on individual counterparty risk used by the banking system. The limit represents the maximum percentage of the entity's total asset portfolio to which a loan to one individual client or project can amount.
<b>Smart contract</b> <a href="#">[Return to main text]</a>	Smart contracts are contracts that are programmed directly onto a blockchain and self-execute without human intervention, as opposed to contracts written on paper.
<b>Stablecoins</b> <a href="#">[Return to main text (paragraph 2.42)]</a> <a href="#">[Return to main text (paragraph 5.13)]</a>	Cryptocurrencies created with the purpose of maintaining a price with little variation in the market, generally representing a fiat currency (such as the dollar or the euro).
<b>Structured financing</b> <a href="#">[Return to main text]</a>	Structured financing is when a series of assets is pooled for sale by tranche, each of which gives rights to cash flows backed by the group of assets. This type of instrument has become increasingly important for the transfer of credit risk.
<b>Supervisory technology (SupTech)</b> <a href="#">[Return to main text]</a>	Technologies that aim to make the work of financial supervisors more efficient.
<b>Sustainable finance</b> <a href="#">[Return to main text]</a>	Sustainable finance refers to the process of factoring environmental, social, and governance considerations into financial sector decision-making, which results in an increase in long-term investments in sustainable economic activities and projects.
<b>Thematic bond</b> <a href="#">[Return to main text]</a>	A regulated debt instrument subject to the same financial regulation and capital market as other fixed-yield securities. A bond is considered thematic when its funds are to be used exclusively for sustainable, green, or social projects.
<b>Transaction cost</b> <a href="#">[Return to main text]</a>	Transaction costs are the expenses incurred when carrying out a financial transaction on the market.
<b>Transition risk</b> <a href="#">[Return to main text]</a>	Financial risk that arises from human efforts to address environmental and climate challenges, including changes in public policies, technological advances, changes in investors, and innovations that disrupt business models, that devalue the asset portfolio of industries and companies with low environmental sustainability.

Term	Definition
<b>Unwinding</b> <a href="#">[Return to main text]</a>	A reduction in the rate at which a central bank accumulates new assets on its balance sheet. Tapering is the first step in the process of winding down, or withdrawing completely, from a monetary stimulus program that has already been implemented. These policies are primarily aimed at interest rates and controlling investor perceptions about the future direction of interest rates, such as changes in the discount rate or reserve requirements.
<b>Virtual currency</b> <a href="#">[Return to main text]</a>	A digital means of exchange that is similar to physical currencies and allows instant transactions and transfer of ownership without borders.

## BIBLIOGRAPHY

- Aboal, D., N. Noya, and A. Ruis, 2014. Contract Enforcement and Investment: A Systematic Review of the Evidence. *World Development*, 64: 322-338. Available at <https://www.sciencedirect.com/science/article/pii/S0305750X14001612?via%3Dihub>.
- Agénor, P. and L. Pereira da Silva, 2016. Reserve Requirements and Loan Loss Provisions as Countercyclical Macroprudential Instruments. IDB Policy Brief IDB-PB-250.
- Aghion, P. et al., 2005. Competition and Innovation: An Inverted-U Relationship. National Bureau of Economic Research. IFS Working Paper 02/04. Aghion, P. et al., 2010. Regulation and Distrust. *The Quarterly Journal of Economics*, 125(3): 1015-1049. Available at <https://doi.org/10.1162/qjec.2010.125.3.1015>.
- Akerlof, G., 1970. The Market for Lemons: Qualitative Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84(3).
- Alesina, A. F. et al., 2013. Do Women Pay More for Credit? Evidence from Italy. *Journal of the European Economic Association*, 11(s1): 45-66.
- Alfonso, V., A. Tombini, and F. Zampolli, 2020. Retail Payments in Latin America and the Caribbean: Present and Future. *BIS Quarterly Review*. Available at [https://www.bis.org/publ/qtrpdf/r\\_qt2012f.htm](https://www.bis.org/publ/qtrpdf/r_qt2012f.htm).
- Allen, F. et al., 2012. The Foundations of Financial Inclusion: Understanding Ownership and Use of Formal Accounts. World Bank.
- Almeida, H., M. Campello, and M. S. Weisbach, 2011. Corporate Financial and Investment Policies When Future Financing Is Not Frictionless. *Journal of Corporate Finance*, 17(3): 675-693. Available at <https://doi.org/10.1016/j.jcorpfin.2009.04.001>.
- Alonso, A. and J. M. Marqués, 2019. Financial Innovation for a Sustainable Economy. Bank of Spain. Available at <https://www.bde.es/f/webbde/SES/Secciones/Publicaciones/PublicacionesSeriadas/DокументosOcasionales/19/Files/do1916e.pdf>.
- Amante, A. et al., 2019. Sovereign Asset and Liability Management in Emerging Market Countries: The Case of Uruguay. IMF Working paper.
- Americas Market Intelligence (AMI), 2020. The Acceleration of Financial Inclusion During the COVID-19 Pandemic: Bringing Hidden Opportunities to Light. AMI. Available at [https://www.mastercard.com/news/media/j4lfhoyr/mastercard\\_financial\\_inclusion\\_during\\_covid\\_whitepaper\\_external\\_20201012.pdf](https://www.mastercard.com/news/media/j4lfhoyr/mastercard_financial_inclusion_during_covid_whitepaper_external_20201012.pdf).
- Andrianaivo, M. and C. Yartey, 2010. Understanding the Growth of African Financial Markets. *African Development Review*.
- Aparicio, G. et al., 2021. Liquidity or Capital? The Impacts of Easing Credit Constraints in Rural Mexico. IDB working paper.
- Appaya, M. and H. Gradstein, 2020. How Regulators Respond to Fintech: Evaluating the Different Approaches—Sandboxes and Beyond. Fintech Note 4. World Bank.
- Appaya, M., H. L. Gradstein, and M. N. Haji, 2020. Global Experiences from Regulatory Sandboxes. Fintech Note 8. Washington, D.C.: World Bank Group. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/34789/Global-Experiences-from-Regulatory-Sandboxes.pdf?sequence=1&isAllowed=y>.

- Araujo, A. P., R. Ferreira, and B. Funchal, 2012. The Brazilian Bankruptcy Law Experience. *Journal of Corporate Finance* 18(4): 994-1004. Available at <https://doi.org/10.1016/j.jcorpfin.2012.03.001>.
- Arráiz, I. et al., 2014. Partial Credit Guarantees and Firm Performance: Evidence from Colombia. *Small Business Economics*, 711-724.
- Arráiz, I. et al., 2018. Are Psychometric Tools a Viable Screening Method for Small and Medium-Size Enterprise Lending? Evidence from Peru. Mimeo.
- Asia-Pacific Economic Cooperation (APEC), 2016. Gender-related Constraints Faced by Women - owned SMEs. Policy Support Unit. Policy Brief 15.
- Attridge, S. and L. Lengen, 2019. Blended Finance in the Poorest Countries. The Need for a Better Approach. London, UK, ODI.
- Avery, R. B. et al, 1998. The Role of Personal Wealth in Small Business Finance. *Journal of Banking & Finance*, 22(6-8): 1019-1061.
- Bae, K.-H. et al., 2009. Creditor Rights, Enforcement, and Costs of Loan Finance.
- Bae, K. H. and V. Goyal, 2009. Creditor Rights, Enforcement, and Bank Loans. *The Journal of Finance*, 64: 823-860.
- Baller, S., S. Dutta, and B. Lanvin (eds.), 2016. The Global Information Technology Report 2016: Innovating in the Digital Economy. World Economic Forum. Available at [http://www3.weforum.org/docs/GITR2016/WEF\\_GITR\\_Full\\_Report.pdf](http://www3.weforum.org/docs/GITR2016/WEF_GITR_Full_Report.pdf).
- Baltagi, B. et al., 2009. Financial Development and Openness: Evidence from Panel Data. *Journal of Development Economics*, 89: 285-296. 10.2139/ssrn.1808903.
- Banerjee, A. et al., 2015. Six Randomized Evaluations of Microcredit: Introduction and Further Steps. *American Economic Journal: Applied Economics*: 1-21. Available at <https://economics.mit.edu/files/10475>.
- Banerjee, A. et al., 2015. The Miracle of Microfinance? Evidence from a Randomized Evaluation. *American Economic Journal: Applied Economics*, 7(1): 22-53. Available at <https://economics.mit.edu/files/5993>.
- Banerjee, A., 2013. Microcredit Under the Microscope: What Have We Learned in the Past Two Decades, and What Do We Need to Know? *Annual Review of Economics*: 487-519.
- Banerjee, A.V. and E. Duflo, 2014. Do Firms Want to Borrow More? Testing Credit Constraints Using a Directed Lending Program. *Review of Economic Studies* 81(2): 572-607.
- Bank of England. 2018. Transition in Thinking: The Impact of Climate Change on the UK Banking Sector. Bank of England. Available at <https://www.fsb.org/wp-content/uploads/P231120.pdf>.
- Barber, B. M. and T. Odean, 2001. Boys Will Be Boys: Gender, Overconfidence, and Common Stock Investment. *Quarterly Journal of Economics*, 116(1): 261-292.
- Bardasi, E. et al., 2009. How Do Female Entrepreneurs Perform? Evidence from Three Developing Regions. *Small Business Economics*, 37(4): 417-441.
- Bartik, A. W. et al., 2020. The Targeting and Impact of Paycheck Protection Program Loans to Small Businesses. National Bureau of Economic Research. Working Paper 27623. Available at <https://www.nber.org/papers/w27623>.

- Basel Institute of Governance. 2021. Basel AML Index 2021: 10th Public Edition Ranking money laundering and terrorist financing risks around the world. Basel. Available at [https://baselgovernance.org/sites/default/files/2021-09/Basel\\_AML\\_Index\\_2021\\_10th%20Edition.pdf](https://baselgovernance.org/sites/default/files/2021-09/Basel_AML_Index_2021_10th%20Edition.pdf).
- Batini, N. et al., 2021. Building Back Better: How Are Green Spending Multipliers? IMF Working Paper. Available at <https://www.imf.org/en/Publications/WP/Issues/2021/03/19/Building-Back-Better-How-Big-Are-Green-Spending-Multipliers-50264>.
- Baudino, P., 2020. Public Guarantees for Bank Lending in Response to the COVID-19 Pandemic. BIS Financial Stability Institute. Available at <https://www.bis.org/fsi/fsibriefs5.pdf>.
- Baum, J. A. and B. S. Silverman, 2004. Picking Winners or Building Them? Alliance, Intellectual, and Human Capital as Selection Criteria in Venture Financing and Performance of Biotechnology Startups. *Journal of Business Venturing*, 19(3): 411-436.
- Bebczuk, R. N., M.C. Fernández Díez, and A. Támola, 2021. Potential for Post-Pandemic Recovery: Bank Credit by Productive Sectors in Latin America and the Caribbean. IDB. Technical Note IDB-TN-2233. Available at <https://publications.iadb.org/en/potential-post-pandemic-recovery-bank-credit-productive-sectors-latin-america-and-caribbean>.
- Beck T. and R. Levine, 2004. Stock Markets, Banks, and Growth: Panel Evidence. *Journal of Banking & Finance*.
- Beck, T. and A. Demirgürç-Kunt, 2006. Small and Medium-size Enterprises: Access to Finance as a Growth Constraint. *Journal of Banking & Finance*, 30(11): 2931-2943.
- Beck, T. et al., 2000. Finance and the Sources of Growth. *Journal of Financial Economics*, 58(1-2): 261-300.
- Beck, T. et al., 2005. Financial and Legal Constraints to Firm Growth: Does Firm Size Matter? *Journal of Finance*.
- Beck, T., 2016. Long-term Finance in Latin America: A Scoreboard Model. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Long-term-Finance-in-Latin-America-A-Scoreboard-Model.pdf>.
- Beck, T., A. Demirgürç-Kunt, and D. Singer, 2013. Is Small Beautiful? Financial Structure, Size, and Access to Finance. *World Development*, 52: 19-33. Available at <https://doi.org/10.1016/j.worlddev.2013.05.014>.
- Beck, T., and H. Mooney, 2021. Financial Development in the Caribbean. In: M. J. Schwartz and D. W. Beuermann (eds.), *Economic Institutions for a Resilient Caribbean*. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Economic-Institutions-for-a-Resilient-Caribbean.pdf>.
- Beck, T., R. Levine, and A. Levkov, 2010. Big Bad Banks? The Winners and Losers from Bank Deregulation in the United States. *The Journal of Finance*, 65(5): 1637-1667. Available at <https://doi.org/10.1111/j.1540-6261.2010.01589.x>.
- Beck; T. et al., 2003. Law, Endowments, and Finance. *Journal of Financial Economics*, 70(2): 137-181.
- Begg, I., 2016. Chapter 3: The Economic Theory of Cohesion Policy. In: S. Piattoni and L. Polverari (eds.). *Handbook on Cohesion Policy in the EU*: 50-64.

