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BACKGROUND PAPER



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IMF Advice on Capital Flows to Latin America

Nicoletta Batini, Eduardo Borensztein, and José Antonio Ocampo

IEO Background Paper
Independent Evaluation Office
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Prepared by Nicoletta Batini,^{*} Eduardo Borensztein,[†] and José Antonio Ocampo[‡]

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^{*} Senior Economist, Independent Evaluation Office, IMF.

[†] Consultant, Independent Evaluation Office, IMF.

[‡] Director, Economic and Political Development Concentration, School of International and Public Affairs, Columbia University.

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ABBREVIATIONS

AIV	Article IV
AREAER	Annual Report on Exchange Arrangements and Exchange Restrictions
Banxico	Bank of Mexico
BCB	Central Bank of Brazil
BCCCh	Central Bank of Chile
BCCR	Central Bank of Costa Rica
BCRP	Central Reserve Bank of Peru
BCU	Central Bank of Uruguay
BdR	Central Bank of Colombia
CAF	Development Bank of Latin America
CFM	capital flow management measure
CLS	Continuous Linked Settlement Bank
CONASSIF	Costa Rican National Council of Financial System Supervision
DNDF	domestic non-deliverable forward
EM	emerging market
ESSF	Economic and Social Stabilization Fund
FCL	Flexible Credit Line
FDI	foreign direct investment
FKRSU	Fernandez-Klein-Rebucci-Schindler-Uribe index
FLAR	Latin American Reserve Fund
FSAP	Financial Sector Assessment Program
FSSR	Financial Sector Stability Review
FTA	free trade agreement
FX	foreign exchange
FXI	foreign exchange interventions
G20	Group of 20
GDP	gross domestic product
GFC	global financial crisis
<i>GFSR</i>	<i>Global Financial Stability Report</i>
IOF	<i>Imposto sobre Operações Financeiras</i> (tax on foreign financial investments, Brazil)
IV	Institutional View on the Liberalization and Management of Capital Flows
LCR	liquidity coverage ratio
MCM	Monetary and Capital Markets Department (IMF)
MPM	macroprudential measure
MXN	Mexican peso
NAFTA	North American Free Trade Agreement
NDF	non-deliverable forward
OECD	Organization for Economic Cooperation and Development
REER	real effective exchange rate
<i>REO</i>	<i>Regional Economic Outlook</i>
SDR	special drawing right
SPR	Strategy, Policy, and Review Department (IMF)
UMP	unconventional monetary policies
URR	unremunerated reserve requirement
USMCA	United States-Mexico-Canada Agreement
VIX	volatility index (Chicago Board Options Exchange)
WHD	Western Hemisphere Department (IMF)

I. INTRODUCTION

1. This paper reviews the experience with Fund advice on capital flows since the global financial crisis (GFC) to five of the largest economies of Latin America, namely, Brazil, Chile, Colombia, Mexico, and Peru, as well as two smaller economies that offer interesting case studies: Costa Rica and Uruguay. It also looks at the case of Argentina in a more limited time window. The macroeconomic and institutional circumstances of these countries are distinct, the shocks that hit them (with the notable exception of the COVID-19 pandemic) often differed, and the policy responses varied. Thus, they provide a useful cross-section of the Fund’s policy advice during this period.

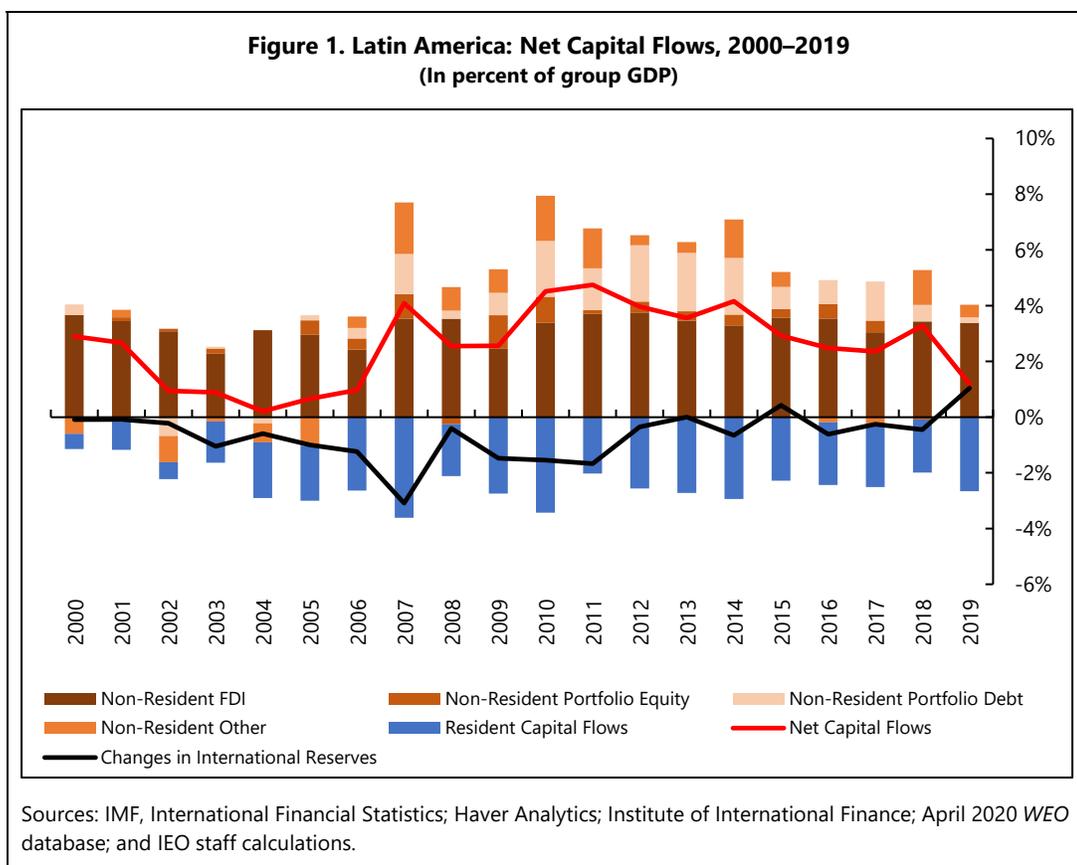
2. This review is based on extensive interviews with policymakers, Fund staff members, market analysts, and a desk review of key documents—including Article IV (AIV) reports, Selected Issues papers and other documents related to Fund surveillance on capital flows, Working Papers, and regional outlooks issued by the IMF Western Hemisphere Department (WHD).¹

A. Background

3. The history of capital flows to Latin America is a rocky one. Starting in the mid-1970s, abundant petrodollars from Middle Eastern oil exporters were recycled as loans from U.S. and European banks washed over the region. The Mexican debt default of 1982 set off an economically devastating sudden stop of capital inflows that lasted for most of the 1980s—a period known as the “lost decade.” In the early 1990s, capital inflows resumed, with portfolio and direct investment this time playing a bigger role than bank loans. The Mexican peso crisis of 1994 slowed this inflow, but unlike the debt crisis of the 1980s it did not halt it. At the end of the 1990s, when financial crises swept Asia in 1997 and Russia in 1998, investors started pulling their investments out of the region. Once again, there was a systemic, abrupt, and persistent collapse in capital flows affecting all countries to a greater or lesser extent. In some countries the shock was devastating: Argentina ended up with a financial and exchange rate crisis, the largest public debt default in world history, and an economic collapse which, in turn, spilled over to Uruguay. Even Chile—a country with strong economic fundamentals, sound macroeconomic policies, and a sustained process of structural transformation—was severely damaged.

4. As lessons were learned from earlier crises, macroeconomic policies in the region improved, and financial systems were strengthened. Latin America weathered the GFC quite well and inflows surged again in the wake of easy money policies in the United States (Figure 1). Between 2014 and 2019, however, after a long boom in commodity prices came to an end, capital inflows to the region moderated and their composition shifted in favor of riskier asset categories, notably portfolio flows (*REO*, October 2019). In that period, capital flows to the region remained highly sensitive to global financial conditions and vulnerable to the possibility of sudden stops, particularly in countries with less strong economic fundamentals.

¹ The interviews and document review were largely completed before the onset of the COVID-19 crisis; while the study has been updated to report on recent developments, it does not seek to evaluate the recent experience.

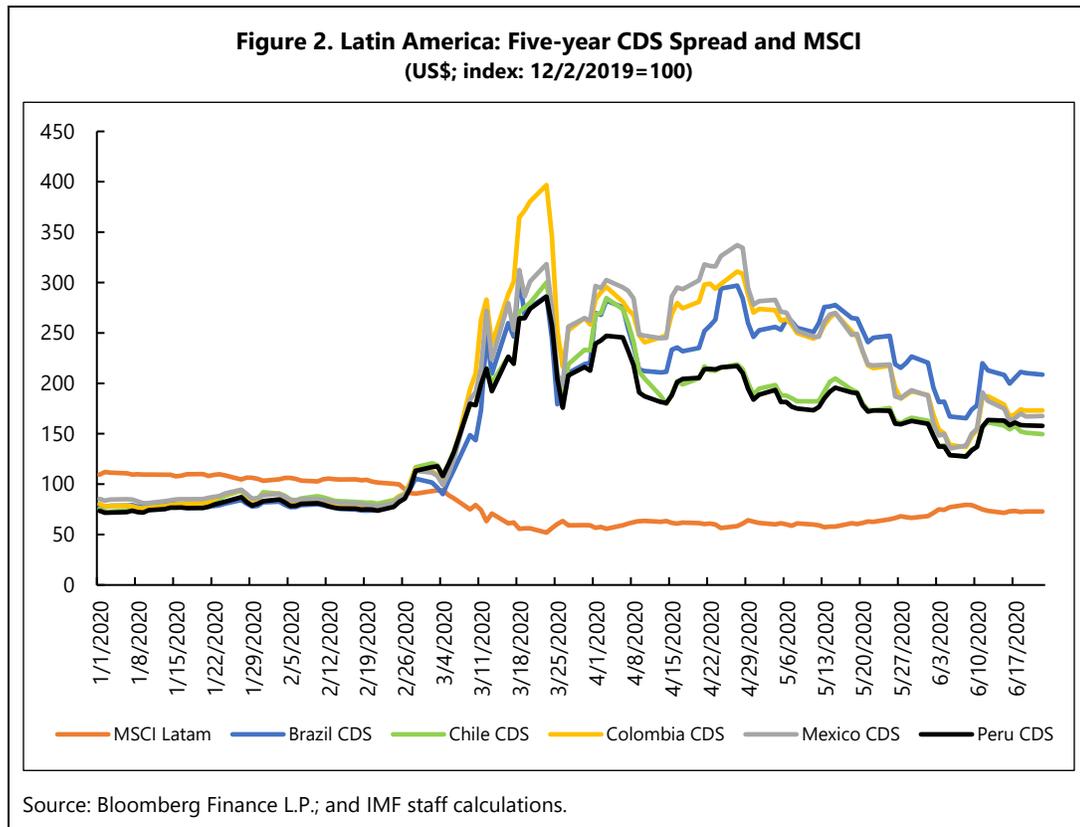


5. In early 2020, the COVID-19 pandemic shock, and associated plunge in commodity prices, led to heavy capital outflows, as sharply adverse expectations about the region's health challenges and economic fallout from a global recession were amplified by a spike in investors' risk aversion. Volatility reached a historic peak when the pandemic was first declared at end-March, with Latin American countries experiencing greater degrees of market stress than other emerging market (EM) regions; both equities and currencies weakened dramatically. Aggressive policy responses to support economies, along with the provision of external funding support, including from the U.S. Federal Reserve and the IMF, have helped to ease external financial conditions and some funding has returned in the form of sovereign bond issues (*GFSR*, April 2020). Nevertheless, at the time of writing, Latin America continues to face severe health challenges and potential for further capital flow volatility.

B. Policy Responses to Capital Flow Volatility

6. This historical roller-coaster of capital flows has posed huge challenges for Latin American governments. Countries in the region have been a laboratory of sorts, where almost every possible approach to dealing with volatile capital flows has been tried, as policymakers have sought to adapt their policy frameworks to country circumstances and objectives. At one end of the spectrum, Chile and Mexico have been largely committed to broadly open capital accounts, inflation targeting, and limited foreign exchange interventions (FXI), believing that a strong

commitment to sound policy frameworks, together with resilient and deep financial markets, provides protection against risks from volatile flows while exchange rate movements can be a useful shock absorber. Other countries in the region have been inclined to intervene more actively to limit exchange rate movements, while using capital account and macroprudential measures (MPMs) to avoid balance sheet mismatches and at times to resist capital surges.



7. Countries in the region with managed exchange rate regimes have been active users of FXI as a tool to respond to volatile capital flows, often in combination with inflation targeting monetary policy regimes. Many countries accumulated sizable reserves as they leaned against sustained capital inflows, first in response to the commodity super-cycle and then as advanced economies responded to the global financial crisis with exceptional monetary stimulus. In some cases, countries have also deployed FX reserves to counter depreciation pressures. The modalities of such interventions, however, have varied widely as countries have experimented with different approaches—including preannounced rules and operations through the non-deliverable forward market (Chamon and others, 2019).