- Benavente, J., et al., 2006. FOGAPE: An Economic Analysis. Working Paper.
- Berg, T., V. Burg, A. Gombović, et al., 2020. On the Rise of Fintechs: Credit Scoring Using Digital Footprints. *The Review of Financial Studies*, 33(7): 2845-2897. Available at <https://academic.oup.com/rfs/article/33/7/2845/5568311>.
- Berger, A. N., W. S. Frame, and N. H. Miller, 2005. Credit Scoring and the Availability, Price, and Risk of Small Business Credit. *Journal of Money, Credit, and Banking*, 37(2): 191-222. Available at <https://doi.org/10.1353/mcb.2005.0019>.
- Berger, A.N. and G.F. Udell, 1998. The Economics of Small Business Finance: The Roles of Private Equity and Debt Markets in the Financial Growth Cycle, *Journal of Banking & Finance*, 22(6-8): 613-673.
- Berkmen, P. et al., 2019. Fintech in Latin America and the Caribbean: Stocktaking. IMF Working Paper 19/71A. International Monetary Fund. Available at <https://www.imf.org/en/Publications/WP/Issues/2019/03/26/Fintech-in-Latin-America-and-the-Caribbean-Stocktaking-46677>.
- Bernanke, B., 1983. Non-Monetary Effects of the Financial Crisis in the Propagation of the Great Depression. *The American Economic Review*, 73(3): 257-276.
- Bijkerk, W., 2021. Regulatory Sandboxes, Innovation Hubs, and Other Regulatory Innovation Tools in Latin America and the Caribbean. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Sandboxes-regulatorios-hubs-de-innovacion-y-mas-innovaciones-regulatorias-en-America-Latina-y-el-Caribe-Una-aproximacion.pdf>.
- Binks, M. R., and C. T. Ennew, 1996. Growing Firms and the Credit Constraint. *Small Business Economics*, 8(1): 17-25.
- BIS, 2010. An Assessment of the Long-Term Economic Impact on Stronger Capital and Liquidity Requirements, Basel Committee on Banking Supervision, Basel: Bank for International Settlements.
- BIS, 2020. Climate-Related Financial Risks: A Survey on Current Initiatives, Basel: Bank for International Settlements.
- BIS, 2020. The green swan. Central banking and financial stability in the age of climate change. Available at <https://www.bis.org/publ/othp31.htm>.
- BIS, 2021. DeFi risks and the decentralisation illusion. Basel: Bank for International Settlements. Available at: [https://www.bis.org/publ/qtrpdf/r\\_qt2112b.pdf](https://www.bis.org/publ/qtrpdf/r_qt2112b.pdf).
- Blanchflower, D. et al., 2003. Discrimination in the Small-Business Credit Market. *The Review of Economics and Statistics*, 85(4): 930-943.
- Blyde, J. S., 2014. Fábricas sincronizadas: América Latina y el Caribe en la era de las Cadenas Globales de Valor. Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/F%C3%A1bricas-sincronizadas-Am%C3%A9rica-Latina-y-el-Caribe-en-la-era-de-las-Cadenas-Globales-de-Valor.pdf>.
- Blyde, J. S., 2020. Global Value Chains and Latin America: A Technical Note. Inter-American Development Bank. Available at [https://publications.iadb.org/publications/english/document/Global\\_Value\\_Chains\\_and\\_Latin\\_America\\_A\\_Technical\\_Note\\_en.pdf](https://publications.iadb.org/publications/english/document/Global_Value_Chains_and_Latin_America_A_Technical_Note_en.pdf).

- Bondonio, D., and R. T. Greenbaum, 2014. Revitalizing Regional Economies Through Enterprise Support Policies: An Impact Evaluation of Multiple Instruments. *European Urban and Regional Studies*, 21(1): 79-103.
- Borensztein, E. et al., 2008. Building Bond Markets in Latin America. In *Bond Markets in Latin America*:1-28.
- Borensztein, E., B. Eichengreen, and U. Panizza, 2006. Debt Instruments and Policies in the New Millennium: New Markets and New Opportunities. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Debt-Instruments-and-Policies-in-the-New-Millennium-New-Markets-and-New-Opportunities.pdf>.
- Boston Consulting Group (BCG), 2009. Women Want More (In Financial Services).
- Boyd, J. et al., 2001. The Impact of Inflation on Financial Sector Performance. *Journal of Monetary Economics*.
- Braggion F., A. Manconi, and H. Zhu, 2018. Can Technology Undermine Macroprudential Regulation? Evidence from Peer-to-Peer Credit in China. Available at <http://www.cafr-sif.com/2018/2018selected/54.%20Can%20Technology%20Undermine%20Macroprudential%20Regulation%20Evidence%20from%20Peer-to-Peer%20Credit%20in%20China.pdf>.
- Breuer, W. et al., 2014. Risk Aversion vs. Individualism: What Drives Risk Taking in Household Finance? *Europe Journal of Finance*, 20.
- Brown, M., T. Jappelli, and M. Pagano, 2009. Information Sharing and Credit: Firm-level Evidence from Transition Countries. *Journal of Financial Intermediation*, 18(2):151-172.
- Brown, R. and N. Lee, 2017. The Theory and Practice of Financial Instruments for Small and Medium-Sized Enterprises. EU-OECD Seminar Series on Designing Better Economic Development Policies for Regions and Cities.
- Bruhn, M., 2009. Female-owned Firms in Latin America: Characteristics, Performance, and Obstacles to Growth. Policy Research Working Paper 5122. World Bank.
- Brunnenschweiler, C. N., 2010. Finance for Renewable Energy: An Empirical Analysis of Developing and Transition Economies. *Environment and Development Economics*: 241-274.
- Buchak, G. et al., 2018. Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks. *Journal of Financial Economics* 130(3): 453-483.
- Buckley et al., 2020. Building Fintech Ecosystems: Regulatory Sandboxes, Innovation Hubs and Beyond. The Rise of Fintech.
- Buckley, R. et al., 2020. Building Fintech Ecosystems: Regulatory Sandboxes, Innovation Hubs, and Beyond. *Washington University Journal of Law & Policy*.
- Buera, F. J., J. P. Kaboski, and S. Yongseok, 2011. Finance and Development: A Tale of Two Sectors. *American Economic Review*, 101(5): 1964-2002. Available at <https://doi.org/10.1257/aer.101.5.1964>.

- Bueso-Merriam, J. et al., 2016. The Impact of the Lending Program for the Productive Development and Employment Generation of the San Juan Province. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/es/el-impacto-del-programa-de-credito-para-el-desarrollo-de-la-produccion-y-el-empleo-en-la-provincia>.
- Burger, J. D. and F. E. Warnock, 2006. Local Currency Bond Markets. *IMF Staff Papers*, 53 (Special Issue): 115-132.
- Busso, M. and J. Messina, 2020. Social Distancing, Informality, and the Problem of Inequality. Washington, D.C.: Inter-American Development Bank. Available at <https://blogs.iadb.org/ideas-que-cuentan/es/distanciamiento-social-informalidad-y-el-problema-de-la-desigualdad/>.
- Buvinić, M., and R. Furst-Nichols, 2014. Promoting Women's Economic Empowerment: What Works? *The World Bank Research Observer*, 31: 59-101.
- Caballero, J. et al., 2016. On Corporate Borrowing, Credit Spreads and Economic Activity in Emerging Economies: An Empirical Investigation. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/On-Corporate-Borrowing-Credit-Spreads-and-Economic-Activity-in-Emerging-Economies-An-Empirical-Investigation.pdf>.
- Caballero, R. J., T. Hoshi, and A. K. Kashyap, 2008. Zombie Lending and Depressed Restructuring in Japan. *American Economic Review*, 98(5): 1943-77. Available at <https://www.aeaweb.org/articles?id=10.1257/aer.98.5.1943>.
- CAF (Development Bank of Latin America), 2018. Inclusión financiera de las mujeres en América Latina. *Serie Políticas Públicas y Transformación Productiva*, 30.
- Calatayud, A., and J. A. Ketterer, 2016. Integrated Value Chain Risk Management. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Gesti%C3%B3n-integral-de-riesgos-para-cadenas-de-valor.pdf>.
- Calderón, C. and L. Servén, 2014. Infrastructure, Growth, and Inequality: An Overview. Policy Research Working Paper 7034. Washington, D.C.: World Bank Group. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/20365/WPS7034.pdf?sequence=1&isAllowed=y>.
- Canales, R., and R. Nanda, 2012. A Darker Side to Decentralized Banks: Market Power and Credit Rationing in SME Lending. *Journal of Financial Economics*, 105(2): 353-366. Available at <https://www.sciencedirect.com/science/article/abs/pii/S0304405X12000438#>.
- Cangoz, M. et al., 2018. How Do Countries Use an Asset and Liability Management Approach? A Survey on Sovereign Balance Sheet Management. World Bank Policy Research Working Paper.
- Cantú, C., and B. Ulloa, 2020. The Dawn of Fintech in Latin America: Landscape, Prospects, and Challenges. *BIS Papers* 112.
- Caro, L., et al., 2012. Credit, Labor Informality, and Firm Performance in Colombia. IDB Working Paper Series IDB-WP-325.
- Carpenter, R. E., and B. C. Petersen, 2002. Capital Market Imperfections, High-Tech Investment, and New Equity Financing. *Economic Journal*, 112(477): F54-F72.

- Carter, R. B., and H. Van Auken, 2005. Bootstrap Financing and Owners' Perceptions of Their Business Constraints and Opportunities. *Entrepreneurship & Regional Development*, 17(2): 129-144.
- Cassar, G., 2004. The Financing of Business Start-Ups. *Journal of Business Venturing*, 19(2): 261-283.
- Cavallo, E. and A. Powell (coord.), 2019. Building Opportunities for Growth in a Challenging World. 2019 Latin American and Caribbean Macroeconomic Report. Washington, D.C.: Inter-American Development Bank. Available at [https://publications.iadb.org/publications/english/document/2019\\_Latin\\_American\\_and\\_Caribbean\\_Macroeconomic\\_Report\\_Building\\_Opportunities\\_to\\_Grow\\_in\\_a\\_Challenging\\_World\\_en\\_en.pdf](https://publications.iadb.org/publications/english/document/2019_Latin_American_and_Caribbean_Macroeconomic_Report_Building_Opportunities_to_Grow_in_a_Challenging_World_en_en.pdf).
- Cavallo, E. and A. Powell, 2021. Opportunities for Stronger and Sustainable Postpandemic Growth. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/2021-Latin-American-and-Caribbean-Macroeconomic-Report-Opportunities-for-Stronger-and-Sustainable-Postpandemic-Growth.pdf>.
- Cavallo, E. et al., 2013. Catastrophic Natural Disasters and Economic Growth. *The Review of Economics and Statistics*, 95(5): 1549-1561. Available at [https://doi.org/10.1162/REST\\_a\\_00413](https://doi.org/10.1162/REST_a_00413).
- Cavallo, E., A. Galindo, V. Nuguer, and A. Powell, (eds.) 2022. From Recovery to Renaissance: Turning Crisis into Opportunity. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/2022-Latin-American-and-Caribbean-Macroeconomic-Report-From-Recovery-to-Renaissance-Turning-Crisis-into-Opportunity.pdf>.
- Cavallo, E., A. Powell, and T. Serebrisky (eds.), 2020. From Structures to Services. The Path to Better Infrastructure in Latin America and the Caribbean. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/From-Structures-to-Services-The-Path-to-Better-Infrastructure-in-Latin-America-and-the-Caribbean.pdf>.
- Cavallo, E., and T. Serebrisky (eds.), 2016. Saving for Development. How Latin America and the Caribbean Can Save More and Better. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Saving-for-Development-How-Latin-America-and-the-Caribbean-Can-Save-More-and-Better.pdf>.
- Cavalluzzo, K. et al., 2002. Competition, Small Business Financing, and Discrimination: Evidence from a New Survey. *The Journal of Business*, 75(4): 641-679.
- CCAF and IDB, 2021 (forthcoming). SME Access to Finance in LAC: Fintech Perspective.
- CCAF, 2020. The Global Alternative Finance Market Benchmarking Report. Cambridge, U.K.: University of Cambridge. Available at <https://www.jbs.cam.ac.uk/faculty-research/centres/alternative-finance/publications/the-global-alternative-finance-market-benchmarking-report/>.
- Centre for Economic Policy Research (CEPR). 2021. Central Bank Digital Currency: Considerations, Projects, Outlook. London, United Kingdom. Available at <https://voxeu.org/content/central-bank-digital-currency-considerations-projects-outlook>.