8. After the COVID-19 shock, exchange rates in the region were generally allowed to depreciate in response to outflow pressures and heightened risk aversion to act as a shock absorber amid collapsing exports, dwindling remittances, and tightening international credit conditions. Some countries (including Brazil, Chile, Colombia, and Peru) took advantage of their dollar buffers to offset some of the pressure by FX intervention through spot and derivative

markets, but better-anchored inflation expectations and reduced currency mismatches seem to have reduced concern about large currency movements. At the same time, most governments provided substantial fiscal support to their economies while central banks lowered policy interest rates and took other steps to ease monetary conditions and ensure market liquidity, including repo programs and purchases of government securities, as market liquidity was affected inter alia by heavy foreign investor sales.

9. Capital account measures were used extensively in the 1980s and 1990s to deal with capital flow volatility. Chile, in particular, pioneered the use of setting special reserve requirements on short-term capital inflows. However, by the 2000s, many of the largest Latin American countries had liberalized their capital accounts and, in combination with established inflation targeting regimes, relied more on currency flexibility as a buffer against volatile capital flows. Chile and Mexico were in the vanguard. Nevertheless, some countries—for example, Costa Rica and Peru—continued to be active in using capital account measures and foreign exchange interventions to prevent excessive capital inflows from creating credit bubbles and to prevent currencies from appreciating to levels that could render exports uncompetitive and strain dollarized balance sheets. In the aftermath of the GFC, particularly in 2010–12, when advanced economy central banks brought their interest rates to near zero and embarked on quantitative easing, a number of other countries including Brazil were also actively using capital account measures combined with FXI to lean against upward pressures on exchange rates, dampen credit booms, and limit balance sheet mismatches.

10. The tide turned again from 2013 after the “taper tantrum,” when the U.S. Federal Reserve hinted it might start to wind down its asset purchase programs and there was a substantial weakening in commodity prices as the Chinese economy decelerated. Recent years have seen a number of periods of capital flow reversals, and policymakers in the region have unwound many of the measures to restrain capital inflows. Up to 2020, Argentina suffered the most extreme experience, reimposing limits on capital outflows following an acceleration of capital flight in 2018–19 notwithstanding a large Stand-By Arrangement from the IMF.

11. It is noteworthy that the policy response to the COVID-19 shock in the region has largely avoided the use of capital account measures. One country, Peru, eased measures on capital inflows (lowering reserve requirements on foreign borrowing), while Argentina’s preexisting widespread capital controls helped to limit capital outflows.

12. Overall, Latin America’s experience with capital account measures has been mixed. Today capital accounts in Latin America are on average more open than those in emerging Asia, for example (see Batini and Durand, 2020). However, there is a wide range of practices across the region, with some economies’ capital accounts almost fully liberalized and others’ still quite closed. Some measures, such as minimum stay requirements for foreign direct investment (FDI) and reserve requirements on short-term borrowing like those used in the 1990s in Chile and Colombia, seemed to have had only a limited effect on overall flows, as investors have found alternative routes to bring capital into the country. However, more recent experience seems to

suggest a more sustained impact from a variety of measures, both currency-based measures (like the differential reserve requirement on dollar bank deposits in Peru introduced in August 2010), and residency-based measures (like the 6 percent financial operations (IOF) tax on portfolio inflows to Brazil, unveiled in October 2010), both in dampening the total volume of flows and in influencing their composition. The latter effect is particularly important for economies that have been highly dollarized like Peru's.

13. In sum, Latin American countries have adopted a range of policy frameworks, reflecting in part different attitudes to how to handle volatile capital flows. More active use of capital account measures seems to reflect a variety of factors operating to different degrees across countries, including greater concern about adverse balance sheet effects from currency movements because of dollarization, shallower and less robust domestic financial markets, and less credible macroeconomic policy frameworks. And the situation remains in flux, with Brazil now moving towards more comprehensive capital account liberalization and Argentina having to reverse its recent capital account opening in the face of extremely stressful market conditions. So far, the COVID-19 shock does not seem to have altered the direction or speed of preexisting liberalization trends in the region.

C. IMF Engagement

14. Against this background, the case studies in this evaluation find that the Fund has generally provided sensible policy advice to Latin American countries on capital flows issues over the past decade, broadly consistent with the Institutional View on the Liberalization and Management of Capital Flows (IV) approved in 2012 and tailored to different country circumstances (IMF, 2012c). Policymakers in the region appreciate the IV as a step forward in providing for greater coherence and flexibility in the IMF's approach. For example, in some cases, including Brazil, Costa Rica, and Uruguay, the Fund has supported the use of capital flow management measures (CFMs) on a temporary basis in the face of a surge in capital inflows.² And while the Fund has not always been a leader of innovation, it has been prepared to learn from experience and done useful research and analysis. A case in point is the Fund's extensive regional work program to explore the strengths and weaknesses of foreign exchange intervention as a tool to deal with exchange rate market pressure and capital flow volatility, which eventually led to a shift in advice in favor of discretionary relative to preannounced intervention rules and to the use of non-deliverable forward markets (Chamon and others, 2019). The Fund also provided influential advice on macroprudential measures, for example, in Costa Rica.

15. The Fund's precautionary facilities, particularly the Flexible Credit Line (FCL), have also proven helpful to supplement reserve adequacy and increase confidence in countries with very

² A capital flow measure is defined in the IV as a measure designed to limit capital flows, and is a narrower concept than capital account measures, which include all currency-based and residency-based measures, some of which may not be judged to be CFMs. See the background paper by Batini and Durand (2020).

strong policies during periods of considerable uncertainty. Mexico and Colombia have both had FCL arrangements continuously in place since 2009, while Chile and Peru both obtained FCL arrangements in 2020 in the face of the COVID-19 pandemic.

16. However, the case studies also highlighted a number of issues with Fund advice on capital flows. First, policymakers often felt that the Fund staff did not always display a deep understanding of market drivers and dynamics in their countries and has often not recognized the complexities of dealing with capital flows in a region that has historically depended heavily on, and at the same time is very sensitive to, foreign capital. As a result of this, in their view, Fund advice has tended to be generic rather than adding value—a finding echoing that in the IEO evaluation of *IMF Advice on Unconventional Monetary Policies* (IEO, 2019).

17. Second, Fund advice was sometimes limited by the IV's guidance on use of CFMs and CFMs/MPMs. While the advice for addressing financial stability concerns was often appreciated on MPMs, the advice on CFMs/MPMs was either absent or not viewed as useful, for example in the cases of Peru, Costa Rica, and Uruguay, in part because of the guidance in the IV that such measures should not be introduced preemptively and should be phased out and replaced by alternative measures. This design feature of the IV seems unduly constraining given the vulnerability to currency mismatches across the region and the relevance of currency-based measures to contain such risks.

18. Third, in some cases, the Fund staff could have more actively challenged the countries' policy approaches, examining or discussing the relative tradeoffs of alternative policies. In the case of Argentina, the staff could have been more forceful in raising concerns about the risks involved with rapid capital account liberalization in advance of establishing a credible macroeconomic framework. In the case of Mexico, the staff's advice could have focused more on the challenges to build external resilience that would have allowed use of the FCL arrangement to be wound down.

19. Fourth, greater sustained attention to capital account issues in Fund research on Latin America would have been helpful to underpin advice. Analysis of capital flows to the region, their drivers, and the policy responses has been quite sporadic, with the notable exception of the sustained work on foreign exchange intervention. The staff could have done more to foster a debate on what is the right pace and level of liberalization for these countries as well as to add value to the region's own analysis of monetary and exchange rate policy design.

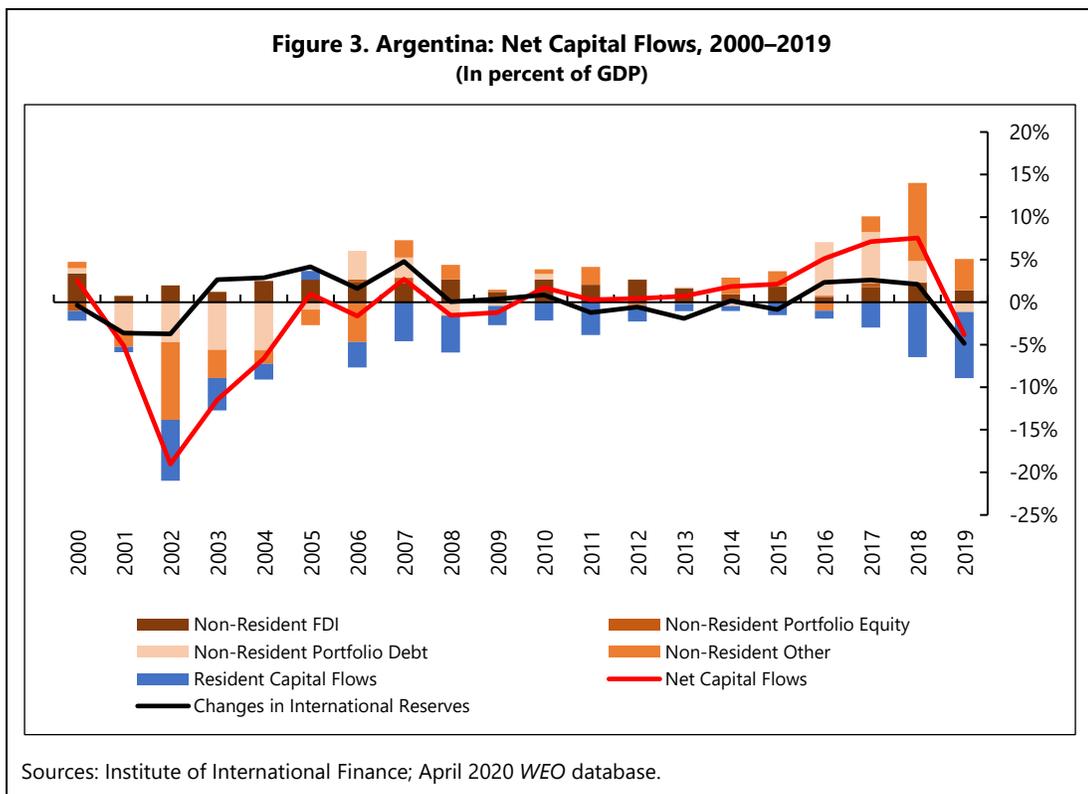
20. Overall, the case studies reviewed in this paper suggest a number of ways to strengthen the value and influence of the Fund's advice on capital flows. The IV in its current formulation seems unduly limiting and at times has hindered a fruitful policy dialogue on policy issues. In addition, the experience raises questions about whether the Fund provided helpful advice on dealing with volatile capital flows in economies with shallow and dollarized financial systems and still not fully credible macroeconomic policy frameworks. For these countries, more attention

could also be paid to advice on strategies to encourage a safe path towards longer-term capital account liberalization goals.

21. Finally, issues were raised in relation to the Fund’s multilateral surveillance of capital flows. Officials in the region were universally supportive of greater attention in IMF surveillance of countries that are sources of capital flows to emphasize spillover implications, for reasons of fairness as well as the increasing potential importance of “spillback” effects.

II. ARGENTINA—EXPERIENCE WITH CAPITAL ACCOUNT LIBERALIZATION³

22. Argentina is a country with a long and difficult history of capital account booms and busts. Although Argentina had maintained an open capital account in the 1990s during the currency board regime, after the currency crisis in 2002 formal and informal restrictions and authorization requirements proliferated and by 2015 affected nearly every foreign exchange transaction. Both capital inflows and outflows were extremely limited (Figure 3). IMF engagement was hampered as the AIV consultations did not proceed for many years.



23. When the Macri administration assumed power in December 2015, it launched a dramatic overhaul of Argentina’s economic policy framework. To start, it decided to let the currency float and to lift most capital account restrictions immediately. At that time, the parallel

³ Prepared by Eduardo Borensztein.

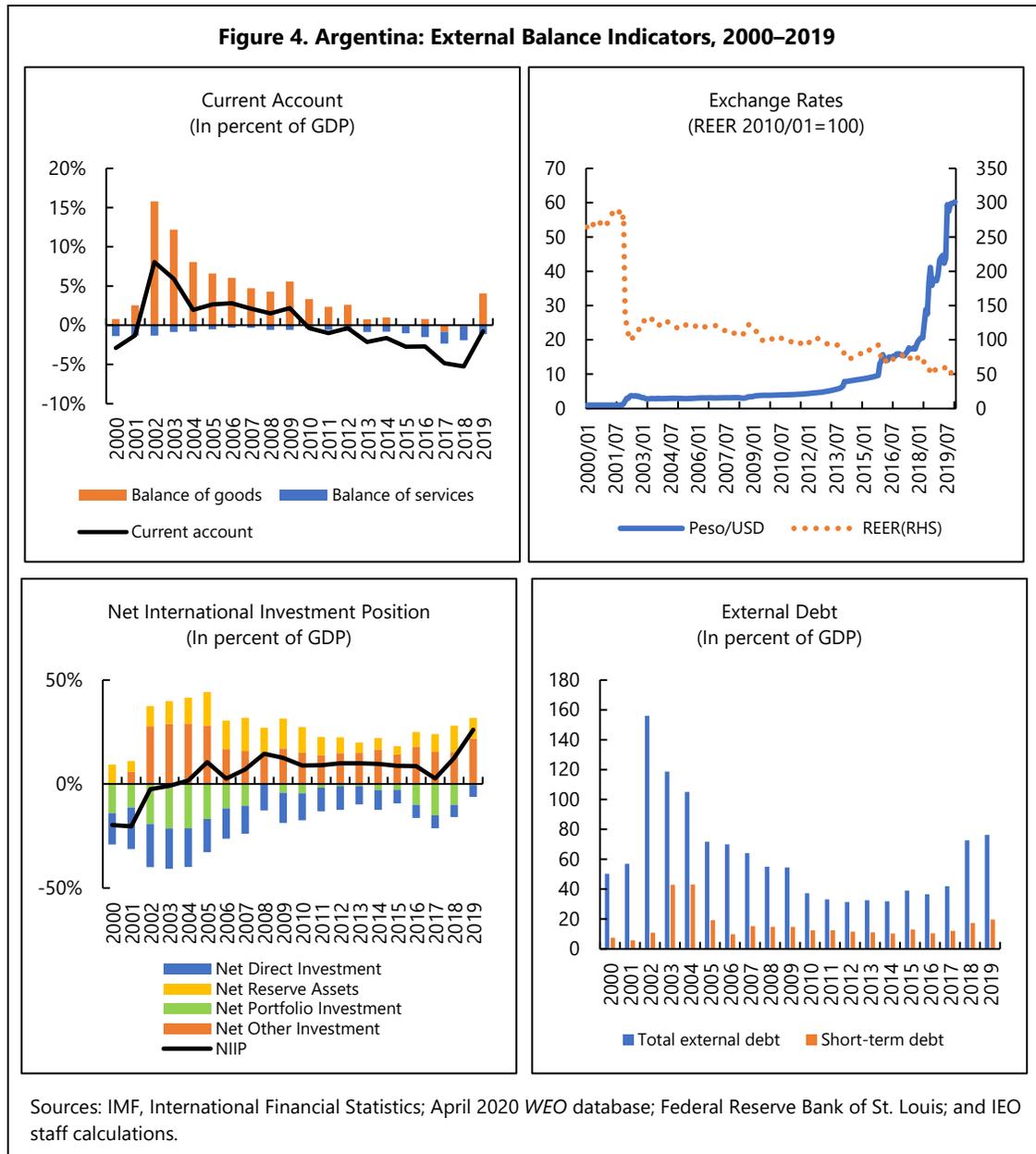
exchange rate market exhibited a premium of about 40 percent over the official one. In particular, within a week of Macri's taking power, Argentina lifted controls on residents' acquisition of foreign assets for saving purposes (Sturzenegger, 2019). The limit on allowed purchases of foreign currency by individuals, which had been set at 20 percent of reported monthly income with a maximum of US\$2,000 per month (and with a tax surcharge of 20 percent), was raised to US\$2 million per month, and raised to US\$5 million six months later. The only remaining restrictions applied to the net foreign exchange position of banks and surrender requirements for some exports (IMF, 2016 and 2017 AIV Staff Reports).

24. Savers in Argentina have displayed a strong bias for holding financial assets in foreign currency for many years (Baliño, Bennett, and Borensztein, 1998). This preference was reflected in the large volume of financial assets held abroad, estimated at US\$200 billion in 2015 (about 40–60 percent of GDP), and the “dollarization” of Argentina bank deposits at times when regulations of—and confidence in—the banking system permitted it. As soon as the restrictions on the acquisition of foreign assets were eased, there were significant capital outflows from residents, averaging more than US\$1 billion per month in 2016, despite relative optimism about economic prospects. At the same time, there were also strong inflows from non-residents, as foreign investor sentiment was boosted by the quick resolution of the hold-out problem left over from the debt restructuring following the 2002 crisis and by the general response to the new government's market-friendly policies. Much of these inflows took the form of investments in short-term dollar-denominated government paper, helping to finance the still high fiscal deficit and rising current account deficit (Figure 4). Resident outflows, along with other signs like the stubbornly high inflation expectations and the high degree of exchange rate pass-through into domestic prices, should have been an indicator of the low level of confidence in the peso.

25. As the liberalization of most capital account transactions took place so quickly, the IMF staff had little chance to offer advice before the measures were adopted. Subsequently, after a vigorous internal debate in which some staff members raised concerns about the potential risks involved, the Fund decided to be broadly supportive of the bold shift towards capital account opening. The issue does not figure prominently in the Policy Note prepared in September 2016 for the first AIV consultation with Argentina since 2006, although the staff did note that “Residents have taken advantage of the removal of FX restrictions by moving assets abroad in 2016” (IMF, 2016a, para 9, p. 10). Nor did comments by IMF reviewing departments focus on the potential risks of capital account liberalization. In fact, the only comments on the issue were SPR's desire to see more coverage of “what has been achieved so far in this very important endeavor” referring to the capital account liberalization measures. The Monetary and Capital Markets Department (MCM) focused on capital inflows by stating that “the mission should consider the possibility of introducing CFMs on short-term inflows if they threaten to be disruptive even when implementing appropriate macroeconomic policies.”

26. The benign staff attitude toward the swift capital account liberalization continued in 2017. The mission team noted (in the Policy Note and later in the Staff Report for the 2017 AIV

consultation) the high level of capital outflows by residents after the lifting of restrictions but did not drill down on the reasons or policy implications. Argentina continued to remove remaining restrictions, which mostly involved surrender requirements for certain industries.



27. Argentina's situation worsened sharply in 2018, as unfavorable global and domestic shocks hit the economy. International financial markets started to turn less favorable to emerging economies with the rise of U.S. interest rates, and a severe drought affected Argentina's harvest. Monetary policy had failed to bring down inflation or stabilize the peso. Against this background, non-resident capital inflows dried up, while there was a surge in resident outflows. In June 2018, Argentina received financial support from the IMF in the form of a Stand-By Arrangement initially

with access of SDR 35.4 billion (about US\$50 billion), which was augmented to SDR 40.7 billion (about US\$57 billion) in October 2018. The high level of fiscal and external financing requirements and the continued lack of market access led to the declaration of a private-sector debt standstill in 2019.

28. The sharp deterioration in sentiment toward Argentinian debt that ensued was followed in 2019 by a further rapid depreciation in the peso,⁴ that in turn spurred a decumulation of foreign reserves. In response, the government reimposed wide-ranging capital account measures, including a limit of five days for exporters to repatriate foreign currency and the need for an authorization by financial institutions and companies alike from the Central Bank for all purchases of dollars in the foreign exchange rate market; an additional measure put a US\$10,000 monthly limit on dollar purchases by individuals, strongly restricting de facto resident outflows. The Fund pledged support for the move in a statement issued when the measures were launched, stressing that the “capital flow management” measures aimed at “protecting exchange rate stability and the savers.” This support for the policy action was reiterated in a staff visit in 2020.⁵

29. This experience suggests that the speed and sequencing of capital account liberalization should have probably been more cautious until greater progress had been achieved in solidifying a sound and credible monetary and fiscal policy framework. IMF staff could have been more forceful in raising concerns at an earlier stage about the risks involved in the government’s strategy and the urgency of strengthening macroeconomic policies to limit the vulnerabilities of an extremely open capital account to changing market conditions.

30. For Argentina, unlike other countries in the region, the impact of the COVID-19 pandemic on the external position has been relatively limited, due in part to the sweeping limits on capital outflows that were already in place. Thus, net capital outflows in March–April were considerably smaller than either the net outflows from Argentina in 2018 or the net outflows experienced by other countries in the region in the aftermath of the COVID-19 shock. Argentina’s exchange rate depreciated less than those of other large economies in the region, with only modest net FX purchases.

⁴ In 2019 the value of the peso fell by 25 percent against the U.S. dollar in the month following the primary election results, which showed the market-friendly government had little chance to retain power.

⁵ In the words of the Fund: “Supported by capital controls and a trade surplus, international reserves and the peso have stabilized” (IMF, 2020).

III. BRAZIL⁶

A. Background

Economic context

31. Brazil is the largest economy in Latin America and the tenth biggest in the world. After conquering hyperinflation in 1994, and emerging from a currency crisis in 1999, Brazil started to build a robust policy framework based on three pillars: fiscal responsibility, a floating exchange rate, and inflation targeting. After navigating the market turbulence that accompanied a political transition in 2003 with large IMF financial support, Brazil entered a period of robust economic growth and poverty reduction, supported by sizable capital inflows but periodically rocked by international volatility. With the end of the commodity super-cycle and the widespread consequences of the Petrobras corruption scandal, Brazil entered a prolonged recession from which it was slowly emerging before the COVID-19 shock hit. A large structural reform agenda is pending, including especially attacking the burdensome regulations that impair the ease of doing business in Brazil and the lack of international trade openness.

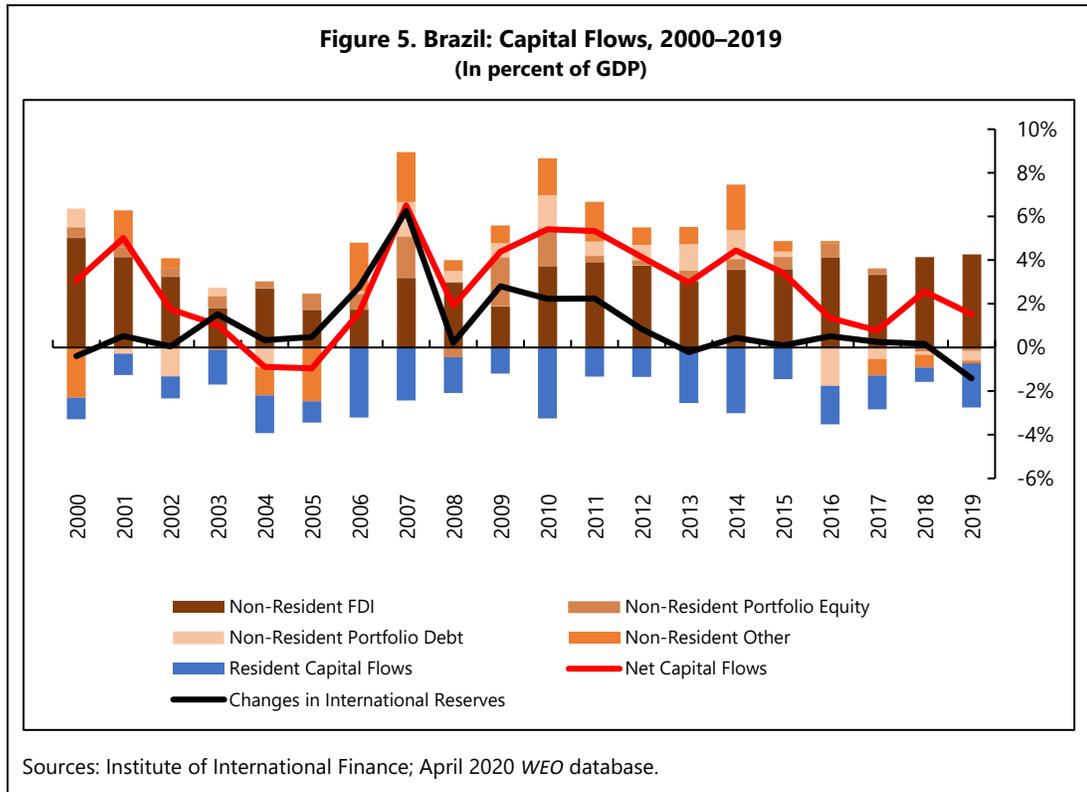
Key developments in capital flows

32. Capital inflows to Brazil ramped up from 2005 as confidence rebuilt in the macroeconomic policy framework in the context of a broader global increase in flows to emerging markets. While FDI inflows were relatively steady, financial capital flows have been volatile (Figure 5). Brazil suffered a sudden stop in 2008–09, as the repercussions of the global financial crisis reached Latin America and resulted in a deterioration in economic prospects and increased risk aversion by international investors. The episode was brief, however, and inflows became abundant again once the market reassessed the trends in Brazil's terms of trade and export demand and global financial conditions eased in response to advanced economies' aggressive unconventional monetary policies (UMP), particularly those of the U.S. Federal Reserve Board. In May 2013. However, the mention of "tapering" of quantitative easing by the Fed sent a wake-up call to international capital markets about the eventual unwinding of UMP, and they became less optimistic about emerging markets more generally.