- Cerutti, E. et al., 2015. The Use and Effectiveness of Macroprudential Policies: New Evidence. IMF Working Paper 15/61. Available at <https://www.imf.org/external/pubs/ft/wp/2015/wp1561.pdf>.
- Chamlou, N., 2008. The Environment for Women's Entrepreneurship in the Middle East and North Africa. Washington, D.C.: World Bank.
- Chaparro, R., M. Netto, P. Mansilla, et al., 2020. Energy Savings Insurance: Advances and Opportunities for Funding Small- and Medium-sized Energy Efficiency and Distributed Generation Projects in Chile. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Energy-Savings-Insurance-Advances-and-Opportunities-for-Funding-Small--and-Medium-Sized-Energy-Efficiency-and-Distributed-Generation-Projects-in-Chile.pdf>.
- Čihák, M. and R. Sahay. 2020. Finance and Inequality. IMF Staff Discussion Notes. IMF. Available at <https://www.imf.org/-/media/Files/Publications/SDN/2020/English/SDNEA2020001.ashx>.
- Cirmizi, E., L. Klapper, and M. Uttamchandani, 2012. The Challenges of Bankruptcy Reform. *World Bank Research Observer*, 27(2): 185-203.
- Claessens, S. et al., 2018. Fintech Credit Markets Around the World: Size, Drivers, and Policy Issues. *BIS Quarterly Review*, September.
- Claessens, S., and E. Feijen, 2006. Financial Sector Development and the Millennium Development Goals. World Bank Working Paper 89. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/7145/386880Financia101OFFICIAL0USE0ONLY1.pdf?sequence=1&isAllowed=y>.
- Claessens, S., J. Frost, G. Turner et al., 2018. Fintech Credit Markets Around the World: Size, Drivers, and Policy Issues. *BIS Quarterly Review*. Available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3288096](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3288096).
- Clark, G. et al., 2006. Finance and Income Inequality: What Do the Data Tell Us? *Southern Economic Journal*.
- Climate Bonds Initiative. 2021 Estado del mercado en América Latina y el Caribe. Washington, D.C.: IDB. Available at [https://www.climatebonds.net/files/reports/cbi\\_lac\\_2020\\_sp\\_02d\\_fv.pdf](https://www.climatebonds.net/files/reports/cbi_lac_2020_sp_02d_fv.pdf).
- Cole, R. A. and T. Sokolyk, 2018. Debt Financing, Survival, and Growth of Start-up Firms. *Journal of Corporate Finance*, 50: 609-625.
- Colin, S., 2012. Does Broadband Internet Access Actually Spur Economic Growth? Geneva, Switzerland: International Telecommunication Union.
- Cornelli, G. et al., 2020. Inside the Regulatory Sandbox: Effects on Fintech Funding. BIS Working Paper 901.
- Cosh, A., D. Cumming, and A. Hughes, 2009. Outside Entrepreneurial Capital. *The Economic Journal*, 119(540): 1494-1533.
- Cowling, M. and J. Siepel, 2013. Public Intervention in UK Small Firm Credit Markets: Value-for-money or Waste of Scarce Resources? *Technovation*, 33(8): 265-275.
- Cowling, M. and P. Mitchell, 2003. Is the Small Firms Loan Guarantee Scheme Hazardous for Banks or Helpful to Small Business? *Small Business Economics*, 21: 63-71.

- Cowling, M., W. Liu, and A. Ledger, 2012. Small Business Financing in the UK Before and During the Current Financial Crisis. *International Small Business Journal*, 30(7): 778-800.
- Cravo, T.A., and C. Piza, 2016. The Impact of Business Support Services for Small and Medium Enterprises on Firm Performance in Low- and Middle-Income Countries. IDB Working Paper Series, IDB-WP-709.
- Croson, R. and U. Gneezy, 2009. Gender Differences in Preferences. *Journal of Economic Literature*.
- Cuellar, C., 2013. El efecto de la desigualdad y el acceso al crédito sobre la acumulación de capital humano. *Ensayos sobre Política Económica*, 31(72): 18-34. Available at <https://www.elsevier.es/es-revista-ensayos-sobre-politica-economica-387-articulo-el-efecto-desigualdad-el-acceso-X0120448313690073>.
- Czernich, N., O. Falck, T. Kretschmer, and L. Woessmann, 2009. Broadband Infrastructure and Economic Growth. Munich, Germany: Center for Economic Studies and Ifo Institute (CESifo).
- Dabla-Norris, E. et al., 2015. Causes and Consequences of Income Inequality: A Global Perspective. International Monetary Fund. Available at <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1513.pdf>.
- Dąbrowski, M., 2015. 'Doing More with Less' or 'Doing Less with Less'? Assessing EU Cohesion Policy's Financial Instruments for Urban Development. *Regional Studies, Regional Science*, 2(1): 73-96.
- Dana, J. and C. Gilbert, 2008. Managing Agricultural Price Risk in Developing Countries. In H. Geman (ed.), *Risk Management in Commodity Markets*. Wiley Finance.
- de la Torre, A., E. Feyen, and A. Ize, 2013. Financial Development: Structure and Dynamics. Oxford University Press on behalf of the World Bank.
- De Michele, R., J. O. Prats Cabrera, and I. Losada Revol, 2018. Effects of Corruption on Public-Private Partnership Contracts: Consequences of a Zero-tolerance Approach. Washington, D.C.: Inter-American Development Bank. Available at [https://publications.iadb.org/publications/english/document/Effects\\_of\\_Corruption\\_on\\_Public%20Private\\_Partnership\\_Contracts\\_Consequences\\_of\\_a\\_Zero-tolerance\\_Approach\\_en\\_en.pdf](https://publications.iadb.org/publications/english/document/Effects_of_Corruption_on_Public%20Private_Partnership_Contracts_Consequences_of_a_Zero-tolerance_Approach_en_en.pdf).
- de Roure, C., L. Pelizzon, and A. V. Thakor, 2021. P2P Lenders Versus Banks: Cream Skimming or Bottom Fishing? SAFE Working paper. Available at <http://dx.doi.org/10.2139/ssrn.3174632>.
- Deloitte, 2012. What Is the Impact of Mobile Telephony on Economic Growth? A Report for the GSM Association. London, England.
- Deloitte, 2012. What Is the Impact of Mobile Telephony on Economic Growth? London, England: GSM Association.
- Demaestri, E. and C. Moskovits, 2015. Toolkit for the Identification, Measurement, Monitoring, and Risk Management of Contingent Sovereign Liabilities. IDB Technical Note 912.
- Demirgüç-Kunt, A. et. al., 2013. Financial Inclusion and Legal Discrimination Against Women: Evidence from Developing Countries. Policy Research Working Paper 6416. Washington, D.C: World Bank.

- Demirgürç-Kunt, A., L. Klapper, D. Singer, et al., 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, D.C.: Inter-American Development Bank. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/37578/9781464818974.pdf>.
- DeNegri, J. et al., 2011. The Impact of Public Credit Programs on Brazilian Firms. IDB Working Paper 293. Washington, D.C.: Inter-American Development Bank.
- Desbordes, R., and S. J. Wei, 2014. The Effects of Financial Development on Foreign Direct Investment. Policy Research Working Paper 7065. World Bank Group. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/20515/WPS7065.pdf?sequence=1&isAllowed=y>.
- Development Finance Institution (DFI), 2022. DFI Working Group on Blended Concessional Finance for Private Sector Projects. Development Finance Institutions. Joint Report. October 2022 Update. Available at: <https://www.ifc.org/wps/wcm/connect/6923bcfa-36cd-4d76-889c-229ae373e175/202112-DFI-BCF-Joint-Report.pdf?MOD=AJPERES&CVID=n.xxCH0>.
- Diamond, D. and P. Dybvig, 1983. Bank Runs, Deposit Insurance, and Liquidity. *Journal of Political Economy*, 91(3): 401-419.
- Dini, M. and G. Stumpo, 2020. Mipymes en América Latina: un frágil desempeño y nuevos desafíos para las políticas de fomento. Economic Commission for Latin America and the Caribbean. ECLAC. Available at <https://www.cepal.org/es/publicaciones/44148-mipymes-america-latina-un-fragil-desempeno-nuevos-desafios-politicas-fomento>.
- Djankov, S. et al., 2008. Debt Enforcement Around the World. *Journal of Political Economy*, 116(6): 1105-1149.
- Djankov, S., A. Shleifer, C. McLiesh, 2007. Private Credit in 129 Countries. *Journal of Financial Economics*.
- Dohmen, T. et al., 2005. Individual Risk Attitudes: New Evidence from a Large, Representative, Experimentally Validated Survey. Institute for the Study of Labor (IZA) Discussion Paper 1730.
- Domínguez, J., M. Fernandini, L. Riquelme et al., 2017. Financiamiento del mercado de vivienda en América Latina y el Caribe. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Financiamiento-del-mercado-de-vivienda-en-Am%C3%A9rica-Latina-y-el-Caribe.pdf>.
- Donoso, L., O. A. Mitnik, E. Salgado, and A. Tamola, 2021 (forthcoming). Does Increasing Productive Credit Availability Improve Financial Inclusion? Evidence from El Salvador. IDB Working Paper.
- Dutta, N. and D. Mukherjee, 2011. Is Culture a Determinant of Financial Development? *Applied Economics Letters*.
- Echavarría, J.J. et al., 2017. Impacto del crédito sobre los productores de café en Colombia. IDB Discussion Paper 544. Washington, D.C.: Inter-American Development Bank.
- ECLAC, 2014. The Economics of Climate Change in Latin America and the Caribbean: Paradoxes and Challenges. Santiago, Chile.: Economic Commission for Latin America and the Caribbean.

- ECLAC, 2016. The State of Broadband in Latin America and the Caribbean 2016. Santiago, Chile.: Economic Commission for Latin America and the Caribbean.
- ECLAC, 2020. Addressing the Growing Impact of COVID-19 with a View to Reactivation with Equality: New Projections. ECLAC. Available at <https://www.cepal.org/en/publications/45784-addressing-growing-impact-covid-19-view-reactivation-equality-new-projections>.
- ECLAC, 2020. Population projections. Latin American and Caribbean Demographic Observatory 2019. Santiago, Chile. Available at: <https://www.cepal.org/es/publicaciones/45198-observatorio-demografico-america-latina-caribe-2019-proyecciones-poblacion>.
- ECLAC, 2020. Quantifying the Impact of COVID-19 with a View to Reactivation. ECLAC. Available at [https://repositorio.cepal.org/bitstream/handle/11362/45445/1/S2000286\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/45445/1/S2000286_es.pdf).
- ECLAC, 2020. Quantifying the Impact of COVID-19 with a View to Reactivation. Santiago, Chile: Economic Commission for Latin America and the Caribbean. Available at [https://repositorio.cepal.org/bitstream/handle/11362/45445/1/S2000286\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/45445/1/S2000286_es.pdf).
- Economist Intelligence Unit (EIU), 2022. Infrascope 2021-2022. Evaluating the environment for public-private partnerships in Latin America and the Caribbean. New York, NY. Available at: <https://impact.economist.com/projects/infrascope/evaluating-the-environment-for-public-private-partnerships-in-latin-america-and-the-caribbean/>.
- Ehrentraud, J., D. Garcia Ocampo, and C. Quevedo Vega, 2020a. FSI Insights on Policy Implementation 27: Regulating Fintech Financing: Digital Banks and Fintech Platforms. BIS. Available at <https://www.bis.org/fsi/publ/insights27.pdf>.
- Ehrentraud, J., D. Garcia Ocampo, L. Garzoni, and M. Piccolo, 2020b. Policy Responses to Fintech: A Cross-Country Overview. FSI Insights on Policy Implementation 23.
- Eichengreen, B. et al., 2003. Currency Mismatches, Debt Intolerance, and Original Sin: Why They Are Not the Same and Why It Matters. NBER Working Paper 10036.
- EIU, 2020. Global Microscope 2020. The Role of Financial Inclusion in the COVID-19 Response. New York, NY: Economist Intelligence Unit. Available at [https://content.centerforfinancialinclusion.org/wp-content/uploads/sites/2/2020/11/SPANISH\\_EIU\\_Microscope\\_2020\\_proof\\_161120.pdf](https://content.centerforfinancialinclusion.org/wp-content/uploads/sites/2/2020/11/SPANISH_EIU_Microscope_2020_proof_161120.pdf).
- EIU, 2021. Rethinking the Global Microscope for Financial Inclusion: 2021 Key Findings Report. Available at <https://www.centerforfinancialinclusion.org/rethinking-the-global-microscope-for-financial-inclusion-2021-key-findings-report>.
- Elam, A., C. G. Brush, P. G. Greene, et al., 2019. 2018/2019 Women's Entrepreneurship Report. Global Entrepreneurship Monitor. Available at <https://www.gemconsortium.org/report/gem-20182019-womens-entrepreneurship-report>.
- Erel, I. and J. Liebersohn, 2020. Does Fintech Substitute for Banks? Evidence from the Paycheck Protection Program. Working Paper 27659. National Bureau of Economic Research.
- Ericsson, A., 2013. Socioeconomic Effects of Broadband Speed. Stockholm, Sweden: Ericsson.