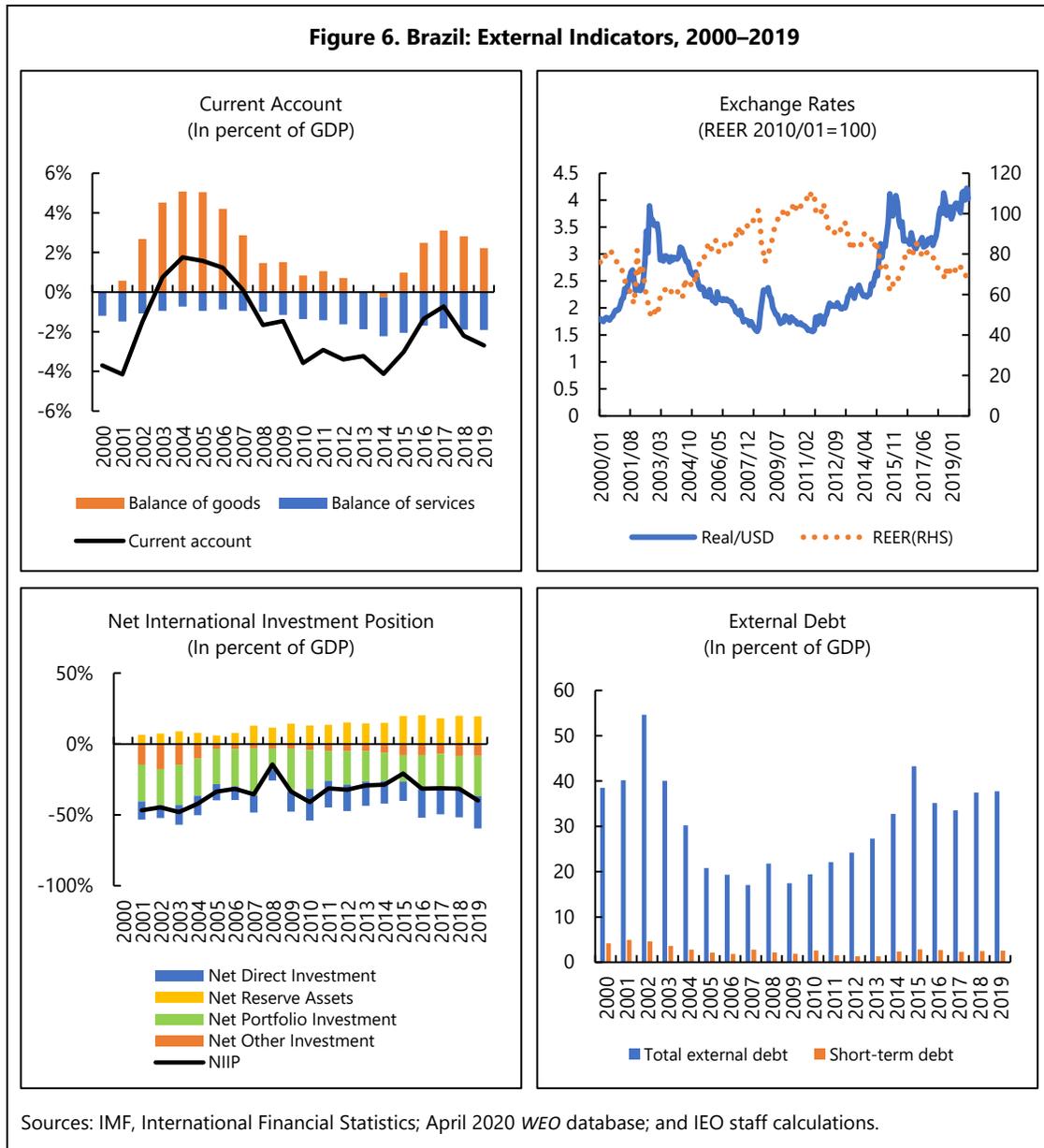
33. Once again, the retrenchment proved to be temporary, but after a brief recovery, the uncertainty resulting from the impeachment of President Rousseff in 2015 and the broad spillovers of the Petrobras corruption investigation triggered persistent outflows. Flows continued to be weak in 2017 and 2018 with the persistence of the corruption case and political uncertainty, and the long recession that Brazil suffered in part because of the turnaround in commodities markets. Flows showed signs of recovery in 2019 but turned negative in early 2020 as the spike in global risk aversion in the wake of the COVID-19 shock led to a sharp withdrawal

⁶ Prepared by Eduardo Borensztein.

of portfolio investments. Capital flows eventually stabilized in April and May 2020; and in early June 2020 net financial FX flows turned marginally positive.



34. Despite the high volatility, the structure of capital inflows to Brazil has been somewhat less risky than that in other Latin American countries. Portfolio inflows are relatively large, exceeding other inflows (which comprise mainly international loans). However, stock market inflows have been at least as large as bond inflows. The fact that stock market prices tend to decline more sharply than bond prices during economic downturns or episodes of market pessimism helps to reduce pressures in the foreign exchange market arising from capital outflows from non-residents during those times. Moreover, government debt is mainly denominated in domestic currency, which means that its value does not rise when economic conditions deteriorate and the Brazilian currency, the real, depreciates. There have been periods of fast build-up of dollar-denominated corporate debt and episodes of exposure to exchange rate volatility through complex derivative structures (Figure 6). Nonetheless, overall these risks have been kept under control and been handled effectively even at times of market stress.



Policy responses to capital flow volatility

35. Since 1999, Brazil has maintained a floating exchange rate and an inflation targeting monetary framework that has been quite successful in turning the page on a long period of persistently high inflation and periodic foreign exchange market instability. Despite some temporary breaches of the inflation target band, the monetary framework has earned significant credibility in markets, and the pass-through from depreciation to inflation is estimated to be quite low, at most 10 percent (Almeida-Marodin and Savino, 2018). Moreover, since exiting Fund-supported programs in 2005, Brazil has accumulated significant international reserves (US\$375 billion, 20 percent of GDP as of end-2018), which have further strengthened credibility.

The Central Bank also provides foreign exchange derivatives to the private sector to help manage their exchange rate risk exposure, complementing its intervention in the spot market.

36. In addition, Brazil has traditionally made use of several capital account measures to manage pressures on foreign exchange and financial markets. Although most of these were rolled back in 2013 in response to deteriorating market conditions at that time, the framework has remained in place till now. According to the Fernandez-Klein-Rebucci-Schindler-Uribe index (FKRSU) index of capital control measures, Brazil has a medium level of restrictiveness with a value of 0.65 currently.⁷

37. Since the onset of the global financial crisis, Brazil's capital account policies have shown three distinct phases. In the first phase, amid strong but volatile capital inflows and easy global liquidity conditions, Brazil focused on measures to stem inflows and preserve credit soundness in domestic markets. In the second phase, when global and domestic developments caused international investors to retrench from their positions in Brazilian assets, Brazil reduced the disincentives to capital inflows and intervened heavily to relieve pressure on the real. In the third phase, the focus has been on a sweeping modernization and deregulation of foreign exchange operations—the currency convertibility initiative—that will bring the policy regime closer to compliance with the Organization for Economic Cooperation and Development (OECD)'s Code of Liberalization of Capital Movements.

38. Amid a large volume of capital inflows in October 2009, Brazil reintroduced the application of a tax on foreign financial investments (IOF, standing for *Imposto sobre Operações Financeiras*) to various types of financial assets but exempted direct investment. The IOF had been used on foreign investments until 2008 but had been discontinued in the face of the global financial crisis. Facing high capital inflows, Brazil set the IOF rate initially at 2 percent and applied it to portfolio inflows, but gradually extended it to broader forms of inflows at varying rates, including bank and corporate short-term borrowing as well as positions in derivatives (Chamon and Garcia, 2016). Moreover, Brazil has played a leading role in raising concerns about spillover effects from source countries' unconventional monetary policies and advocating the use of capital flow measures.⁸

39. In addition, Brazil used macroprudential measures to slow down the rapid credit growth—as high as 15–25 percent between 2008 and 2012—which was at least in part caused by strong international inter-bank borrowing. The measures, however, were aimed at domestic bank lending and not at the inter-bank flows themselves and were not classified as capital account restrictions for the Fund's Annual Report on Exchange Arrangements and Exchange Restrictions

⁷ The index ranges from 0 to 1, where 1 is the most restrictive. The average for upper-middle-income countries is 0.48. See Fernandez and others (2016).

⁸ Famously, Brazil's former Finance Minister Guido Mantega accused central banks in major economies of engaging in "currency wars" that hurt Brazil's and other emerging economies' competitiveness (*Financial Times*, September 27, 2010). See IEO (2019), and Borensztein (2019).

(AREAER) or as CFMs. They included, for example, differential capital requirements, limits on loan-to-value ratios, and maximum maturities for certain consumer loans, including loans of longer duration (IMF, 2011a).

40. Brazil also responded to the capital inflows surge by intervening heavily in the foreign exchange market. The international reserves of the Central Bank (BCB) rose by some US\$300 billion between 2005 and 2011. BCB believed that Brazil needed to build up a large reserve buffer to preserve stability in the foreign exchange and financial markets.

41. In the second phase, from 2013, Brazil faced a weakening of commodity markets, a less exuberant mood by international investors, a downturn in the domestic economy, the loss of its investment grade rating, and political uncertainty stemming from the presidential impeachment and removal. In that context, Brazil gradually reduced or eliminated the taxes on various forms of capital inflows and intervened in the FX market to relieve downward pressure on the real. The IOF taxes on depository receipts of stocks, fixed income securities, and derivatives were gradually lowered and brought down to zero; the main remaining IOF tax (at 6 percent) applies to short-term international borrowing with some exceptions for inter-bank loans. FX intervention was mostly in the form of a derivative instrument—non-deliverable forward contracts that were settled in local currency—and followed a preannounced schedule for the following 4–6 months. By March 2015, the Central Bank had already built a short-dollar position equivalent to US\$108 billion. The authorities felt that intervention through the derivatives market could be effective to provide the balance sheet protection that the private sector required while still preserving the level of spot reserves, as long as there was market confidence in the maintenance of the convertibility of the currency. BCB started to unwind its short-dollar swap position as market pressures eased, especially after the cabinet changes that followed the impeachment of President Rousseff in April 2016. Despite some pause at a time of renewed turbulence, the net swap position of the Central Bank had shrunk to US\$24 billion by end-2017 (Barata and Barroso, 2019).

42. In the third phase, Brazil has committed to a thorough overhaul of its capital account regime and a currency convertibility initiative as part of a broader set of pro-market policies introduced by a new government that took office in 2018. A bill was sent to Congress in 2019 that abolishes some 40 laws (some of them dating from nearly 100 years ago) and gives full authority to the Central Bank to establish rules and regulations in the foreign exchange market. The bill facilitates the modernization of the foreign exchange market (including electronic trading and fintech technologies) and eliminates a burdensome and antiquated reporting system. The initiative does not by itself establish currency convertibility or free capital movement but allows the BCB to move towards liberalization—or temporarily increase restrictions on capital movements—as it sees fit. For example, the bill does not abolish the IOF tax, leaving authority with the BCB to raise or lower the rate without any legislative action. The convertibility initiative is also related to Brazil's application for OECD accession, including commitment to the OECD's

Code of Liberalization of Capital Measures, although the authorities consider the provisions of the bill to be a worthwhile objective in itself.

43. In recent years, foreign exchange intervention has been limited to episodes of market distress (IMF, 2019 AIV Staff Report). The BCB switched its “defensive” intervention to the spot market, as it assessed that foreign exchange demand was largely arising from repayment of foreign debts rather than from a corporate desire to hedge against possible future exchange rate depreciations.

44. The response to the capital flow volatility triggered by the COVID-19 pandemic was multifaceted and part of a wider response to the health and economic shock. The government introduced a large fiscal support package to support the economy while the Central Bank eased monetary policy, bringing the policy rate to a historic low and introduced measures to increase market liquidity. The exchange rate was allowed to depreciate and the Central Bank intervened several times in the foreign exchange market (both with spot and derivative contracts sales) to counter disorderly conditions while resuming repo operations of Brazilian sovereign bonds denominated in U.S. dollars. In addition, as part of a wider set of dollar liquidity arrangement with central banks in advanced and emerging market economies, and to address strains in global U.S. dollar funding markets during the pandemic, the U.S. Federal Reserve arranged to provide up to US\$60 billion to the Central Bank of Brazil through a swap facility that would remain in place for six months.

B. IMF Engagement

Research and analysis

45. The IMF staff has written two major studies of foreign exchange intervention in Brazil. The first (IMF, 2015b) presented a detailed explanation of the different modes of intervention utilized by Brazil since the start of the floating system, including intervention in the derivatives currency swap market since 2013. The empirical analysis concluded that intervention had been successful in reducing exchange rate volatility. However, the paper questioned the decision to continue the intervention program after global conditions had stabilized by mid-2014. The second study (IMF, 2016b) analyzed the effectiveness of forward intervention—a fairly novel topic—and concluded that such intervention affected the exchange rate and helped to reduce volatility. It found an asymmetry, however, in that forward intervention seemed to be as effective as spot for short BCB U.S. dollar positions but less effective than spot for long BCB U.S. dollar positions. It cautioned, however, that forward intervention would become ineffective when there is convertibility risk.

Policy advice

46. As capital inflows recovered post-GFC, the IMF staff was supportive of the measures taken in view of the magnitude of the inflows, the strong real appreciation of the exchange rate, and the volatility of the flows that had once again emerged. Raising interest rates to moderate

credit and aggregate demand growth would only pull in higher inflows. In the international context prevailing at the time, the staff considered a measure like the IOF as part of the “feasible policy response.”⁹ It is noteworthy that the staff took this view well in advance of the approval of the IV in November 2012. However, the policies enshrined in the IV were already under development within the Fund, and the staff had taken a pragmatic view in various country cases.

47. The staff expressed some doubts, however, about the effectiveness of Brazil’s measures, especially in the longer run, warning that there could be leakages to types of flows that were exempted from the tax, so that the impact could be more on the composition of flows than on total volumes.¹⁰ Private sector participants contacted by various missions also signaled that leakages might develop. In internal discussions in 2009 and 2010, both MCM and WHD presented analyses concluding that the effect of the IOF tax was likely to be relatively small and temporary.¹¹ However, the effectiveness of the IOF seems to have improved when it was extended to cover exchange rate derivatives in September 2011 (Chamon and Garcia, 2016). Although the Fund staff did not offer specific advice on how to make the measures more effective, it mentioned the roles of fiscal policy and macroprudential measures as ways to moderate the effect of inflows without resorting to interest rate increases.

48. Private sector participants who were contacted in the course of the preparation of this evaluation assessed the effectiveness of the IOF measures as “moderate.” The fact that the private sector generally opposed the measures at the time, however, suggests that the measures did have an impact. Also, some private sector economists thought that controls could result in a risk premium (a “convertibility premium”) that could rise at times of high uncertainty, even though Brazil never applied taxes or restrictions retroactively on investments that had already been made by international investors.

49. The second phase, from 2013, included significant exchange rate intervention using the non-deliverable forward market and a gradual removal of capital inflow restrictions. The IMF staff was initially supportive of the use of non-deliverable forward (NDF) intervention as it was introduced at a time of disorderly conditions related to the “taper tantrum” in global markets. Later, however, as the NDF auction program continued until December 2014 and reached a notional value of US\$110 billion, the staff became less enthusiastic, and welcomed the interruption of the auctions since global market conditions had normalized and an excessive

⁹ This position was essentially reaffirmed the following year after the expansion of the coverage of the IOF and the increase in its rate (IMF, 2011a).

¹⁰ A 2011 background paper that reviewed the Brazilian experience managing capital inflows stated: “With regards to CFMs, the IOF in particular seems to have initially affected more the composition of flows (higher FDI and less fixed income portfolio investment) than the overall quantity of flows. However, more recent changes to the IOF have lowered somewhat incentives for carry trades. Looking forward, an issue to consider is other side-effects of CFMs on the real economy” (IMF, 2011b).

¹¹ Surveillance Committee meetings of November 3, 2009 and July 20, 2010.

level of NDF liabilities could affect the credibility of the policy and constrain exchange rate flexibility (IMF, 2014 AIV Staff Report, para 25; External Sector Assessment, para 10).

50. While the staff advised that conditions were appropriate to phase out the IOF tax starting in 2012, it agreed with the authorities that the IOF had been useful during the inflow surge: “Capital flow measures (CFMs) have helped insulate Brazil from large and volatile capital flows and remain part of the policy toolkit [...] Staff concurred that the IOF appears to have been effective and that CFMs involved material tradeoffs, and emphasized that to minimize the negative effects (including on preserving deep derivative markets) they should be well integrated with other policies in the broader policy toolkit, and be temporary and nondiscriminatory.” As to the degree of effectiveness, the staff’s final assessment was: “There is some evidence that CFMs have been successful in helping to reduce portfolio inflows although the evidence on a persistent effect on the exchange rate is unclear” (IMF, 2013 AIV Staff Report). In the 2018 and 2019 AIV reports, the IMF staff noted that IOF taxes have been gradually relaxed in recent years “in line with the Fund’s Institutional View on capital flows,” as capital inflow pressures had receded.

51. The IMF staff shared some degree of concern about the risks of international borrowing by corporates, which was the only form of capital flow still subject to a positive rate of IOF tax: “Despite improvement, corporates remain vulnerable to shocks. Macro-financial shocks could increase debt-at-risk in the corporate sector—while firms use natural and financial hedging against their FX exposures, profitability and interest rate shocks could double the amount of debt at risk, especially in the manufacturing and energy sectors” (IMF, 2018 AIV Staff Report).

52. In the third phase, involving the road to currency convertibility and OECD accession, the IMF staff has supported Brazil’s strategy, although noting potential risks from higher exposure to capital movements: “Accession to the OECD’s Code of Liberalization of Capital Movements would foster the international integration of financial services. The authorities are pursuing negotiations with the OECD to be compliant with the codes of liberalization by 2020, irrespective of whether Brazil will ultimately become a member of the OECD [...]. This would foster competition and the adoption of best practices in the domestic market, helping to improve financial intermediation efficiency. Potential risks from the removal of restrictions on capital transactions include greater exposure to foreign shocks via capital flows reversals, given the likely increase in foreign participation in Brazil’s capital markets” (IMF, 2019 AIV Staff Report).

53. The staff noted that compliance with the OECD Code of Liberalization of Capital Movements would require a commitment to removing the IOF tax (IMF, 2019 AIV Staff Report). They did not elaborate, however, on whether full compliance with OECD codes would be in line with IV recommendations or would be advisable for Brazil. In this regard, it is important to note that Brazil’s view, as expressed in interviews for this evaluation, has remained that CFMs can be useful, not only when there is a surge in capital inflows but also to avoid the possible build-up of risks and vulnerabilities at times when the economy is not subject to a large surge of capital inflows (or a currency crisis).

54. The adoption of the IV was highly appreciated by many officials in Brazil because it incorporated an emerging-market perspective, and it showed that the Fund could be open-minded and learn from different members' experiences. The Brazilian experience and intellectual leadership were seen as important contributors to the development of the views contained in the IV. However, some officials observed that IMF mission teams were sometimes not very familiar with the IV, in contrast with staff from the departments that were involved in developing the policy. A firmer grounding would help the Fund to provide consistent policy advice across countries and time. The Fund may also wish to strengthen its outreach as the policy is sometimes not well understood.¹²

55. As concerns the quality of Fund advice on policies for dealing with capital flows, both officials and private sector economists had mixed views, although Financial Sector Assessment Program (FSAP) work and publications like the *Global Financial Stability Report* were well regarded and the staff's macroeconomic analysis was praised. On the design and calibration of CFMs and MPMs, officials did not think that the IMF staff had provided much value added. Similarly, they felt that the Fund had not provided much useful guidance on how to handle risks associated with volatile flows and rising corporate indebtedness, and Brazilian officials were not impressed by the depth of financial expertise on the Fund's team. On foreign exchange intervention, in contrast, senior BCB officials appreciated the confidential advice provided by senior management in WHD against a significant lowering of the level of international reserves (as long as Central Bank losses or contingent liabilities in forward markets were not built up excessively) at a time when the issue of "using" the international reserves was being debated in Brazil (Borensztein, 2019). Brazilian authorities also appreciated two Selected Issues papers (IMF, 2015b; 2016b) on the effectiveness of forward exchange rate intervention, which was a fairly novel strategy that the BCB was pursuing.

56. BCB staff have noted tensions between the OECD Code on Liberalization of Capital Flows and the IV. Brazil found the IV was a key rationale to support their position in their discussion with OECD members. They view Brazil as being mostly on the same page with the IMF on the role of the IOF and hope that OECD members will ultimately go along with that view. They mentioned, however, that there has not been a convergence of views between the Central Bank and Fund staff regarding the use of preemptive measures to limit risks of a build-up in vulnerabilities associated with volatile capital flows.

¹² The Fund staff and the Ministry of Public Finance jointly organized a conference in Rio de Janeiro in 2011 which served as initial outreach for the new IV policy that the Fund had adopted.

IV. CHILE¹³

A. Background

Economic context

57. After three decades of stable and sustained growth, Chile is currently the richest country in Latin America in terms of per capita GDP measured at purchasing power parity exchange rates. While its economy is still highly dependent on copper exports (which represent more than 50 percent of merchandise exports), a prudently managed stabilization fund has insulated the economy from fluctuations in global copper demand and prices. Chile's economic performance is anchored in a robust macroeconomic policy framework and sound institutions, which are regularly rated as the strongest in the region. The economy, however, has failed to find dynamism and innovation outside the traditional export sectors of mining and agriculture, and the system has been affected by high inequality, with limited social mobility and low political participation. The underlying social discontent erupted in late 2019 and is driving the country to attempt a new set of deep political and economic reforms.

Key developments in capital flows

58. Until recently, non-resident inflows to Chile have been dominated by FDI, particularly into the mining sector (Figure 7). A second key feature of the structure of Chile's capital accounts is the large volume of foreign portfolio assets that is owned by local institutions—especially pension fund administrators—built up over many years. Pension funds and insurance companies (whose largest product is life insurance associated with the pension structure) have assets that jointly reach some 80 percent of GDP. The limit on the fraction of their portfolios that can be invested abroad was gradually increased until 2012, when it exceeded 80 percent of the total assets and ceased to be a binding constraint.¹⁴

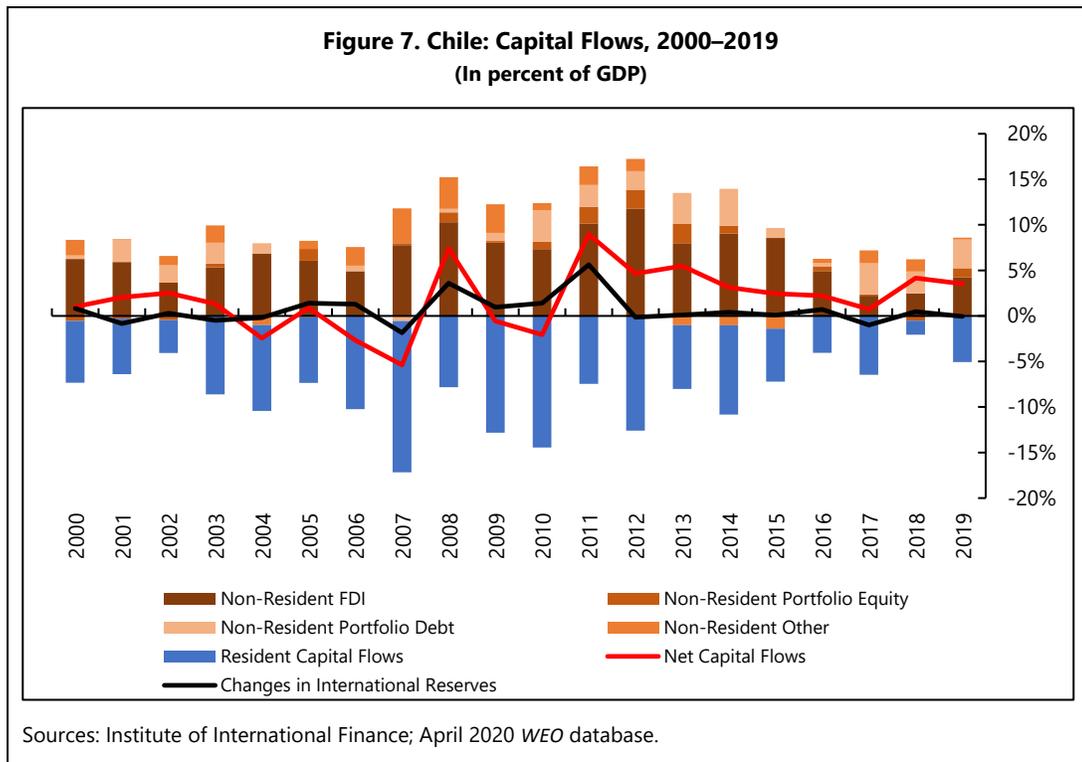
59. While Chile is exposed to the same global shocks as other Latin American countries, decisions by resident investors often counteract and even dominate those of international investors. In fact, Chile's net international investment in portfolio assets is positive (Figure 8). Moreover, a large accumulation of foreign assets by residents has tended to offset surges of capital inflows from non-residents, especially since 2012 (Figure 8).

60. In addition, the Economic and Social Stabilization Fund (ESSF), which took over the copper stabilization fund and smooths government revenue fluctuations created by both copper prices and the business cycle has accumulated assets close to US\$15 billion (just over 5 percent of GDP), which are mostly invested abroad. As the ESSF has a countercyclical function, it

¹³ Prepared by Eduardo Borensztein.

¹⁴ However, pension funds are required to cover a fraction of their external asset position in the forward exchange rate market (Carrière-Swallow and García-Silva, 2013).

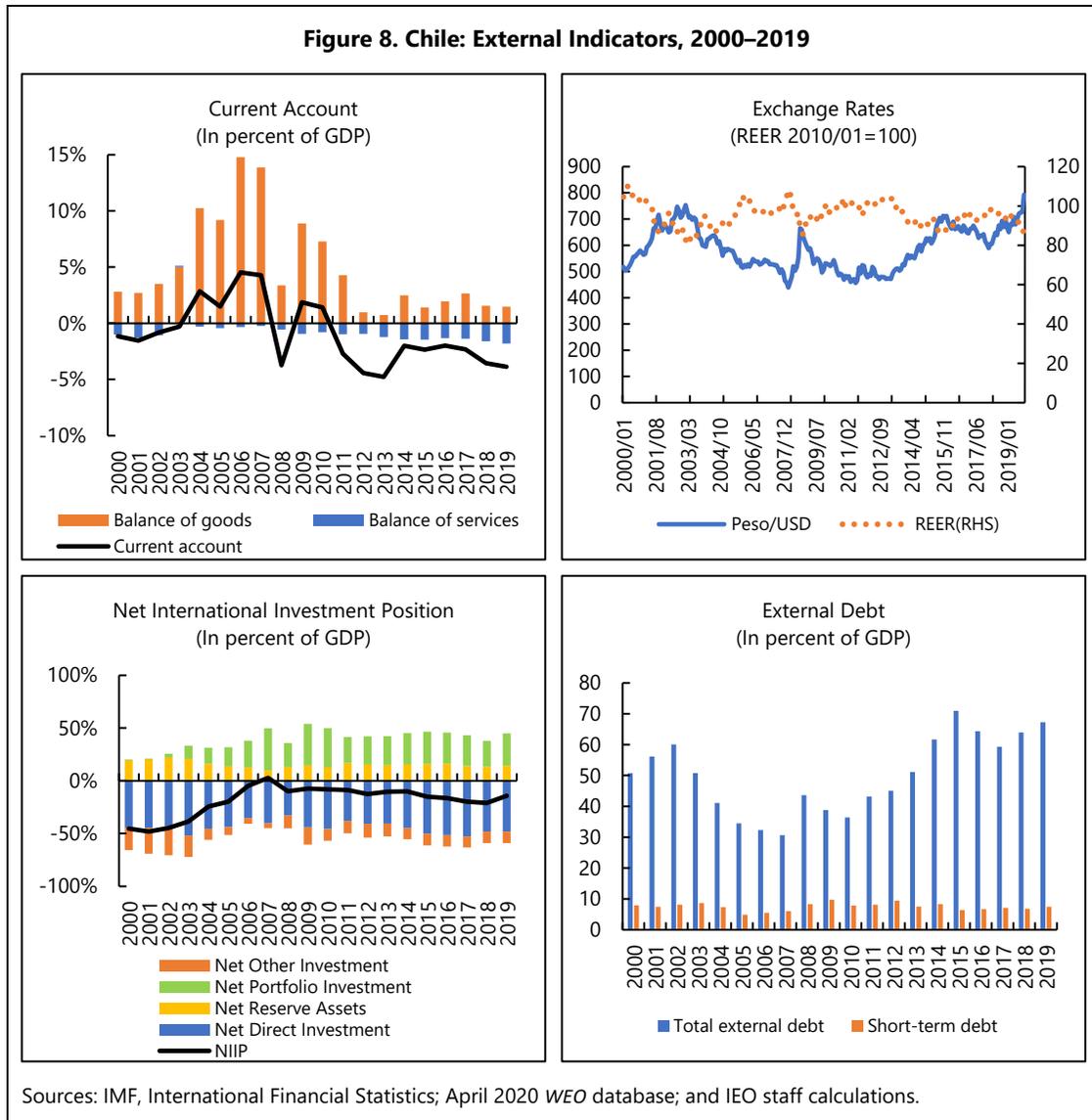
generates capital inflows to Chile at times of recession and low copper prices and vice versa, which also tends to offset the direction of flows from global investors.