- Eslava, M., A. Galindo, M. Hofstetter, et al., 2010. Scarring Recessions and Credit Constraints: Evidence from Colombian Plant Dynamics. CEDE Document 007711. Universidad de los Andes - CEDE.
- Eslava, M., A. Maffioli, and M. Meléndez, 2012. Second-tier Government Banks and Firm Performance. IDB Working Paper Series IDB-WP-294.
- Eslava, M., A. Maffioli, and M. Meléndez, 2014. Credit Constraints and Business Performance: Evidence from Public Lending in Colombia. CEDE Working Paper 2014-37.
- EU-LAC Foundation, 2020. The Potential of the Green Bond Markets in Latin America and the Caribbean. Hamburg, Germany: EU-LAC Foundation.
- European Banking Authority, 2017. Sustainable Finance. Available at <https://www.eba.europa.eu/financial-innovation-and-fintech/sustainable-finance>.
- European Commission, 2015. Guidelines on EU Blending Operations. Tools and Methods Series. Guidelines 5. Brussels, Luxembourg: Directorate-General for International Cooperation and Development.
- Faccio M. et al., 2016. CEO Gender, Corporate Risk-taking, and the Efficiency of Capital Allocation. *Journal of Corporate Finance*, 39: 193-209.
- Fairlie, R. and A. Robb, 2008. Gender Differences in Business Performance: Evidence from the Characteristics of Business Owners Survey. IZA Discussion Paper 3718.
- Falahaty, M. and S. H. Law, 2013. The Determinants of Financial Development: New Evidence from the Middle East and North Africa Region.
- Feal-Zubimendi, S. et al., 2019. Country Infrastructure Briefs: Southern Cone. Inter-American Development Bank (IDB).
- Ferguson, F. et al., 1998. Work-Family Conflict and Entrepreneurial Women: A Literature Review. *Journal of Small Business and Entrepreneurship*, 15(1): 30-51.
- Fernández Díez, M. C. et al., 2020. Initial Conditions for Economic Recovery After COVID-19. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Condiciones-iniciales-para-la-recuperacion-economica-despues-del-COVID-19-Un-marco-logico-y-quantitativo-para-los-paises-de-America-Latina-y-el-Caribe.pdf>.
- Filippidis, I. and C. Katrakilidis, 2014. Institutions, Policy, and Banking Sector Development: A Reassessment. *Finance a Uver*, 64: 501-521.
- Financial Alliance for Women (FAFW), 2016. The Paradox of Gender-Neutral Banking. Available at <https://financialallianceforwomen.org/download/the-paradox-of-gender-neutral-banking/>.
- Financial Alliance for Women, 2019. The Economics of Banking on Women. New York, NY: Financial Alliance for Women.
- Financial Stability Board (FSB), 2017. Financial Stability Implications from Fintech: Supervisory and Regulatory Issues that Merit Authorities Attention. FSB. Available at <https://www.fsb.org/wp-content/uploads/R270617.pdf>.
- Financial Superintendence of Colombia, 2019. Riesgos y oportunidades del cambio climático. Workshop.

- Fischer, E., 1992. Sex Differences and Small-Business Performance Among Canadian Retailers and Service Providers. *Journal of Small Business and Entrepreneurship*, 9(4): 2-13.
- Flatnes, J. E., 2020. Information Sharing and Rationing in Credit Markets. *American Journal of Agricultural Economics*, 103(3): 944-960.
- Fleisig, H., M. Safavian, and N. de la Peña, 2006. Reforming Collateral Laws to Expand Access to Finance. Washington, D.C.: World Bank.
- Food and Agriculture Organization (FAO), 2020. Farmers and Agribusinesses at Risk Under COVID-19: What Role for Blended Finance Funds?
- Forbes, K., 2020. The International Aspects of Macroprudential Policy. NBER Working Paper 27698.
- Forcella, D., 2017. Green Microfinance in Latin America and the Caribbean. Washington, D.C.: Inter-American Development Bank.
- Foster, A., and M. Rosenzweig, 2010. Microeconomics of Technology Adoption. *Annual Review of Economics*, 2: 395-424.
- Freedman, P. L., 2004. Designing Loan Guarantees to Spur Growth in Developing Countries. Washington, D.C.: United States Agency for International Development (USAID).
- Freel, M. S., 2007. Are Small Innovators Credit Rationed? *Small Business Economics*, 28(1): 23-35.
- Freire, G., C. Diaz-Bonilla, S. Schwartz Orellana, J. Soler Lopez, F. Carbonari, 2018. Afro-descendants in Latin America: Toward a Framework of Inclusion. Washington, D.C.: World Bank. Available at: <https://openknowledge.worldbank.org/handle/10986/30201>.
- Frischtak, C. et al., 2017. Towards a More Effective BNDES. World Bank.
- Frost, J. et al., 2019. Big Tech and the Changing Structure of Financial Intermediation. *Economic Policy*.
- Frost, J., 2020. The Economic Forces Driving Fintech Adoption Across Countries. BIS Working Paper 838.
- FSB, 2018. FSB 2018 Resolution Report: Keeping the Pressure up. Seventh Report on the Implementation of Resolution Reforms. FSB. Available at <https://www.fsb.org/wp-content/uploads/P151118-1.pdf>.
- FSB, 2019. Fintech and Market Structure in Financial Services: Market Developments and Potential Financial Stability Implications. FSB. Available at <https://www.fsb.org/wp-content/uploads/P140219.pdf>.
- FSB, 2020. The implications of climate change for financial stability. FSB. Available at <https://www.fsb.org/2020/11/the-implications-of-climate-change-for-financial-stability/>.
- Fung, D. W. H, W. Y. Lee, J. J. H. Yeh, et al., 2020. Friend or Foe: The Divergent Effects of Fintech on Financial Stability. *Emerging Markets Review*, 45: 100727.
- Fuster, A., M. Plosser, P. Schnabl, et al., 2019. The Role of Technology in Mortgage Lending. *The Review of Financial Studies*, 32(5): 1854-1899.
- Galindo, A. et al., 2007. Does Financial Liberalization Improve the Allocation of Investment? Micro-Evidence from Developing Countries. *Journal of Development Economics*.

- Gallego, J., B. Hoffmann, P. Ibarrarán et al., 2021. Impactos del programa Ingreso Solidario frente a la crisis del COVID-19 en Colombia. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Impactos-del-programa-Ingreso-Solidario-frente-a-la-crisis-del-COVID-19-en-Colombia.pdf>.
- Gambacorta, L. et al., 2020. Data vs Collateral. BIS Working Papers 881, September.
- Gandelman, N. and A. Rasteletti, 2017. Credit Constraints, Sector Informality and Firm Investments: Evidence from a Panel of Uruguayan Firms. *Journal of Applied Economics*, 20(2): 351-372.
- García Zaballos, A. and R. López Rivas, 2012. Socioeconomic Impact of Broadband in Latin America and Caribbean Countries. Washington, D.C.: Inter-American Development Bank.
- García Zaballos, A. et al., 2019. The Impact of Digital Infrastructure on the Sustainable Development Goals. Washington, D.C.: Inter-American Development Bank.
- García Zaballos, A., E. Iglesias, G. Prado, et al., 2020. Digitalización: Herramienta de defensa ante la crisis del Covid-19 y para el desarrollo sostenible. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Digitalizacion-Herramienta-de-defensa-ante-la-crisis-del-Covid-19-y-para-el-desarrollo-sostenible.pdf>.
- Garcia-Kilroy, C. and H. P. Rudolph, 2017. Private Financing of Public Infrastructure Through PPPs in Latin America and the Caribbean. World Bank.
- Gilchrist, C., 2015. Impact of Broadband on Economic Growth in ECTEL Member States. Santa Lucía: Eastern Caribbean Telecommunications Authority (ECTEL).
- Giuliodori, D. et al., 2019. The Impact of Guarantees on SMEs Access to Credit and Employment. Mimeo.
- Global Banking Alliance for Women (GBA), 2018. BancoEstado: From Massifying Access to Unlocking the Potential of Women's Enterprises in Chile. GBA Case Study, 2015. Brooklyn, NY: GBA.
- Global Partnership for Financial Inclusion (GPFI), 2020. Advancing Women's Digital Financial Inclusion. Global Partnership for Financial Inclusion by the Better Than Cash Alliance, Women's World Banking, and the World Bank Group. Available at: [https://www.gpfi.org/sites/gpfi/files/sites/default/files/saudig20\\_women.pdf](https://www.gpfi.org/sites/gpfi/files/sites/default/files/saudig20_women.pdf).
- Gonzales Arrieta, G. M., 2005. Mortgage Loans and Access to Housing for Low-income Households in Latin America. *CEPAL Review*.
- Goo, J. J., and J. Y. Heo, 2020. The Impact of the Regulatory Sandbox on the Fintech Industry, with a Discussion on the Relation Between Regulatory Sandboxes and Open Innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 6(2): 43.
- Gourinchas, P.O., S. Kalemli-Özcan, V. Penciakova et al., 2020. COVID-19 and SME Failures. NBER Working Paper 27877. Cambridge, MA: National Bureau of Economic Research. Available at [https://www.nber.org/system/files/working\\_papers/w27877/w27877.pdf](https://www.nber.org/system/files/working_papers/w27877/w27877.pdf).
- Granda, C., F. Hamann, and C.E. Tamayo (2017). Credit and Saving Constraints in General Equilibrium: Evidence from Survey Data. IDB Working Paper Series, IDB-WP-808.

- Greenwood, J., J. M. Sanchez, and C. Wang, 2010. Financing Development: The Role of Information Costs. *The American Economic Review*, 100(4): 1875-1891.
- Guirkinger, C., and S. Boucher, 2008. Credit Constraints and Productivity in Peruvian Agriculture. *Agricultural Economics*, 39(3).
- Gummi, M. et al., 2017. Consumer Protection in Financial Technology: Risks Unbanked and Underbanked Consumers Face in Digital Credit and the Technological and Regulatory Approaches to Mitigate Risk. CEGA. Available at [http://www.digitalcreditobservatory.org/uploads/8/2/2/7/82274768/consumer\\_protection\\_in\\_financial\\_technology\\_gspp.pdf](http://www.digitalcreditobservatory.org/uploads/8/2/2/7/82274768/consumer_protection_in_financial_technology_gspp.pdf).
- Gutierrez, E., N. Karmali, and D. Sourrouille, 2018. Bank Credit Allocation in Latin America and the Caribbean. Policy Research Working Paper 8571. Washington, D.C.: World Bank.
- Hamilton, R. T. and M. A. Fox, 1998. The Financing Preferences of Small Firm Owners. *International Journal of Entrepreneurial Behavior & Research*, 4(3): 239-248.
- Harlem Capital, 2022. 128 LATAM Women Founded Startups Raised \$4B+ in 2021. Available at: <https://harlem.capital/128-latam-women-founded-startups-raised-4b-in-2021/>.
- Haro, M. I., and M.C. Fernández Díez, 2019. Diagnóstico de la situación del monitoreo y evaluación en la banca pública de desarrollo en América Latina y el Caribe, IDB, <http://dx.doi.org/10.18235/0001710>.
- Heilbrunn, S., 2004. Impact of Gender on Difficulties Faced by Entrepreneurs. *International Journal of Entrepreneurship and Innovation*, 5(3): 159-165.
- Hendriks, S., 2019. The Role of Financial Inclusion in Driving Women's Economic Empowerment. *Development in Practice*, 29(9). Available at: <https://doi.org/10.1080/09614524.2019.1660308>.
- Heng, D. et al., 2016. Advancing Financial Development in Latin America and the Caribbean. IMF Working Paper 16/81. Available at <https://www.imf.org/external/pubs/ft/wp/2016/wp1681.pdf>.
- Herrera, D. and S. Vadillo, 2018. Sandbox Regulatorio en América Latina y el Caribe para el ecosistema Fintech y el sistema financiero. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/es/publicacion/17483/sandbox-regulatorio-en-america-latina-el-caribe-para-el-ecosistema-fintech-y-el>.
- Herrera, D. and S. Vadillo, 2021. Sandbox regulatorio multi-jurisdiccional para América Latina y el Caribe. IDB Discussion Paper IDB-DP-771. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Sandbox-regulatorio-multi-jurisdiccional-para-America-Latina-y-el-Caribe.pdf>.
- Herrera, D., 2020. MSME Financing Instruments in Latin America and the Caribbean During COVID-19. IDB Discussion Paper IDB-DP-771. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Instrumentos-de-financiamiento-para-las-micro-pequenas-y-medianas-empresas-en-America-Latina-y-el-Caribe-durante-el-Covid-19.pdf>.
- Hill, J., 2018. Chapter 15: Fintech and Government Regulation: If It Quacks Like a Bank. In: *Fintech and the Remaking of Financial Institutions*, 285-314. Academic Press.

- Hoff, K. and J. Stiglitz, 1993. Imperfect Information and Rural Credit Markets: Puzzles and Policy Perspectives.
- Horvath, A. and P. Lang, 2021. Do Loan Subsidies Boost the Real Activity of Small Firms? *Journal of Banking and Finance*, 122(C).
- Huang, J. and D. J. Kisgen, 2013. Gender and Corporate Finance: Are Male Executives Overconfident Relative to Female Executives? *Journal of Financial Economics*, 108(3): 822-839.
- Huang, Y, 2010. Political Institutions and Financial Development: An Empirical Study. *World Development*, 38(12):1667-1677.
- Humphrey, C., 2018. Channeling Private Investment to Infrastructure: What Can Multilateral Development Banks Realistically Do? ETH Zurich Research Collection.
- Ibarrarán, P. et al., 2010. Big Questions About Small Firms. In: C. Pages (ed.). *The Age of Productivity: Transforming Economies from the Bottom Up*. New York, NY: Palgrave Macmillan. Chapter 9.
- IDB Group, 2019. Second Update to the Institutional Strategy. Washington, D.C.: Inter-American Development Bank. Available at <https://iadb-comms.org/IDB-strategy>.
- IDB Group, 2021. Vision 2025: Reinvesting in the Americas. Washington, D.C.: Inter-American Development Bank. Available at <https://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=SHARE-328957462-89>.
- IDB Invest, 2019. IDB Invest Business Plan and Administrative and Capital Budget Proposal 2020-2022.
- IDB Lab, 2019. Business Plan 2019-2021. Washington, D.C.: Inter-American Development Bank. Available at <https://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=SHARE-1914875107-54>.
- IDB, 2014. Support to SMEs and Financial Access/Supervision Sector Framework Document Washington, D.C.: Inter-American Development Bank. Available at <https://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=38884395>.
- IDB, 2015. Update to the Institutional Strategy 2010-2020. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Actualizaci%C3%B3n-de-la-Estrategia-Institucional-2010-2020.pdf>.
- IDB, 2016. Evaluation of IDB Group's Work through Financial Intermediaries. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Evaluaci%C3%B3n-del-Trabajo-del-Grupo-BID-a-trav%C3%A9s-de-intermediarios-financieros.pdf>.
- IDB, 2018a. Transparency Fund: 2013-2018 Strategy and Results Framework. Washington, D.C.: Inter-American Development Bank.
- IDB, 2018b. Sector Framework Document. Strategies, Policies, Sector Frameworks, and Guidelines at the IDB. Washington, D.C.: Inter-American Development Bank. Available at <https://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=SHARE-1646886943-1825>.