61. Like other emerging markets, Chile was affected by a capital flows reversal in early 2020. The COVID-19 shock came only a few months after the social unrest that started in mid-October 2019 and triggered substantial outflows of portfolio investments by residents.

Policy responses to capital flow volatility

62. Chile has operated a floating exchange rate/inflation targeting framework since 1999. The Central Bank of Chile (BCCh) allows the exchange rate to fluctuate and has intervened only to build up international reserves under a preannounced purchase schedule or under disorderly conditions. Given its reliance on exchange rate flexibility, Chile holds a comparatively modest level of international reserves (US\$41 billion or 14 percent of GDP in 2019). Under the inflation targeting framework, Chile has brought down inflation over time and enjoys strong credibility, as reflected in well-anchored inflation expectations. Exchange rate pass-through has been estimated at 8–14 percent, despite the low incidence of administered prices in the consumer price index (Sansone and Justel, 2016). The financial system is large, well-diversified, and highly integrated into the global financial system, and an IMF financial sector stability assessment indicated that it is the deepest in the region and compares well with its peers (IMF, 2011c). The FKRSU index gives Chile a value of 0.45, showing that the economy is fairly open for its income level. Chile reports to the AREAER several measures that are micro-prudential in nature (such as the regulations on foreign assets of pension funds and insurance companies referred to above).



63. Chile used restrictions on capital inflows quite extensively in the 1990s but has remained wary of resorting to those measures since adopting a full-fledged floating exchange rate and inflation targeting framework. However, prudential measures (especially on pension fund administrators and insurance companies) and operational market rules affecting foreign investors do exert a significant influence on capital account flows.

64. In the 1990s, with the inflation rate still around 30 percent, local interest rates were high and were attracting sizable capital inflows. The authorities were keen to maintain a competitive exchange rate in order to support growth in the export sector. Although the peso was under continuous appreciating pressure, there was also some concern at the Central Bank that capital inflows could exacerbate cyclical fluctuations in Chile. In this context, the BCCh introduced an unremunerated reserve requirement (URR) on capital inflows, known as the *encaje*, in June 1991. The URR required 20 percent of financial capital inflows to be deposited in a non-interest-

bearing account at the Central Bank for one year. The design was meant to penalize shorter-term flows more heavily. In the aftermath of the pullback in inflows into emerging markets in the late 1990s, the *encaje* was lifted in 1999, although at the time the Central Bank warned that it might be reintroduced if conditions warranted.¹⁵

65. The macroeconomic framework in Chile was changed significantly after the difficult experience of 1999. Chile adopted a floating exchange rate system and an inflation targeting regime for monetary policy. In addition to a vigorous consolidation of public finances, Chile introduced a copper income stabilization fund in 1985 that went a long way towards protecting the economy from large commodity price shocks.¹⁶ Notably, in response to a boom in copper prices, the stabilization fund accumulated assets equivalent to about 15 percent of GDP in just two years (2006–07), averting a large exchange rate appreciation and the need for other types of policy response. In addition, the volatility of the exchange rate that the Central Bank has allowed has acted as a deterrent to excessive foreign currency borrowing by the corporate sector (Cowan and De Gregorio, 2005).

66. In the past few years, Chile has implemented reform measures that, while not involving a further liberalization of the capital account per se, may have (and, in some cases, are already having) a large positive impact on capital inflows. These include better aligning bond custody and settlement practices with international standards, such as facilitating the operation of Euroclear bank in Chile and adopting settlement terms consistent with international practice. As a result of these measures, the share of non-resident holdings of government bonds in local markets jumped from about 3 percent to more than 12 percent (BCCh Financial Stability Report, 2018). The government is also seeking to reduce the counterparty risk in transactions involving Chilean pesos outside of Chile through engagement with multinational banks involved in the foreign exchange markets. Finally, there are some residual controls on operations between residents and non-residents that do not involve the foreign exchange market. These would apply, for example, to a forward foreign exchange contract that is settled in pesos or to the issuance of peso-denominated bonds in the Chilean market by a foreign corporation. Current legislation does not give the BCCh jurisdiction over such operations, but there are bills in Congress to provide for that authority.

67. On the side of residents' flows in and out of Chile, shifts in prudential rules go a long way to explaining the main observed trends. Pension funds offer five different portfolios that clients can choose from. Regulations by BCCh establish minimum and maximum exchange risk hedging ratios for each of these portfolios, according to their riskiness in terms of local currency. As the

¹⁵ Several analysts have concluded that the capital account deterioration in Chile in 1998–99 was not caused by global market contagion but by the relaxation of the rules restricting foreign investment by pension funds, which triggered a large outflow by those institutions. See Cowan and De Gregorio (2005), Valdes (2008), and Carrière-Swallow and Garcia (2013).

¹⁶ The ESSF was established in February 2007 with a contribution of \$2.58 billion, most of which was from the dissolution of the Copper Stabilization Fund, which the ESSF replaced.

U.S. stock market suffered a huge drop in 2007–09, pension funds found themselves holding large excess hedging positions which they offset by repatriating funds to Chile. In addition, shifts in portfolios between onshore and offshore allocations may be large as there is a herding tendency among participants who follow advice from a widely influential website.¹⁷

68. Chile has refrained from intervening in the foreign exchange market except in disorderly conditions or when it preannounced a set program to increase international reserve holdings. Disorderly conditions emerged in 2001, with the looming crisis in Argentina and the September 11 attacks in the U.S., and again in 2002–03 with the transition to the Lula administration in Brazil. Chile's Central Bank resorted to both spot intervention to support the peso and the issuance of bonds denominated in U.S. dollars and sold in the domestic market. In 2008 and 2011, BCCh implemented programs of foreign exchange purchases to increase its foreign reserves and be in a stronger position to guarantee financial stability in the event of disruptive volatility. In the latter two episodes, the exchange rate had appreciated in the preceding months, but the announcements of the intervention—and not the intervention itself—seem to have had a small, short-run effect (Larraín and Saravia, 2019).

69. The foreign exchange market became highly stressed as a result of the protracted political unrest in late 2019. After depreciation in the peso of almost 15 percent, amidst continued exchange rate volatility, in November the Central Bank announced a sizable intervention program lasting for six months, comprising up to US\$10 billion in spot sales and up to another US\$10 billion in provision of hedging instruments in the form of non-deliverable forwards. The Central Bank has announced on a weekly basis the volume of intended intervention in both markets. Through mid-January 2020, BCCh had sold US\$2.6 billion in the spot market and US\$4.5 billion in the NDF market (Vial, 2020).

70. The policy response to the COVID-19 shock has been consistent with earlier approaches to dealing with capital flow volatility. The response package has involved a large fiscal stimulus, a rapid easing of monetary conditions via a large cut in official rates, and several measures to improve the provision and amount of liquidity in the financial system, including changes to eligibility of collateral for repo operations, a new funding facility for banks conditional on them extending credit, an expansion of eligible currencies for meeting reserve requirements in foreign currencies, and a special asset purchase program aimed at bank bonds. The program for providing liquidity in pesos and U.S. dollars through repo operations and swaps was expanded, and macroprudential measures, like the degree of tolerance for deviations from the liquidity coverage ratio, were eased, while the timetable for the implementation of Basel III standards was extended.

¹⁷ Regulations on insurance companies (which provide the annuities that people can buy at retirement) establish a ceiling on the percentage of foreign assets and require 100 percent exchange rate cover to avoid a currency mismatch with their peso liabilities.

71. In the face of demand pressure on the peso, the BCCh intervened in the foreign exchange market, selling US\$2.5 billion reserves through end-June. The Bank also extended until January 9, 2021 the window for possible resumption of FX sales and NDF operations that was opened in November 2019 (during the social unrest), and it unwound around US\$4.5 billion of these during the first two quarters of 2020 in response to the COVID-19 crisis. These interventions were accompanied by additional operations affecting the size and development of the peso/dollar exchange rate market, notably the settlement in dollars that the Treasury carries out as part of the use of the ESSF to finance the fiscal deficit, as well as the additional debt placements made abroad. Finally, to bolster its external buffers in a period of high uncertainty, Chile obtained a US\$23.9 billion two-year FCL arrangement from the IMF.

B. IMF Engagement

Research and analysis

72. Analytical work by the IMF staff contributed to Chile's quantification and assessment of the effects of global financial shocks, and—at least in one case—its policy response. Several studies in 2012 and 2013 measured the impact of shocks in international financial markets on the Chilean economy. One study (IMF, 2012b) found a significant and sizable effect of international financial market volatility—proxied by the CBOE volatility index (VIX) of U.S. stock market volatility—among the external factors that were the source of output fluctuations in Chile. Another study (IMF, 2012a) focused more narrowly on the transmission of risk premiums prevailing in the European and U.S. markets to Chilean banks' bond yields and inter-bank credit spreads. This study, which extended recent work by the BCCh, found that changes in global risk aversion and credit spreads were responsible for as much as 40–60 percent of the volatility of Chilean banks' spreads in bond and credit markets. The issue of the impact of global shocks on the exchange rate was taken up in the following year. An analysis of the weekly peso/U.S. dollar exchange rate found that, in addition to traditionally studied factors like copper prices and interest rate differentials, the expansion of the U.S. Federal Reserve balance sheet under the quantitative easing policy and the foreign exchange forward position of Chilean pension funds had a measurable effect on short-term exchange rate fluctuations even when controlling for other measures of liquidity like interest rates. Market volatility, again proxied by the VIX index, was the determinant with the largest effect, however.

73. Parts of the staff studies looked more directly at policy actions. The 2012 exchange rate study found that BCCh's foreign exchange interventions in 2008 and 2011 had had a small but discernible impact (2.5–3.5 percent) on the exchange rate. The avowed objective of the Central Bank had been to increase the level of its international reserves to strengthen external resilience, but the interventions also came at a time when the exchange rate had appreciated and the Central Bank had recognized that the exchange rate was more appreciated than its fundamental value. In a study for a volume on international reserves management in Latin American inflation targeters in 2019 (Larraín and Saravia, 2019), two BCCh economists analyzed the announcement impact of interventions including the 2008 and 2011 events and reached broadly similar

conclusions. Another study (IMF, 2014) analyzed the low level of foreign investment in the Chilean sovereign bond market. The issue had puzzled the authorities since foreign participation in Chile was about 2 percent, contrasting with levels of 40–60 percent in countries such as

Mexico and Peru. The BCCh had taken up the puzzle in its Financial Stability Report in the previous year, and the Fund staff study pointed to a number of additional factors that might have been discouraging foreign investment, including settlement risk of foreign exchange transactions—which could be relieved by joining the Continuous Linked Settlement Bank (CLS), a suggestion that the authorities followed later. The staff paper cautioned, however, that increased foreign participation in the domestic bond market could create volatility risks, in addition to the desired benefits of increased diversification and liquidity of the markets.

Policy advice

74. Chilean officials and the IMF staff have been in broad agreement that capital account restrictions would not be effective in reducing the overall volume and volatility of flows in current conditions, given the overall openness of Chile’s capital account and the sophistication of financial markets, which have contributed to large inward and outward positions and significant coverage in the offshore NDF market. Moreover, it would be disruptive to impose capital controls on institutions like pension funds and insurance companies without disturbing the structure of their assets and liabilities (which depends on the individuals’ investment choices) and exchange rate risk management (which is in part required by regulations). Investment parameters have been fine-tuned over time but not with an eye to influencing capital flows per se. Capital flow issues have not figured largely in IMF consultations. While the quality of Fund advice is well regarded, authorities feel confident their own analysis on these topics is “at the frontier” already.