- IDB, 2019. Enabling Women's Financial Inclusion Through Data: The Case of Mexico. Washington, D.C.: Inter-American Development Bank. Available at [https://publications.iadb.org/es/publications/spanish/document/Fomentar\\_la\\_inclus%C3%93n\\_financiera\\_de\\_las\\_mujeres\\_a\\_trav%C3%A9s\\_de\\_datos\\_El\\_caso\\_de\\_M%C3%A9xico\\_es\\_es.pdf](https://publications.iadb.org/es/publications/spanish/document/Fomentar_la_inclus%C3%93n_financiera_de_las_mujeres_a_trav%C3%A9s_de_datos_El_caso_de_M%C3%A9xico_es_es.pdf).
- IDB, 2019. Project Completion Report. Lending Program for Productive Development in the Province of San Juan, (AR-L1130;2763/OC-AR). Available at <https://www.iadb.org/projects/document/EZSHARE-100273479-2?project=AR-L1130>.
- IDB, 2019. Update of the Institutional Strategy: Development Solutions that Reignite Growth and Improve Lives (document GN-2933-5; CII/GN-378-5).
- IDB, 2020. 2020 Latin American and Caribbean Macroeconomic Report. Washington, D.C.: Inter-American Development Bank. Available at [https://publications.iadb.org/publications/spanish/document/Informe\\_macroecon%C3%B3mico\\_de\\_Am%C3%A9rica\\_Latina\\_y\\_el\\_Caribe\\_2020\\_Pol%C3%ADticas\\_para\\_combatir\\_la\\_pandemia.pdf](https://publications.iadb.org/publications/spanish/document/Informe_macroecon%C3%B3mico_de_Am%C3%A9rica_Latina_y_el_Caribe_2020_Pol%C3%ADticas_para_combatir_la_pandemia.pdf).
- IDB, 2020. Coronavirus Impact Dashboard. Washington, D.C.: Inter-American Development Bank. Available at <https://www.iadb.org/en/topics-effectiveness-improving-lives/coronavirus-impact-dashboard>.
- IDB, 2020. Development in the Americas 2020: From Structures to Services: The Path to Better Infrastructure in Latin America and the Caribbean. Washington, D.C.: Inter-American Development Bank.
- IDB, 2020. Transparency and Integrity Sector Framework Document. Washington, D.C.: Inter-American Development Bank.
- IDB, 2021. Development Effectiveness Overview (DEO). Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/en/development-effectiveness-overview-deo-2021>.
- IDB, 2021. Strengthening Regional Value Chains in Latin America and the Caribbean. Washington, D.C.: Inter-American Development Bank. Available at <https://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=EZSHARE-1821959538-55>.
- IDB, IDB Invest, and Finnovista, 2018. Fintech: Latin America 2018: Growth and Consolidation. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/en/fintech-latin-america-2018-growth-and-consolidation>.
- IFC, 2011. Strengthening Access to Finance for Women-owned SMEs in Developing Countries. International Finance Corporation. Available at [https://www.ifc.org/wps/wcm/connect/2a9123b3-d369-4115-8cbf-19083218ce64/G20\\_Women\\_Report.pdf?MOD=AJPERES&CVID=jqeI-xk](https://www.ifc.org/wps/wcm/connect/2a9123b3-d369-4115-8cbf-19083218ce64/G20_Women_Report.pdf?MOD=AJPERES&CVID=jqeI-xk).
- IFC, 2014. Women-owned SMEs: A Business Opportunity for Financial Institutions. Available at <https://www.ifc.org/wps/wcm/connect/44b004b2-ed46-48fc-8ade-aa0f485069a1/WomenOwnedSMes+Report-Final.pdf?MOD=AJPERES&CVID=kiIZZDZ>.
- IFC, 2018. Mobilization of Private Finance by Multilateral Development Banks and Development Finance Institutions 2018. Available at [https://www.ifc.org/wps/wcm/connect/publications\\_ext\\_content/ifc\\_external\\_publication\\_site/publications\\_listing\\_page/mdb-joint-report-on-mobilization-2018](https://www.ifc.org/wps/wcm/connect/publications_ext_content/ifc_external_publication_site/publications_listing_page/mdb-joint-report-on-mobilization-2018).

- IFC, 2020. Global Financial Stability Report. IFC. Available at <https://www.imf.org/en/Publications/GFSR>.
- ILO, 2011. Indigenous and Tribal Peoples' Rights in Practice: A Guide to ILO Convention No. 169.
- ILO, 2017. Indigenous Peoples and Climate Change: From Victims to Change Agents Through Decent Work. Available at: [https://www.ilo.org/global/topics/indigenous-tribal/WCMS\\_551189/lang--en/index.htm](https://www.ilo.org/global/topics/indigenous-tribal/WCMS_551189/lang--en/index.htm).
- Imai, M., 2006. Market Discipline and Deposit Insurance Reform in Japan. *Journal of Banking & Finance*.
- IMF, 2010. Making Over-the-Counter Derivatives Safer: The Role of Central Counterparties. Global Financial Stability Report. Chapter 3. International Monetary Fund. Available at <https://www.imf.org/-/media/Websites/IMF/imported-flagship-issues/external/pubs/ft/GFSR/2010/01/pdf/chap3pdf.ashx>.
- IMF, 2012a. Too Much Finance? IMF Working Paper WP/12/161. International Monetary Fund. Available at <https://www.imf.org/external/pubs/ft/wp/2012/wp12161.pdf>.
- IMF, 2012b. Stability Report. April. Washington, D.C.: International Monetary Fund.
- IMF, 2013. Stability Report. Washington, D.C.: International Monetary Fund.
- IMF, 2017. Financial Stability Reports in Latin America and the Caribbean. International Monetary Fund. Available at <https://www.imf.org/en/Publications/WP/Issues/2017/03/28/Financial-Stability-Reports-in-Latin-America-and-the-Caribbean-44771>.
- IMF, 2017. Green Finance Latin America 2017 Report. What Is the Latin American Banking Sector Doing to Mitigate Climate Change? International Monetary Fund. Washington, D.C. Available at [https://www.ifc.org/wps/wcm/connect/0a419cfa-2959-403c-8403-044f6b3be04b/Green+Finance+Report+2017\\_2019.pdf?MOD=AJPERES&CVID=mGxiRRO](https://www.ifc.org/wps/wcm/connect/0a419cfa-2959-403c-8403-044f6b3be04b/Green+Finance+Report+2017_2019.pdf?MOD=AJPERES&CVID=mGxiRRO).
- IMF, 2018. The IMF and the Fight Against Money Laundering and the Financing of Terrorism.
- IMF, 2019. Financial Soundness Indicators Compilation Guide. International Monetary Fund, Washington, D.C. Available at <https://www.imf.org/en/Data/Statistics/FSI-guide>.
- IMF, 2020a. World Economic Outlook. The Great Lockdown. International Monetary Fund. Washington, D.C. Available at <https://www.imf.org/-/media/Files/Publications/WEO/2020/April/English/text.ashx>.
- IMF, 2020b. Regional Economic Outlook. Western Hemisphere. Pandemic Persistence Clouds the Recovery. October.
- IMF, 2020c. Greening the Recovery. Fiscal Affairs. Available at <https://www.imf.org/-/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-greening-the-recovery.ashx>.
- IMF, 2021. Can Fintech Foster Competition in the Banking System in Latin America and the Caribbean? International Monetary Fund. Available at <https://www.imf.org/en/Publications/WP/Issues/2021/04/29/Can-Fintech-Foster-Competition-in-the-Banking-System-in-Latin-America-and-the-Caribbean-50253>.

- IMF, 2021. Fintech and Financial Inclusion in Latin America and the Caribbean. International Monetary Fund. Available at <https://www.imf.org/en/Publications/WP/Issues/2021/08/20/Fintech-and-Financial-Inclusion-in-Latin-America-and-the-Caribbean-464324>.
- IMF, 2021. Fintech Potential for Remittance Transfers: A Central America Perspective. International Monetary Fund. Available at <https://www.imf.org/en/Publications/WP/Issues/2021/06/25/Fintech-Potential-for-Remittance-Transfers-A-Central-America-Perspective-461266>.
- IMF, 2021. Global Financial Stability Report Update, January 2021. International Monetary Fund. Available at <https://www.imf.org/en/Publications/GFSR/Issues/2021/01/27/global-financial-stability-report-january-2021-update>.
- IMF, 2021. Global Financial Stability Report: Covid-19, Crypto and Climate. International Monetary Fund. Available at <https://www.imf.org/en/Publications/GFSR/Issues/2021/10/12/global-financial-stability-report-october-2021>.
- IMF, 2021. Policy Support and Vaccines Expected to Lift Activity. International Monetary Fund. Available at <https://www.imf.org/en/Publications/WEO/Issues/2021/01/26/2021-world-economic-outlook-update>.
- IMF, 2021. The Impact of Fintech on Central Bank Governance. International Monetary Fund. Available at <https://www.imf.org/en/Publications/fintech-notes/Issues/2021/08/24/The-Impact-of-Fintech-on-Central-Bank-Governance-463625>.
- IMF, 2022. Global Financial Stability Report: Shockwaves from the War in Ukraine Test the Financial System's Resilience. International Monetary Fund. Available at <https://www.imf.org/en/Publications/GFSR/Issues/2022/04/19/global-financial-stability-report-april-2022>.
- IMF, 2022. World Economic Outlook Update. Rising Caseloads, A Disrupted Recovery, and Higher Inflation. International Monetary Fund. Available at <https://www.imf.org/en/Publications/WEO/Issues/2022/01/25/world-economic-outlook-update-january-2022>.
- International Center for Research on Women, 2017. Gender and Digital Financial Inclusion: What Do We Know and What Do We Need to Know? International Center for Research on Women. Available at <https://www.icrw.org/wp-content/uploads/2017/11/Gender-and-digital-financial-inclusion.pdf>.
- International Financial Architecture Working Group, 2017. Principles of MDBs' Strategy for Crowding-in Private Sector Finance for Growth and Sustainable Development.
- International Labour Organization (ILO), 2020. World Employment and Social Outlook Trends 2020. Geneva: ILO.
- International Organization of Securities Commissions (IOSCO), 2019. Sustainable Finance in Emerging Markets and the Role of Securities Regulators. Available at [https://www.greenfinancelac.org/wp-content/uploads/2019/07/FTDT\\_NOTE -IOSCO-2019-FINAL-REPORT\\_rev\\_eng.pdf](https://www.greenfinancelac.org/wp-content/uploads/2019/07/FTDT_NOTE -IOSCO-2019-FINAL-REPORT_rev_eng.pdf).
- International Telecommunication Union (ITU), 2015. Measuring the Information Society Report 2015. International Telecommunications Union.

- International Telecommunication Union and United Nations Educational, Scientific, and Cultural Organization, 2020. The State of Broadband 2020. Geneva: International Telecommunication Union and United Nations Educational, Scientific, and Cultural Organization. Available at <https://www.broadbandcommission.org/publication/the-state-of-broadband-2020/>.
- IOSCO, 2020. Development of Emerging Capital Markets: Opportunities, Challenges and Solutions. Final Report. IOSCO. Available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD663.pdf>.
- Islam, S. N., and J. Winkel, 2017. Climate Change and Social Inequality. United Nations. Available at [https://www.un.org/esa/desa/papers/2017/wp152\\_2017.pdf](https://www.un.org/esa/desa/papers/2017/wp152_2017.pdf).
- Jaffee, D. M. and T. Russell, 1976. Imperfect Information, Uncertainty, and Credit Rationing. *Quarterly Journal of Economics*, 90(4): 651-666.
- Jagtiani, J. A. and C. Lemieux, 2017. Fintech Lending: Financial Inclusion, Risk Pricing, and Alternative Information. Federal Reserve Bank of Philadelphia. Available at <https://ssrn.com/abstract=3005260>.
- Jagtiani, J. A. and C. Lemieux, 2018. The Roles of Alternative Data and Machine Learning in Fintech Lending: Evidence from the Lendingclub Consumer Platform. Federal Reserve Bank of Philadelphia Working Paper 18-15.
- Jagtiani, J. A. and C. Lemieux, 2018. The Roles of Alternative Data and Machine Learning in Fintech Lending: Evidence from the Lendingclub Consumer Platform. Working Paper 17-17. Philadelphia, PA: Federal Research Bank of Philadelphia. Available at [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3005260](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3005260).
- Jagtiani, J. and C. Lemieux, 2018. Do Fintech Lenders Penetrate Areas That Are Underserved by Traditional Banks? *Journal of Economics and Business*, 100(2018): 43-54.
- Jagtiani, J., and K. John, 2018. Fintech: The Impact on Consumers and Regulatory Responses. *Journal of Economics and Business*, 100: 1-6.
- Jayarahne, J. and P. Strahan, 1996. Entry Restrictions, Industry Evolution, and Dynamic Efficiency: Evidence from Commercial Banking. Federal Reserve Bank of New York Research Paper 9630.
- Jianakoplos, N. and A. Bernasek, 1998. Are Women More Risk Averse? *Economic Inquiry*, 36(4): 620-630.
- Kagochi, J., 2019. Inflation and Financial Sector Development in Sub-Saharan African Countries. *Journal of Economic Studies*, 46(4): 798-811.
- Kapan, T. and C. Minoiu, 2013. Balance Sheet Strength and Bank Lending During the Global Financial Crisis, International Monetary Fund.
- Kast, F. and D. Pomeranz, 2014. Saving More to Borrow Less: Experimental Evidence from Access to Formal Savings Accounts in Chile. NBER Working Paper 20239. Available at <https://econpapers.repec.org/scripts/redir.pf?u=http%3A%2F%2Fwww.hbs.edu%2Ffaculty%2Fpages%2Fdownload.aspx%3Fname%3D14-001.pdf;h=repec:hbs:wpaper:14-001>.
- Katz, R. et al., 2020. El estado de la digitalización de América Latina frente a la pandemia del COVID-19. Caracas, Venezuela: Development Bank of Latin America.

- Katz, R., 2009. Estimating Broadband Demand and Its Economic Impact in Latin America. Mexico City, Mexico: III Conference Acorn-Redecom.
- Katz, R., 2010. The Contribution of Broadband to Economic Development. In: Jordan, V., Galperin, H., Peres, W. (eds.). *Fast-Tracking the Digital Revolution: Broadband for Latin America and the Caribbean*. Santiago, Chile.: UN Economic Commission for Latin America and the Caribbean.
- Kelly, T. and C. M. Rossotto, 2012. *Broadband Strategies Handbook*. Washington, D.C.: World Bank.
- Kepler, E. and S. Shane, 2007. Are Male and Female Entrepreneurs Really That Different? Small Business Research Summary RS 309. Washington, D.C., United States: Small Business Administration Office of Advocacy.
- Ketterer, J. A. and O. Villacorta, 2017. Créditos a las pyme y políticas de gobierno: La evidencia de los países desarrollados. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Cr%C3%A9ditos-a-las-pyme-y-pol%C3%ADticas-de-gobierno-La-evidencia-de-los-pa%C3%ADses-desarrollados.pdf>.
- Ketterer, J. A., 2017. Digital Finance: New Times, New Challenges, New Opportunities. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Digital-Finance-New-Times-New-Challenges-New-Opportunities.pdf>.
- Kim, S. E., 2005. The Role of Trust in the Modern Administrative State: An Integrative Model. *Administration & Society*, 37(5): 611-35.
- Klapper, L. F. and S. Parker, 2010. Gender and the Business Environment for New Firm Creation. Published by Oxford University Press on behalf of the International Bank for Reconstruction and Development.
- Klapper, L., A. Lusardi, and G. Panos, 2013. Financial Literacy and Its Consequences: Evidence from Russia During the Financial Crisis. *Journal of Banking & Finance*, 37(10): 3904-3923.
- Klomp, J. and J. de Hann, 2010. Banking Risk and Regulation: Does One Size Fit All? CPB Discussion Paper.
- Kodila-Tedika, O., and S. Asongu, 2015. The Effect of Intelligence on Financial Development: A Cross-Country Comparison. *Intelligence*, 51: 1-9.
- Koutroumpis, P., 2009. The Economic Impact of Broadband on Growth: A Simultaneous Approach. Geneva, Switzerland: International Telecommunication Union.
- Kulfas, M., 2009. Las PYMES argentinas en el escenario post convertibilidad: políticas públicas, situación y perspectivas. Buenos Aires: ECLAC.
- La Porta, R. et al., 1998. Law and Finance. *Journal of Political Economy*, 106(6): 1113-1151.
- La Porta, R., F. Lopez-de-Silanes, A. Shleifer, et al., 1997. Legal Determinants of External Finance. *The Journal of Finance*, 12(3): 1131-1150.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer, 2013. Law and Finance After a Decade of Research. In: *Handbook of the Economics of Finance*, 2: 425-491. Elsevier B. V.

- Lampani, K. P. and R. W. Bostic, 1999. Racial Differences in Patterns of Small Business Finance: The Importance of Local Geography. *Federal Reserve Bank of Chicago Proceedings*: 149-179.
- Larraín, C. and J. Quiroz, 2006. Estudio para el fondo de garantía de pequeños empresarios. Mimeo.
- Larson, D. F. et al., 2004. Policies on Managing Risk in Agricultural Markets. Washington, D.C.: World Bank.
- Law, S. and W. Azman-Saini, 2012. Institutional Quality, Governance, and Financial Development. *Economics of Governance*.
- Le, T. et al., 2016. Institutional Quality, Trade Openness, and Financial Sector Development in Asia: An Empirical Investigation. *Emerging Markets Finance and Trade*, 52(5): 1047-1059.
- Lee, N., and R. Brown, 2016. Innovation, SMEs and the Liability of Distance: The Demand and Supply of Bank Funding in UK Peripheral Regions. *Journal of Economic Geography*, 17(1): 233-260.
- Lee, N., H. Sameen, and M. Cowling, 2015. Access to Finance for Innovative SMEs Since the Financial Crisis. *Research Policy*, 44(2): 370-380.
- León, F., 2015. Does Bank Competition Alleviate Credit Constraints in Developing Countries? *Journal of Banking and Finance*, 57: 130-142.
- Lerner, J., 2010. The Future of Public Efforts to Boost Entrepreneurship and Venture Capital. *Small Business Economics*, 35(3): 255-264.
- Levine, R. et al., 2000. Financial Intermediation and Growth: Causality and Causes. *Journal of Monetary Economics*, 46: 31-77.
- Levine, R. et al., 2007. Finance, Inequality and the Poor. *Journal of Economic Growth*.
- Levine, R., 2004. Finance and Growth: Theory and Evidence. National Bureau of Economic Research.
- Li, J., J. Li, X. Zhu et al., 2020. Risk Spillovers Between Fintech and Traditional Financial Institutions: Evidence from the U.S. *International Review of Financial Analysis*, 71: 101544.
- Liner, E., 2017. The Economic Benefit of a Stable Financial System. Report. Third Way. Available at <https://www.thirdway.org/report/the-economic-benefit-of-a-stable-financial-system>.
- Loscocco, K. A. et al., 1991. Gender and Small Business Success: An Inquiry into Women's Relative Disadvantage. *Social Forces*, 70(1): 65-85.
- Loukoianova, E. et al., 2018. Financial Inclusion in Asia-Pacific. International Monetary Fund. Washington, D.C. Available at <https://www.imf.org/~/media/Files/Publications/DP/2018/46115-dp1817-financial-inclusion-in-asia-pacific.ashx>.
- Love, I., and M. S. Martínez Pería, 2015. How Bank Competition Affects Firms' Access to Finance. *World Bank Economic Review*, 29(3): 413-448.
- Love, I., and N. Mylenko, 2003. Credit Reporting and Financing Constraints. Working Paper 3142. World Bank.

- Love, I., and S. Sánchez, 2009. Credit Constraints and Investment Behavior in Mexico's Rural Economy. World Bank Policy Research Working Paper 5014.
- Love, I., M. S. Martínez Pería, and S. Singh, 2016. Collateral Registries for Movable Assets: Does their Introduction Spur Firms' Access to Bank Finance? *Journal of Financial Economics*, 49(1): 1-37.
- Mahawiya, S., 2015. Financial Sector Development, Inflation and Openness: A Comparative Panel Study of ECOWAS and SADC. Working Paper 528. Economic Research Southern Africa.
- Manasa, K. N. and M. C. Padma, 2019. A Study on Sentiment Analysis on Social Media Data. In: V. Sridhar, M. Padma, and K. Rao (eds), *Emerging Research in Electronics, Computer Science and Technology. Lecture Notes in Electrical Engineering*, 545. Singapore: Springer.
- Manolova, T.S. et al., 2012. One Size Does Not Fit All: Entrepreneurial Expectancies and Growth Intentions of U.S. Women and Men Nascent Entrepreneurs. *Entrepreneurship & Regional Development*, 24(12): 7-27.
- Manova, K., 2010. Credit Constraints and the Adjustment to Trade Reform. *Trade Adjustment Costs in Developing Countries: Impacts, Determinants, and Policy Responses*. World Bank.
- MAPFRE Economics, 2022. The Latin American Insurance Market in 2021. Madrid, Spain: Fundación MAPFRE. Available at <https://documentacion.fundacionmapfre.org/documentacion/publico/es/media/group/1116648.do>.
- Mariño-Martínez, R. et al., 2020. Las entidades de contrapartida central en la mitigación del riesgo de Contraparte y de liquidez: El caso de los derivados cambiarios en Colombia. *Borradores de Economía*. Colombia: Bank of the Republic.
- Marlow, S. and S. Carter, 2006. If You Don't Ask You Don't Get! Women, Self-employment, and Finance. Mimeo.
- Martin, R., and P. Sunley, 2015. On the Notion of Regional Economic Resilience: Conceptualization and Explanation. *Journal of Economic Geography*, 15(1): 1-42.
- Martínez A. L. and C. Reséndiz. 2021. Inclusión financiera sin discriminación: hacia un protocolo de trato incluyente en sucursales bancarias de México (LC/MEX/TS.2021/13/Rev.1), Mexico City, ECLAC/CONAPRED. Available at: [https://repositorio.cepal.org/bitstream/handle/11362/46980/4/S2100815\\_es.pdf](https://repositorio.cepal.org/bitstream/handle/11362/46980/4/S2100815_es.pdf).
- Martínez Gutierrez, A.L., 2019. ¿Quién tiene acceso al crédito en México?. Un experimento sobre la discriminación por tono de piel. Government of Mexico. National Discrimination Prevention Council (CONAPRED). 2019. Available at: [http://sindis.conapred.org.mx/wp-content/uploads/2020/07/Quien\\_tiene\\_acceso\\_al\\_credito\\_en\\_Mexico.pdf](http://sindis.conapred.org.mx/wp-content/uploads/2020/07/Quien_tiene_acceso_al_credito_en_Mexico.pdf).
- Martínez Peria, M. S. and S. Singh, 2014. The Impact of Credit Information Sharing Reforms on Firm Financing? Working Paper 7013. Washington, D.C.: World Bank.
- Masoud N., and G. Hardaker, 2012. The Impact of Financial Development on Economic Growth: Empirical Analysis of Emerging Market Countries. *Studies in Economics and Finance*.

- McKinsey. 2021. Global Banking Annual Review 2021: The great divergence. Available at <https://www.mckinsey.com/industries/financial-services/our-insights/global-banking-annual-review>.
- Mejia-Escobar, J., J. González-Ruiz, and E. Duque, 2020. Sustainable Financial Products in the Latin America Banking Industry: Current Status and Insights. *Sustainability*, 12(14): 5648.
- Merton, R. C., and Z. Bodie, 2005. The Design of Financial Systems: Towards a Synthesis of Function and Structure. *Journal of Investment Management, Working Paper 10620*. Available at [https://www.nber.org/system/files/working\\_papers/w10620/w10620.pdf](https://www.nber.org/system/files/working_papers/w10620/w10620.pdf).
- Mexico Projects Hub, 2020. How to Invest? Banco Nacional de Obras y Servicios Públicos (BANOBRAS).
- Mijid, N., 2015. Why Are Female Small Business Owners in the United States Less Likely to Apply for Bank Loans Than Their Male Counterparts? Department of Economics, Central Connecticut State University.
- Milian, E. Z., M. Spinola, and M. de Carvalho, 2019. Fintechs: A Literature Review and Research Agenda. *Electronic Commerce Research and Applications*.
- Ministry of Finance of Chile, 2019. Estrategia Financiera frente al Cambio Climático. Available at <https://cambioclimatico.mma.gob.cl/wp-content/uploads/2020/04/Estrategia-financiera.pdf>.
- Ministry of Industry, Energy, and Tourism of Spain, 2017. Digital Agenda for Spain. Madrid, Spain: Ministry of Industry, Energy, and Tourism.
- Moro, A. et al., 2017. Does a Manager's Gender Matter When Accessing Credit? Evidence from Europe Data. *Journal of Banking & Finance*, 80(C): 119-134.
- Morón, E. et al., 2012. Financial Dependence, Formal Credit, and Firm Informality: Evidence from Peruvian Household Data. IDB Working Paper IDB-WP-288.
- Moszoro, M. et al., 2015. What Drives Private Participation in Infrastructure Developing Countries? Institutional and Political Determinants of Private Participation in Infrastructure. Organisation for Economic Co-operation and Development (OECD).
- Muñoz Miranda, A. et al., 2012. Room for Development: Housing Markets in Latin America and the Caribbean. Washington, D.C.: Inter-American Development Bank.
- Muravyev, A. et al., 2009. Entrepreneurs' Gender and Financial Constraints: Evidence from International Data. *Journal of Comparative Economics*, 37(2): 270-286.
- Myers, S. C., and N. S. Majluf, 1984. Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics*, 13(2): 187-221.
- Nabalón, I. et al., 2021. Onboarding digital. Washington, D.C.: Inter-American Development Bank.
- Naceur, S. and R. Zhang, 2016. Financial Development, Inequality and Poverty: Some International Evidence. Washington, D.C.: International Monetary Fund.
- Neira, J., D. Perez, and C. E. Tamayo, 2016. Reforms, Credit, and Misallocation in Colombia. Unpublished. Washington, D.C.: Inter-American Development Bank.