75. Looking back, Chilean officials noted that there was a need for instruments like capital controls in the 1990s because exchange rate flexibility was limited by a “band” regime, the credibility of the monetary authority was still lacking, the fiscal consolidation effort still had a way to go, there were vulnerabilities in the banking system, and the copper revenue management framework still needed improvement. By contrast, in the current policy framework, capital account restrictions would be seen as an attempt to micro-manage the exchange rate in a way that could distort financial markets and reduce confidence in the commitment to market-based policies. Chile does make use of MPMs to moderate the credit cycle, although these measures do not discriminate between residents and non-residents and are not classified as capital account restrictions. Foreign banks are subsidiaries, so they are considered residents.

76. Another issue constraining the use of capital account restrictions is that several of Chile’s free trade agreements, including that with the United States, limit them to emergency conditions, such as a balance of payments crisis, and prohibit durations longer than one year. In addition, Chile accepted the OECD Code of Liberalization of Capital Movements when it became a member of OECD in 2010.

77. In Chile, when the IV was issued, there were some voices arguing to reconsider the use of capital account restrictions, but the BCCh officials said that they had not seriously evaluated reintroducing them at any point since the floating exchange rate regime started. In fact, Chile felt that the role for capital flow measures anticipated in IV required further research because such measures may have damaging side effects and should not be part of a standard toolkit without a clear assessment of potential costs. There was a recognition, however, that countries without a solid monetary framework and a sound fiscal position may need to resort to capital account measures to alleviate risks associated with a fully open capital account under such conditions, and that the Fund could discuss their advisability on a case-by-case basis.

V. COLOMBIA¹⁸

A. Background

Economic context

78. The Republic of Colombia is the fourth largest economy in Latin America and the third most populous. Steady economic growth and stable inflation in recent years, and a peace deal in 2016 that ended a long internal conflict, have made this oil-exporting country attractive to international exporters and investors.

79. Colombia's capital account regime changed in the early 1990s from a highly restrictive system of controls to a more open but still highly regulated regime, as part of an external liberalization reform pursued by the government and the newly-autonomous Central Bank—the Banco de la República (BdR). The relaxation in measures led to strong capital inflows, making the country vulnerable to the turn in sentiment toward emerging markets that took place in 1998–2000. In response, some capital account measures were again tightened over this period and only gradually eased over the subsequent two decades as external conditions improved, and as part of commitments under free trade agreements and the decision to join the OECD.

80. An essential element of the country's regulatory regime is that transactions among residents should be in Colombian pesos, thus forbidding domestic dollarization. With exceptions only for sectors that directly receive foreign exchange in their domestic transactions (such as tourism), foreign exchange accounts in the Colombian financial system are forbidden and debt payments within the country have to be in pesos, even if denominated in a foreign currency. Transactions with non-residents involving trade in goods and capital account transactions go through a regulated foreign exchange market.¹⁹ Non-residents can hold domestic accounts for debt transactions in local currency. Along with these regulations to reduce foreign exchange risk, a long-standing regulation requires the maturity of loans provided by intermediaries in foreign

¹⁸ Prepared by José Antonio Ocampo.

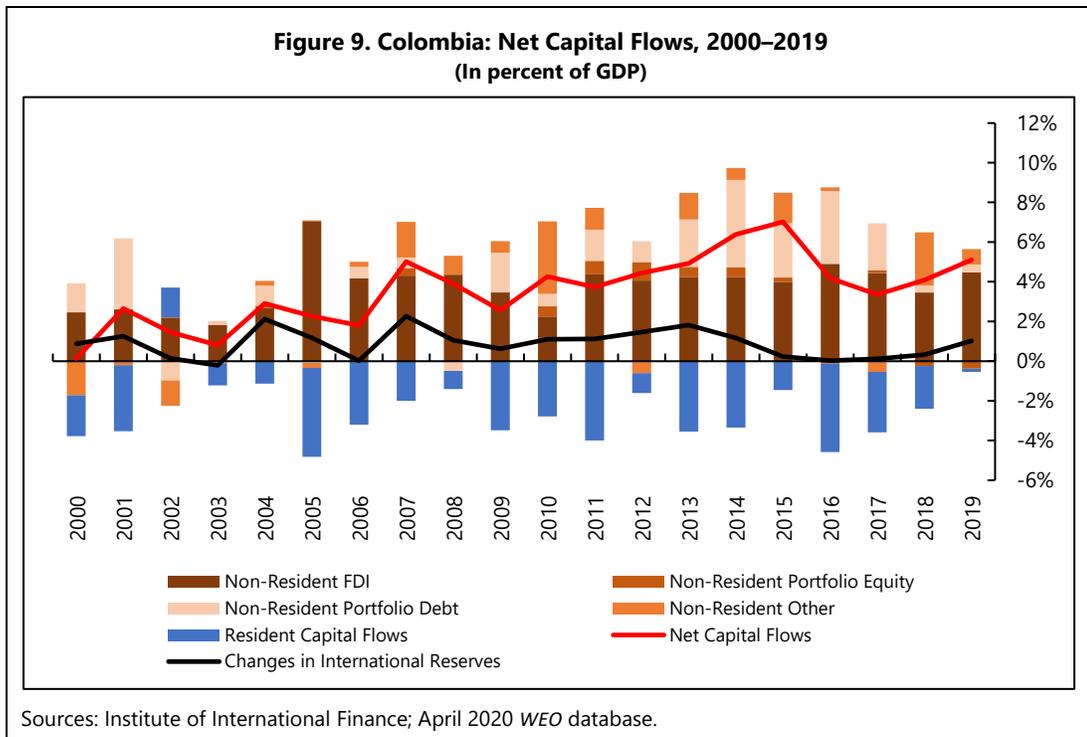
¹⁹ Transactions with non-residents involving trade in services and capital account transactions based on service revenues can be transacted in a free market. On these issues, and more generally on the foreign exchange regime, see Correa (2017).

currencies to be less than the maturity of the foreign currency liabilities with which the loans are financed.

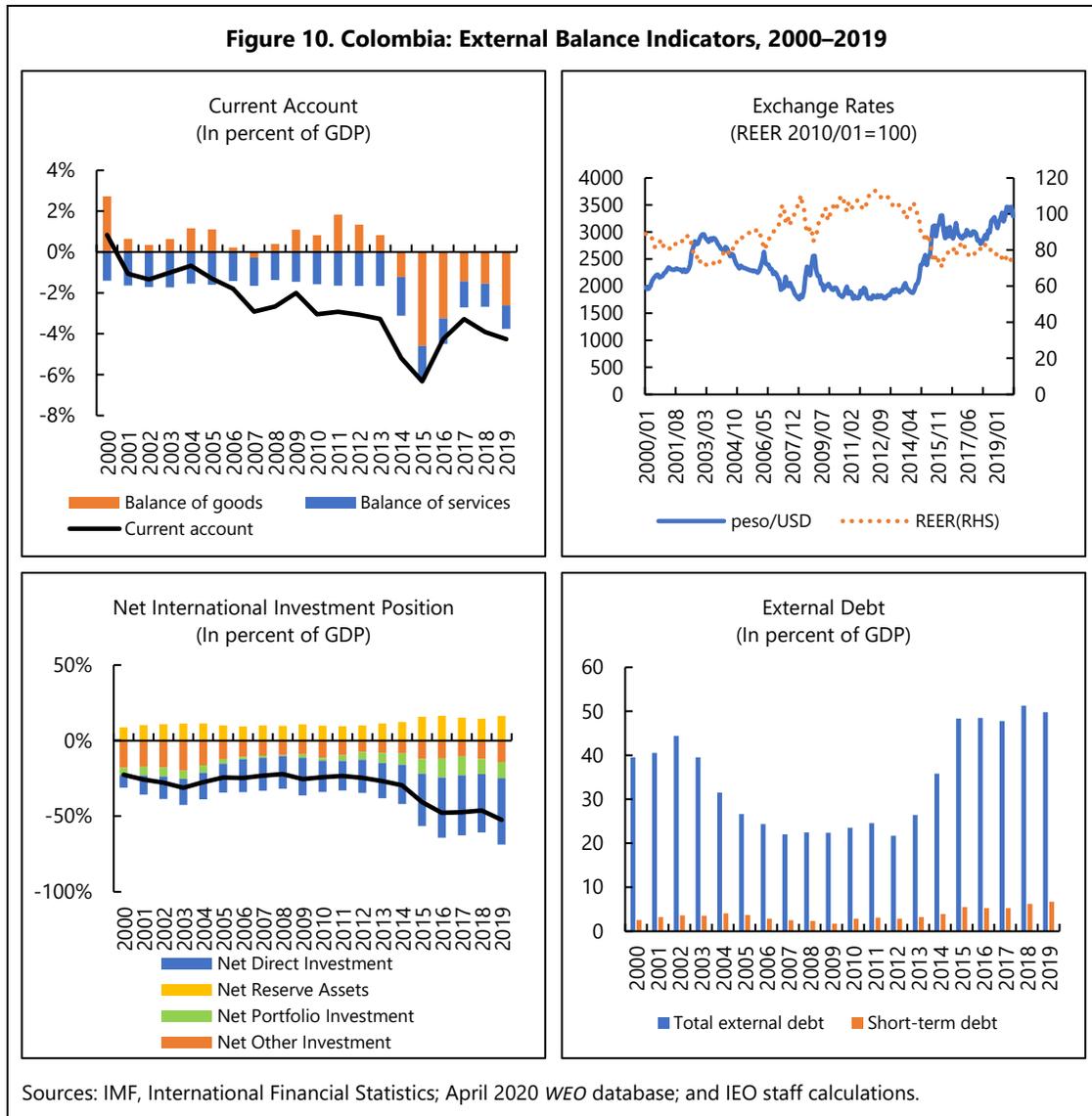
81. In addition to these macroprudential measures, Colombia has on occasion used capital account measures to limit volatile short-term flows and raise the maturity of external debt by tilting the composition of flows toward longer-term flows. The main instrument is URR for external borrowing, introduced by the Central Bank in 1993 and used until 1998, heavily so during the capital inflow surge that preceded the Asian crisis (Ocampo and Tovar, 2003).²⁰ The URR for external borrowing has been complemented by one for portfolio inflows, as well as by minimum stay periods for portfolio flows. These measures were used again in 2007–08 as discussed later.

Key developments in capital flows

82. FDI has been a major and fairly stable source of external financing since the mid-1990s (Figure 9), helping fund large current account deficits over much of the period (Figure 10). Portfolio inflows have been strongly affected by the dynamics of external capital markets and are mainly channeled to the domestic market for government securities and secondarily to the stock market. The Colombian private pension funds are a major source of resident portfolio outflows, but also of net inflows during some periods. Although there has been no systematic analysis of their outward investment pattern, they seem to have been stabilizing in terms of the country's foreign exchange availability, countering the tendency of portfolio inflows.



²⁰ Since the deposit could be replaced by a payment to the Central Bank equivalent to its opportunity cost, it can be said that it is equivalent to a tax.



83. Colombia's portfolio inflows have been sizable since 2010 and have experienced large month-to-month swings, though they largely rode out the "taper tantrum" of 2013 and the impact on them of the COVID-19 pandemic while negative has been relatively benign. The fall in oil prices in 2014 could have been expected to dampen inflows to an oil-producing economy, but there was a countervailing effect generated by the increase in Colombia's weight in the J.P. Morgan Emerging Markets Bond Index in that year. Over the last few years, however, inflows have been more volatile, driven by frequent shifts in sentiment toward emerging markets.

84. Standard indices indicate that Colombia's capital account liberalization in the early 1990s put capital account openness temporarily above the average for emerging economies, while the measures introduced in the face of the EM crises of 1998–2000 placed it below the average. On current estimates, the country remains less open relative to the EM average, though—given the limitations of the indices (see Batini and Durand, 2020)—it is possible that the magnitude of the

reversal during 1998–2000 was overestimated and that the gradual subsequent liberalization is not being adequately picked up.

Policy responses to capital flow volatility

85. In the years preceding the GFC, portfolio inflows to Colombia surged, prompting the use again of the URR in 2007–08 to limit short-term flows and contain pressures on the exchange rate. With the collapse of Lehman Brothers, however, market sentiment changed sharply and the concern became one of containing potential outflows. The URR was reduced to zero in October 2008, along with other policies to cushion the impact of the crisis, viz. a large cut in policy interest rates and a fiscal impulse of about 1 percent of GDP during 2009.

86. The government also entered into a US\$10 billion FCL arrangement with the IMF in May 2009, which provided insurance against a further deterioration of global conditions. Successor FCL arrangements have been approved since then, with the latest two-year arrangement approved in 2020 in the wake of the COVID-19 crisis. The authorities have treated the arrangement as precautionary and consider it an important buffer in ensuring the country's resilience in the years following the GFC.