- NERA, 2020. Assessing the Contribution of Connectivity Investments to the Development of Latin American Societies. NERA Economic Consulting. Available at <https://www.nera.com/content/dam/nera/publications/2020/Facebook%20Connectivity%20Investments%20Report%20-%20English.pdf>.
- Netto, M., et al., 2022. A Guidebook for National Development Banks on Climate Risk. Washington, DC: IDB. Available at: <https://publications.iadb.org/publications/english/document/A-Guidebook-for-National-Development-Banks-on-Climate-Risk.pdf>.
- NGFS, 2019. A Call for Action: Climate Change As a Source of Financial Risk. Network for Greening the Financial System. Available at [https://www.ngfs.net/sites/default/files/medias/documents/reporte-de-la-ngfs-una-llamada-a-la-accion-es\\_290719\\_0.pdf](https://www.ngfs.net/sites/default/files/medias/documents/reporte-de-la-ngfs-una-llamada-a-la-accion-es_290719_0.pdf).
- NGFS, 2020. Overview of Environmental Risk Analysis by Financial Institutions. Network for Greening the Financial System. Available at [https://www.ngfs.net/sites/default/files/medias/documents/overview\\_of\\_environmental\\_risk\\_analysis\\_by\\_financial\\_institutions.pdf](https://www.ngfs.net/sites/default/files/medias/documents/overview_of_environmental_risk_analysis_by_financial_institutions.pdf).
- NGFS, 2021. Scenarios in Action: A progress report on global supervisory and central bank climate scenario exercises. Available at <https://www.ngfs.net/sites/default/files/medias/documents/scenarios-in-action-a-progress-report-on-global-supervisory-and-central-bank-climate-scenario-exercises.pdf>.
- NGFS, 2022. NGFS Scenarios for Central Banks and Supervisors. Available at: [https://www.ngfs.net/sites/default/files/medias/documents/ngfs\\_climate\\_scenarios\\_for\\_central\\_banks\\_and\\_supervisors\\_.pdf.pdf](https://www.ngfs.net/sites/default/files/medias/documents/ngfs_climate_scenarios_for_central_banks_and_supervisors_.pdf.pdf).
- Nightingale, P. et al., 2009. From Funding Gaps to Thin Markets: UK Government Support for Early-stage Venture Capital. London, U.K.: National Endowment for Science, Technology, and the Arts (NESTA).
- Nuguer, V. and A. Powell, 2020. Inclusion in Times of COVID-19. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Inclusion-in-Times-of-Covid-19.pdf>.
- Nuguer, V. and A. Powell, 2020b. Policies to Fight the Pandemic. Washington, D.C.: Inter-American Development Bank. Available at [https://publications.iadb.org/publications/spanish/document/Informe\\_macroeconómico\\_de\\_América\\_Latina\\_y\\_el\\_Caribe\\_2020\\_Políticas\\_para\\_combatir\\_la\\_pandemia.pdf](https://publications.iadb.org/publications/spanish/document/Informe_macroeconómico_de_América_Latina_y_el_Caribe_2020_Políticas_para_combatir_la_pandemia.pdf).
- Obregón, C., 2001. Las SOFOLES como alternativa de financiamiento para la vivienda en México, *La consolidación de los mercados financieros de vivienda en América Latina*. Lima: Inter-American Housing Union (UNIAPRAVI).
- Ocampo, J., 2009. Latin America and the Global Financial Crisis. *Cambridge Journal of Economics*, 33(4): 703-724.
- OECD, 2015. Consequences of Corruption at the Sector Level and Implications for Economic Growth and Development. Paris: OECD Publishing.
- OECD, 2018a. Financial Markets, Insurance, and Pensions: Digitalization and Finance. Paris: Organisation for Economic Co-operation and Development.
- OECD, 2018b. Making Blended Finance Work for Sustainable Development Goals. Paris: Organisation for Economic Co-operation and Development.

- OECD, 2020. An Inclusive, Green Recovery Is Possible: The Time to Act Is Now. Available at <https://www.ccacoalition.org/en/blog/inclusive-green-recovery-possible-time-act-now#:~:text=News%20%26%20Events%20Blog-,An%20Inclusive%2C%20Green%20Recovery%20is%20Possible%3A%20The%20Time%20to%20Act,biodiversity%20action%2C%20and%20builds%20resilience>.
- OECD, 2020. Building Back Better: A Sustainable, Resilient Recovery After COVID-19. Policy Responses. Available at [https://read.oecd-ilibrary.org/view/?ref=133\\_133639-s08q2ridhf&title=Building-back-better- A-sustainable-resilient-recovery-after-Covid-19](https://read.oecd-ilibrary.org/view/?ref=133_133639-s08q2ridhf&title=Building-back-better- A-sustainable-resilient-recovery-after-Covid-19).
- OECD, 2021. No Net Zero Without SMEs: Exploring the Key Issues for Greening SMEs and Green Entrepreneurship. Available at: <https://www.oecd-ilibrary.org/docserver/bab63915-en.pdf?expires=1675467629&id=id&accname=guest&checksum=4F7B7BBF0C5DA2F9A67A167029918812>.
- OECD/IDB, 2016. Broadband Policies for Latin America and the Caribbean: A Digital Economy Toolkit. Paris: OECD Publishing.
- OECD/IDB, 2016. Políticas de banda ancha para América Latina y el Caribe: un manual para la economía digital. Paris: OECD Publishing.
- Office of Evaluation and Oversight (OVE), 2014. A Comparative Analysis of IDB Approaches Supporting SMEs: Assessing Results in the Brazilian Manufacturing Sector. Office of Evaluation and Oversight, IDB. Available at <https://publications.iadb.org/en/comparative-analysis-idb-approaches-supporting-smes-assessing-results-brazilian-manufacturing>.
- Office of the President of the Argentine Republic, 2018. Plan y estructura de proyectos PPP en Argentina.
- Oman, W., 2019. A Role for Financial and Monetary Policies in Climate Change Mitigation [Blog]. Available at <https://blogs.imf.org/2019/09/04/a-role-for-financial-and-monetary-policies-in-climate-change-mitigation/>.
- Omri A. et al., 2015. Financial Development, Environmental Quality, Trade, and Economic Growth: What Causes What in MENA Countries. *Energy Economics*.
- Ongena, S. and A. Popov, 2013. Take Care of Home and Family, Honey, and Let Me Take Care of the Money: Gender Bias and Credit Market Barriers for Female Entrepreneurs.
- Orser, B. et al., 2006. Women Entrepreneurs and Financial Capital. *Entrepreneurship: Theory and Practice*, 30(5): 643-665.
- Ortiz, L., 2008. Estabilidad financiera y seguro de depósito bancario. De la burbuja crediticia al rescate bancario en México. *Economía Informa*.
- Osinski, J. et al., 2013. Macroprudential and Microprudential Policies: Toward Cohabitation. Analysis document. IMF.
- Pailhé, C., 2016. Sex-disaggregated Supply-side Data Relevant to Financial Inclusion. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Datos-de-oferta-desagregados-por-sexo-relevantes-para-la-inclus%C3%B3n-financiera.pdf>.
- Paixão, M. 2017 Acesso ao crédito produtivo pelos microempreendedores afrodescendentes. Available at: <https://publications.iadb.org/es/publicacion/16266/acesso-ao-credito-produtivo-pelos-microempreendedores-afrodescendentes-desafios>.

- Pardo Martínez, C.I. and W. H. Alfonso Piña, 2016. Regional Analysis Across Colombian Departments: A Non-parametric Study of Energy Use. *Journal of Clearer Production*, 115: 130-138.
- Peek J. and E. S. Rosengren, 2000. Collateral Damage: Effects of the Japanese Bank Crisis on Real Activity in the United States. *American Economic Review*, 90(1): 30-45. Available at <https://www.aeaweb.org/articles?id=10.1257/aer.90.1.30>.
- Pereira da Silva, L., 2018. Fintech in EMEs: Blessing or Curse? BIS. Available at <https://www.bis.org/speeches/sp180620.pdf>.
- Petralia, K. et al., 2019. Banking Disrupted? Financial Intermediation in an Era of Transformational Technology. *Geneva Report on the World Economy*, 22.
- Philippon, T., 2019. On Fintech and Financial Inclusion. NBER Working Paper 26330. Available at <https://www.nber.org/papers/w26330>.
- Piras, C. et al., 2013. Definitions Matter: Measuring Gender Gaps in Firms' Access to Credit. Inter-American Development Bank. Capital Markets and Financial Institutions Division (CMF/IFD). Discussion Paper IDB-DP-314.
- Planifica Ecuador, 2019. Informe de avance del cumplimiento de la agenda 2030 para el desarrollo sostenible. Quito, Ecuador: Planifica Ecuador. Available at <https://www.planificacion.gob.ec/wp-content/uploads/downloads/2019/07/Informe-Avance-Agenda-2030-Ecuador-2019.pdf>.
- Poghosyan, T., 2019. How Effective is Macroprudential Policy? Evidence from Lending Restriction Measures in EU Countries. IMF Working Paper 19/45.
- Pombo, P. et al., 2013. Clasificación de los sistemas de garantía desde la experiencia latinoamericana. IDB Technical Note 503.
- Ponticelli, J. and L. Alencar, 2016. Court Enforcement, Bank Loans, and Firm Investment: Evidence from a Bankruptcy Reform in Brazil. *The Quarterly Journal of Economics*, 131(3): 1365-1415.
- Porumbescu, G.A. et al., 2017. Can Transparency Foster More Understanding and Compliant Citizens? *Public Administration Review*, 77: 840-850.
- Powell, A. (coord.), 2012. The World of Forking Paths: Latin America and the Caribbean Facing Global Economic Risks. Latin American and Caribbean Macroeconomic Report. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/El-mundo-de-los-senderos-que-se-bifurcan-Am%C3%A9rica-Latina-y-el-Caribe-ante-los-riesgos-econ%C3%B3micos-globales.pdf>.
- Powell, A., and L. Rojas-Suárez, 2020. Sound Banks for Healthy Economies: Challenges for Policymakers in Latin America and the Caribbean in Times of Coronavirus. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/es/bancos-solidos-para-la-recuperacion-economica-recomendaciones-de-politica-en-tiempos-de-coronavirus>.
- Prats J., and J. A. Ketterer, 2019. El rol de la banca pública de desarrollo en el financiamiento de infraestructuras. Connectivity, Markets, and Finance Division Technical Note. Inter-American Development Bank.

- Prats, J. and P. Puig Gabarró, 2017. Telecommunications Governance: Toward the Digital Economy. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/La-gobernanza-de-las-telecomunicaciones-Hacia-la-econom%C3%ADa-digital.pdf>.
- Qian, J. and P. E. Strahan, 2007. How Laws and Institutions Shape Financial Contracts: The Case of Bank Loans. *The Journal of Finance*, 62: 2803-2834.
- Qiang, C. et al., 2009. Economic Impacts of Broadband. Information and Communications for Development. Washington, D.C.: World Bank.
- Ramírez, L., J. Thomä, and D. Cebreros, 2020. Transition Risks Assessment of Latin American Financial Institutions and the Use of Scenario Analysis. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Transition-Risks-Assessment-by-Latin-American-Financial-Institutions-and-the-Use-of-Scenario-Analysis.pdf>.
- Reinhart, C. and K. Rogoff, 2009. This Time Is Different: Eight Centuries of Financial Folly. Princeton University Press.
- Reymond, A. et al., 2020. Financing Sustainable Infrastructure in Latin America and the Caribbean: Market Development and Recommendations. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/english/document/Financing-Sustainable-Infrastructure-in-Latin-America-and-the-Caribbean-Market-Development-and-Recommendations.pdf>.
- Riding, A. L. and C. S. Swift, 1990. Women Business Owners and Terms of Credit: Some Empirical Findings of the Canadian Experience. *Journal of Business Venturing*, 5(5): 327-340.
- Robb, A. M. and S. Coleman, 2010. Financing Strategies of New Technology-based Firms: A Comparison of Women- and Men-owned Firms.
- Robb, A. M., and D. T. Robinson, 2014. The Capital Structure Decisions of New Firms. *The Review of Financial Studies*, 27(1): 153-179.
- Robichaud, Y., 2015. Why Are Female-owned Businesses Smaller? An Empirical Study in Canada and the United States. University of Moncton. *Journal of Management Policy and Practice*, 16(1).
- Rojas, E. and N. Medellin, 2011. Housing Policy Matters for the Poor: Housing Conditions in Latin America and the Caribbean 1995-2006. IDB Working Paper Series IDB-WP-289. December 2011.
- Rostamkalei, A. and M. Freel, 2016. The Cost of Growth: Small Firms and the Pricing of Bank Loans. *Small Business Economics*, 46(2): 255-272.
- Ruprah, I. J. and L. T. Marcano, 2007. A Meta-Impact Evaluation of Social Housing Programs: The Chilean Case. IDB Working Paper OVE-WP-02/07.
- Ruprah, I.J. et al., 2014. Is There a Caribbean Sclerosis? Stagnating Economic Growth in the Caribbean. Washington, D.C.: Inter-American Development Bank.
- S&P Global Ratings, 2022. Calificaciones soberanas en América ¿en transición hacia la recuperación o al estancamiento? Available at <https://www.spglobal.com/assets/documents/ratings/es/pdf/2022-01-27-calificaciones-soberanas-en-america-en-transicion-hacia-la-recuperacion-o-al-estancamiento.pdf>.

- S&P Global Ratings. 2022. América Latina - Panorama bancario por país, primer trimestre de 2022: Bancos sortean la tormenta, pero nuevos riesgos los acechan. Available at <https://www.spglobal.com/assets/documents/ratings/es/pdf/2022-02-17-america-latina-panorama-bancario-por-pais-1-t-2022-bancos-sortean-la-tormenta-pero-nuevos-riesgos-los-acechan.pdf>.
- Sahay, R and M. Čihák, 2018. Women in Finance: A Case for Closing Gaps. IMF. Available at <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2018/09/17/women-in-finance-a-case-for-closing-gaps-45136>.
- Sahay, R. et al., 2015. Financial Inclusion: Can It Meet Multiple Macroeconomic Goals? IMF Staff Discussion Note. Available at <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1517.pdf>.
- Sahay, R. et al., 2020. The Promise of Fintech: Financial Inclusion in the Post COVID-19 Era. IMF.
- Saunders, L., 2019. Fintech and Consumer Protection: A Snapshot. National Consumer Law Center. Available at <https://www.nclc.org/images/pdf/cons-protection/rpt-fintech-and-consumer-protection-a-snapshot-march2019.pdf>.
- Schinasi, G., 2004. Defining Financial Stability. IMF Working Paper WP/04/187.
- Schopflocher, T. et al., 2019. Global Structured Finance Outlook 2019: Securitization Continues to Be Energized with Potential \$1 Trillion in Volume Expected Again. S&P Global. Available at <https://www.spglobal.com/en/research-insights/articles/global-structured-finance-outlook-2019-securitization-continues-to-be-energized-with-potential-1-trillion-in-volume-expected-ag>.
- Scott, Colin, 2012. Does Broadband Internet Access Actually Spur Economic Growth? Geneva, Switzerland: International Telecommunication Union.
- Serebrisky, T., C. Pastor, A. Suárez-Alemán et al., 2017. Financiamiento privado de la infraestructura en América Latina y el Caribe: Chile, Perú y Uruguay como casos de estudio. Washington, D.C.: Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Financiamiento-privado-de-la-infraestructura-en-Am%C3%A9rica-Latina-y-el-Caribe-Chile-Per%C3%BA-y-Uruguay-como-casos-de-estudio.pdf>.
- Shin, H. S., 2019. Big Tech in Finance: Opportunities and Risks. In: Speech on the Occasion of the BIS Annual General Meeting in Basel. Bank for International Settlements.
- Smallridge, D., et al., 2013. The Role of National Development Bank in Catalyzing International Climate Finance. Available at: <https://publications.iadb.org/en/role-national-development-banks-catalyzing-international-climate-finance>.
- Steele, P. and S. Patel, 2020. Tackling the Triple Crisis: Using Debt Swaps to Address Debt, Climate and Nature Loss Post-COVID-19. International Institute for Environment and Development (IIED).
- Stefani, M. L. and V. Vacca, 2013. Credit Access for Female Firms: Evidence from a Survey on European SMEs. Occasional Paper 176, Bank of Italy.
- Stein, E. H. and R. A. Wagner, 2019. The Development of Venture Capital in Latin America and the Caribbean: A Comparative Perspective. ECLAC. Available at [https://repositorio.cepal.org/bitstream/handle/11362/44979/RVI128\\_Stein.pdf?sequence=1&isAllowed=y](https://repositorio.cepal.org/bitstream/handle/11362/44979/RVI128_Stein.pdf?sequence=1&isAllowed=y).

- Stein, P. et al., 2018. Raising US\$23 Trillion: Greening Banks and Capital Markets for Growth. IFC. Available at <https://openknowledge.worldbank.org/handle/10986/30919>.
- Stella, P., 2002. Central Bank Financial Strength, Transparency and Policy Credibility. IMF Working Paper WP/02/137.
- Stiglitz, J. E. and A. Weiss, 1981. Credit Rationing in Markets with Imperfect Information. *The American Economic Review*, 71(3): 393-410. Available at [https://www.jstor.org/stable/1802787?seq=1#metadata\\_info\\_tab\\_contents](https://www.jstor.org/stable/1802787?seq=1#metadata_info_tab_contents).
- Stiglitz, J.E., 1989. Markets, Market Failures, and Development. *The American Economic Review*, 79(2): 197-203. Available at <https://www.jstor.org/stable/1827756?seq=1>.
- Stiglitz, J.E., 1993. The Role of the State in Financial Markets. Proceedings of the World Bank Annual Conference on Development Economics. World Bank. Washington, D.C. Available at <https://documents1.worldbank.org/curated/en/23928146874129085/pdf/multi-page.pdf>.
- Studart, R. and K. Gallagher, 2016. Infrastructure for Sustainable Development: The Role of National Development Banks. Global Economic Governance Initiative. Boston University.
- Stulz, R. and R. Williamson, 2003. Culture, Openness, and Finance. *Journal of Financial Economics*, 70(3): 313-349.
- Stulz, R. M., 2019. Fintech, Big Tech, and the Future of Banks. *Journal of Applied Corporate Finance*, 31(4): 86-97.
- Támola, A. 2020. Conceptualización de un sistema de medición del desarrollo para instituciones financieras de desarrollo. Inter-American Development Bank. Available at <https://publications.iadb.org/publications/spanish/document/Conceptualizacion-de-un-sistema-de-medicion-del-desarrollo-para-instituciones-financieras-de-desarrollo.pdf>.
- Thakor, A.V., 2020. Fintech and Banking: What Do We Know? *Journal of Financial Intermediation*, 41: 100833.
- Thompson, H. and C. Garbacz, 2008. Broadband Impacts on State GDP: Direct and Indirect Impacts. Montreal, Canada: International Telecommunications Society.
- Thompson, H. and C. Garbacz, 2011. Economic Impacts of Mobile Versus Fixed Broadband. Available at 10.1016/j.telpol.2011.07.004.
- Tonkonogy, B. et al., 2018. Blended Finance in Clean Energy: Experiences and Opportunities. Climate Policy Initiative.
- Toronto Centre, 2018. Risk-Based Supervision. Toronto Centre Notes.
- Torres, J., F. Maduko, I. Gaddis, L. Iacovone, and K. Beegle, 2021. "The Impact of the COVID-19 Pandemic on Women-Led Businesses." Policy Research Working Paper 9817, Washington, D.C.: World Bank.
- Trivelli, C., and J. Clausen, 2018. Proyecto Capital Perú: Evidencia e incidencia para transitar de una idea política a una política pública. Edited by I. Villada, E. Caballero, and J. Yancari. Instituto de Estudios Peruanos. Available at: <http://repositorio.iep.org.pe/handle/IEP/1133>.
- Trovato, G. and M. Alfò, 2006. Credit Rationing and the Financial Structure of Italian Small and Medium Enterprises. *Journal of Applied Economics* 9(1): 167-184.

- United Nations Environment Programme (UNEP), 2009. The Global Financial Crisis and its Impact on Renewable Energy Finance.
- University of Cambridge, 2021. The 2<sup>nd</sup> Global Alternative Finance Market Benchmarking Report. Cambridge, U.K.: University of Cambridge.
- Vera, C. and E. Pérez-Caldentey, 2015. El financiamiento para el desarrollo en América Latina y el Caribe. ECLAC. Available at <https://www.cepal.org/es/publicaciones/39656-financiamiento-desarrollo-america-latina-caribe>.
- Volz, U., J. Beirne, and N. Ambrosio Preudhomme, et al., 2020. Climate Change and Sovereign Risk. London: SOAS University of London. Available at [https://eprints.soas.ac.uk/33524/1/Climate%20Change%20and%20Sovereign%20Risk\\_final.pdf](https://eprints.soas.ac.uk/33524/1/Climate%20Change%20and%20Sovereign%20Risk_final.pdf).
- Vučinić, M, 2020. Fintech and Financial Stability: Potential Influence of Fintech on Financial Stability, Risks, and Benefits. *Journal of Central Banking Theory and Practice*, 9(2): 43-66. Available at <https://doi.org/10.2478/jcbtp-2020-0013>.
- Wang, X. et al., 2020. Bank Market Power and SME Finance: Firm-Bank Evidence from European Countries. *Journal of International Financial Markets, Institutions, and Money*.
- Wendt, F., 2015. Central Counterparties: Addressing Their Too Important to Fail Nature. IMF Working Paper WP/15/21.
- Weychert, E., 2020. Financial Development and Income Inequality. *Central European Journal*, 7(54): 84-100.
- Wilson, F. et al., 2007. Bank Loan Officers' Perceptions of Business Owners: The Role of Gender. *British Journal of Management*, 18(2): 154-171.
- Wishlade, F. et al., 2016. Financial Instruments for Enterprises. Final Report: Ex post Evaluation of Cohesion Policy Programmes 2007-2013, Focusing on the European Regional Development Fund (ERDF) and the Cohesion Fund (CF). Available at [https://ec.europa.eu/regional\\_policy/sources/docgener/evaluation/pdf/expost2013/wp3\\_final\\_en.pdf](https://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2013/wp3_final_en.pdf).
- World Bank and CCAF, 2019. Regulating Alternative Finance: Results from a Global Regulator Survey. Washington, D.C.: World Bank Group. Available at <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2019-11-ccaf-regulating-alternative-finance-report.pdf>.
- World Bank and CCAF, 2020. The Global COVID-19 Fintech Rapid Assessment Study. World Bank Group and the University of Cambridge.
- World Bank, 2015. Global Financial Development Report 2015-2016: Long-Term Finance. Washington, D.C.: World Bank Group. Available at <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/955811467986333727/global-financial-development-report-2015-2016-long-term-finance>.
- World Bank, 2017. MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small, and Medium Enterprises in Emerging Markets. Washington, D.C.: World Bank Group. Available at <https://documents1.worldbank.org/curated/en/653831510568517947/pdf/121264-WP-PUBLIC-MSMEReportFINAL.pdf>.

- World Bank, 2018. Afro-descendants in Latin America: Toward a Framework of Inclusion. Brief. Available at: <https://www.worldbank.org/en/region/lac/brief/afro-descendants-in-latin-america>.
- World Bank, 2019. Global Development Indicators. Databank. World Bank.
- World Bank, 2020. Doing Business 2020: Comparing Business Regulations in 190 Economies. Washington, D.C.: World Bank Group. Available at <https://espanol.doingbusiness.org/es/reports/global-reports/doing-business-2020>.
- World Bank, 2020. Key Terms: Financial Development, Global Financial Development Report 2019/2020. Available at <https://www.worldbank.org/en/publication/gfdr/gfdr-2016/background/financial-development>.
- World Economic Forum (WEF), 2020. Global Gender Gap Report 2020. Geneva: World Economic Forum. Available at [http://www3.weforum.org/docs/WEF\\_GGGR\\_2020.pdf](http://www3.weforum.org/docs/WEF_GGGR_2020.pdf).
- World Economic Forum (WEF), 2021. Global Gender Gap Report 2021. Geneva: World Economic Forum. Available at [https://www3.weforum.org/docs/WEF\\_GGGR\\_2021.pdf](https://www3.weforum.org/docs/WEF_GGGR_2021.pdf).
- World Economic Forum (WEF), 2022. Global Gender Gap report 2022. Geneva: World Economic Forum. Available at [https://www3.weforum.org/docs/WEF\\_GGGR\\_2022.pdf](https://www3.weforum.org/docs/WEF_GGGR_2022.pdf).
- World Economic Forum (WEF). 2021. The Global Risks Report. 16th edition. Available at <https://www.weforum.org/reports/the-global-risks-report-2021>.
- World Economic Forum (WEF). 2022. The Global Risks Report. 17th edition. Available at [https://www3.weforum.org/docs/WEF\\_The\\_Global\\_Risks\\_Report\\_2022.pdf](https://www3.weforum.org/docs/WEF_The_Global_Risks_Report_2022.pdf).
- World Health Organization (WHO), 2020. Coronavirus Disease (COVID-19) Outbreak. Available at <https://www.who.int/westernpacific/emergencies/covid-19>.
- World Risk Report. 2021. Focus: Social Protection. Ruhr University Bochum – Institute for International Law of Peace and Armed Conflict (IFHV). Available at <https://reliefweb.int/sites/reliefweb.int/files/resources/2021-world-risk-report.pdf>.
- Worrel, E. et al., 2003. Productivity Benefits of Industrial Energy Efficiency Measures. *Energy*, 28(11): 1081-1098.
- Woutersen, T. and S. Khandker, 2014. Estimating the Long-run Impact of Microcredit Programs on Household Income and Net Worth. World Bank. Available at: <https://openknowledge.worldbank.org/handle/10986/20379?locale-attribute=es>.
- Zhao, T. and D. Jones-Evans, 2016. SMEs, Banks, and the Spatial Differentiation of Access to Finance. *Journal of Economic Geography*, 17(4): 791-824.
- Zimmerman Treichel, M. and J. A. Scott, 2006. Women-Owned Businesses and Access to Bank Credit: Evidence from Three Surveys Since 1987. *Journal of Venture Capital*, 8(1): 51-67.