87. Over the past decade, as financial conditions have improved and, despite volatility in capital flows, the government's policies toward the capital account have been governed by the goal of deeper trade and international financial integration. The free trade agreement with the United States, which became effective in 2011, and accession to membership of the OECD in 2019 have been important milestones in this process, leading to gradual liberalization of the capital account. The commitments under the FTA do not completely preclude Colombia's options of using non-discriminatory macroprudential measures, and even the URR, under certain circumstances. Although the URR has not been used since 2008, it has not been eliminated (formally, it has a zero rate at present); in fact, the transactions potentially subject to the URR have continued to be updated, and now include all forms of trade pre-financing, which had been previously excluded. In the case of the OECD Code too, Colombia presented a list of reservations and has the option to take needed steps in the event of a balance of payments crisis.²¹

88. The move to floating exchange rates since 1999 has been complemented with periodic interventions in the foreign exchange market to control excessive volatility and pressures on the exchange rate. There have been many systems of intervention and they have varied over time depending on circumstances. In the face of volatility, the Central Bank has often used an automatic mechanism of auctions of put (or call) options to buy (or sell) foreign exchange. The auctions are triggered whenever the nominal exchange rate deviates from its 20-day average by more than a specified percentage. In addition to the automatic mechanisms, the Central Bank

²¹ The reservations are not substantial. They include limitations on: foreign investment in housing next to the country's frontiers; branches of non-resident banks; branches of air transportation and port service firms; participation above a certain level in TV companies; and an old regulation prohibiting FDI in security services.

has also used discretionary purchases or sales to contain pressures on the exchange rate. For instance, discretionary purchases were used during 2004 and 2007 to mitigate a strong appreciation trend and discontinued when the peso depreciated at the start of the global financial crisis.

89. In response to the economic contraction and financial market volatility triggered by the COVID-19 crisis, Colombia has followed a multi-pronged approach including a large fiscal stimulus of around 2.8 percent of GDP while the Central Bank implemented a hefty cut in policy rates, lowered reserve requirements for key accounts, and launched an asset purchase program from credit institutions of public as well private debt for a notional total of 10 trillion pesos (US\$2.6 billion)—the first case of so-called “quantitative easing” in the region. With the peso coming under demand pressure, the Central Bank provided dollar hedging by introducing auctions of non-deliverable forwards with a 30-day maturity. In addition, Colombia obtained access to the U.S. Federal Reserve’s FIMA Repo facility and the FCL arrangement with the IMF was renewed for a further two years.

B. IMF Engagement

Research and analysis

90. During 2007–08, the IMF staff’s work on capital flows focused on understanding the impact of the various capital account measures, particularly the URR, that Colombia had used in the preceding years to contain inflows. Staff research found that the effect of these measures on curbing the overshooting of the exchange rate was modest and that they also raised exchange rate volatility (Clements and Kamil, 2009). This was the opposite conclusion from that of research done around the same time by BdR staff (Rincón and Toro, 2010), which found that the simultaneous use of URRs and Central Bank interventions in foreign exchange markets had significant effects in containing exchange rate pressures during the period when these interventions were adopted simultaneously. Other academic work on the effects of URRs in Colombia in the 1990s (Ocampo and Tovar, 2003) also showed that they reduced short-term flows and were effective in increasing the policy space for domestic interest rate policies.

91. Interviews with IMF staff members indicate that the reasons for the difference in results were not fully resolved, in part because with the GFC the attention of both authorities and staff turned to the need to curb outflows. As global and domestic conditions improved in 2010, and inflow measures returned to the agenda, the staff’s views were guided by the work underway by then at the Fund and elsewhere in the run-up to the adoption of the Institutional View. This broader look at the cross-country evidence yielded conclusions more favorable to the use of the URR as an effective price-based instrument to regulate capital inflows (see Montiel, 2020).

92. The FCL arrangement has influenced the staff’s research and analysis towards greater attention to risks and policy options to contain the build-up of vulnerabilities. Two significant staff analyses are worth highlighting:

- The risks generated by the expansion of Colombian commercial banks abroad—for Colombia’s own economy and for Central American countries—were analyzed in research undertaken for the 2015 AIV consultations. The IMF staff highlighted that in view of lower loan quality, higher foreign exchange exposures, and weaker prudential standards, the capital of the banks (though above the regulatory minima) could prove insufficient to manage the associated risks. It also pointed out the absence of common regulatory and supervisory standards and confidentiality requirements on information sharing. It called, therefore, for strengthening capital buffers further and building a regional body in charge of financial stability that would “act as a forum for the coordination of regional macroprudential surveillance.”
- As part of the 2019 AIV consultation, the drivers of and prospects for portfolio inflows were assessed using the capital-flows-at-risk approach. The analysis found that “the baseline outlook for portfolio inflows is less favorable than in recent years but does not signal a large probability of outflows” and also provided estimates of how the outlook would change under various tail events.

Policy advice

93. The renewed use of the URR was a subject of discussion in the 2007 and 2008 AIV consultations. The IMF considered that the measures had positive effects in terms of reducing foreign borrowing and portfolio inflows but, given the small share these comprised in total capital inflows, the effect on overall capital flows was probably modest. The contrasting views were clearly laid out in the 2008 Staff Report:

“The views of staff and the authorities differed on the merits of capital controls and their effectiveness. Staff’s econometric analysis suggested ... there was no robust evidence that they reduced the sensitivity of the exchange rate to interest rate differentials. ...The controls were also associated with a significant increase in exchange rate volatility. In light of their limited effectiveness and adverse effects on volatility and asset market development, staff saw significant drawbacks to the controls. The authorities, however, were of the view that the controls had helped protect financial stability by preventing a large build-up of foreign-currency debt by the private sector, which could have generated domestic instability in the context of the global financial crisis. They saw the controls as a potentially useful tool that could be employed again, if required by circumstances.”

94. In the Board discussion of the 2007 report, some Executive Directors noted the difference in views between the staff and the authorities on the effectiveness and impact of capital controls in the short run, and considered that capital controls should remain in the authorities’ toolkit in case the need should arise in the future. However, as discussed, after the collapse of Lehman Brothers concerns pivoted to curbing outflows and the authorities reduced the URR rate to zero. This step was welcomed by the staff in the 2008 AIV consultation: “The elimination of capital

controls is also a positive step, given their potentially negative effects on financial sector development and exchange rate volatility.”

95. As recovery took hold in 2010–11, the authorities stated that their “policy response to a possible surge in capital inflows would be geared at mitigating risks to financial stability” and that they would consider “tightening macroprudential measures and reintroducing capital flow management (CFMs) tools used in previous episodes of large capital inflows.” Interviews indicate that though the staff was of the view that macroeconomic policies rather than CFMs were what was needed, the AIV report indicated support: “Staff welcomes the authorities’ plans. The staff also underscores that a tightening of the fiscal stance would have to be part of the policy response to a possible surge in capital inflows.” In the Board discussion, “Directors recognized that additional tools, including strengthened macroprudential regulation and capital flow management policies, can play a role in the event that capital inflows threaten financial stability.”

96. Differences of opinion continued into 2012–13 though the staff was still disinclined to be publicly critical of capital account measures. The Staff Report on the 2012 AIV consultation (which took place in February 2013 after the IV had been approved) mentioned the staff’s view that Colombia’s proscription of dollar accounts through regulations on currency and maturity mismatches was partly responsible for its “relatively small financial markets,” but made no recommendations for changes in these measures. In internal discussions, the staff continued to be against the use of CFMs. A July 2013 presentation in the Capital Flows Group noted the staff’s view that capital inflows in Colombia and the consequent appreciation of the peso “stemmed mainly from strong fundamentals, including favorable terms on trade.” The staff “therefore did not see CFMs as a useful tool, and instead recommended stronger fiscal tightening and structural reforms to improve competitiveness over the medium run.”

97. Consultations over the 2014–19 period were not contentious. Over this period, Colombian authorities had to deal with several external shocks, most notably the collapse in oil prices in the second half of 2014, and volatility in flows due to the frequent shifts in market sentiment toward emerging markets. The staff has praised the reliance on exchange rates as a shock absorber in the face of these developments, while noting that judging the equilibrium exchange rate in the aftermath of large shocks such as the oil price decline is difficult. In 2015, the staff noted that the external balance assessment methodologies “produce conflicting results,” ranging from a 40 percent overvaluation to a 15 percent undervaluation; the authorities “noted that their models and methodologies also produce a wide range of results.”

98. Given the difficulties in judging the adequacy of the exchange rate adjustment, the staff has been supportive of other measures that the authorities have used from time to time to complement the exchange rate adjustment. The staff expressed support for the variations in the foreign exchange intervention programs of the authorities to deal with changing circumstances. In the 2014 AIV report, “staff agreed that the implementation of the foreign exchange purchase program has been prudent and did not undermine exchange rate flexibility or the inflation-targeting regime, as reflected by significant exchange rate variability and well-anchored inflation

expectations.” Similar sentiments were expressed in subsequent reports, with the 2017 report stating that “the authorities and staff agreed that the flexible exchange rate will remain the first line of defense against external shocks” but took note of the authorities’ intent “to consider all available intervention tools when facing shocks and select the most appropriate ones according to cost/benefit analysis.” In 2018, the Central Bank announced a program “to accumulate reserves to enhance the economy’s resilience to external shocks and as part of the authorities’ efforts to prepare for a possible gradual reduction in FCL access, risks permitting,” which staff supported as an “appropriate step.”

Assessment

99. The overall assessment of the IMF’s role in Colombia over the past decade or so is a positive one. Authorities feel that through the AIV consultations and the reviews for the FCL arrangements, the IMF has appropriately drawn their attention to downside risks generated by the international environment, while recognizing the resilience of their policy framework. There have been honest differences of views on the effectiveness of certain policy instruments, such as the URR, and there is no indication that the staff has tried to, or been under pressure to, reach preconceived conclusions. Since the adoption of the IV, the staff’s views appear to have evolved toward greater sympathy and support for the authorities’ position that a heterodox toolkit is needed to support warranted macroeconomic adjustments through exchange rates and other macroeconomic policies. The FCL arrangement has been successful in providing Colombia an additional buffer of support during a difficult decade, providing room for Colombia to gradually build its own revenue buffers.

VI. COSTA RICA²²

A. Background

Economic context

100. Costa Rica is a small middle-income economy that has achieved a significant transformation over the last decades. The oldest continuous democracy in Latin America, the country has managed to progressively shift its export base from primary products to high-tech manufacturing and services and has enjoyed relatively stable and high economic growth, rising GDP per capita, and falling poverty rates. Since the late 1980s, a series of reforms has helped transform the economy, including free trade zones, membership of the Central American Free Trade Agreement with the United States,²³ privatization of most state-owned enterprises, an opening up of the banking sector to private banks (although the government kept ownership of the four largest banks), and the abolition of tariffs on many consumer goods. Costa Rica is an

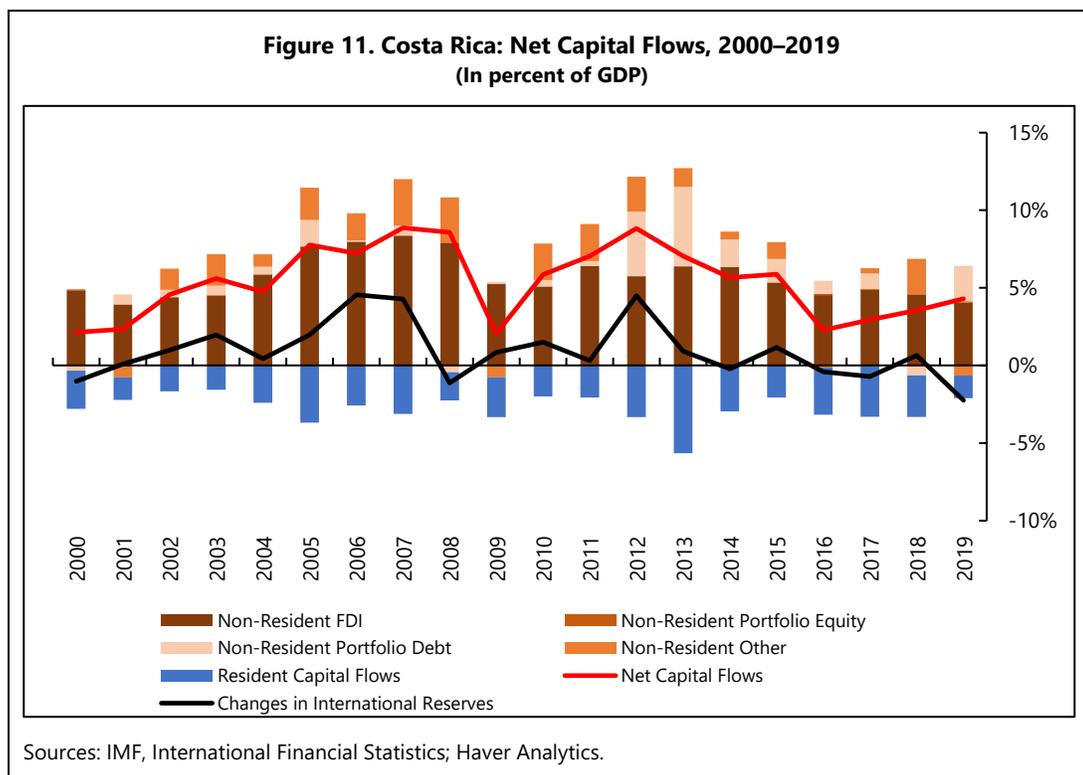
²² Prepared by Nicoletta Batini.

²³ The United States is Costa Rica’s largest trade and investment partner. Approximately 53 percent of all FDI and 40 percent of all imports are of U.S. origin.

open economy with very limited capital account restrictions. Historically, it has managed volatile capital flows through foreign exchange intervention, concerned about the impact of exchange rate swings on a dollarized financial system. However, it has shifted recently to a more flexible exchange rate regime. In the face of periods of capital flow volatility, it has considered capital flow measures to help contain macroeconomic and financial risks. In 2015, Costa Rica applied for OECD accession, and on May 15, 2020 it joined the OECD as the 38th member.

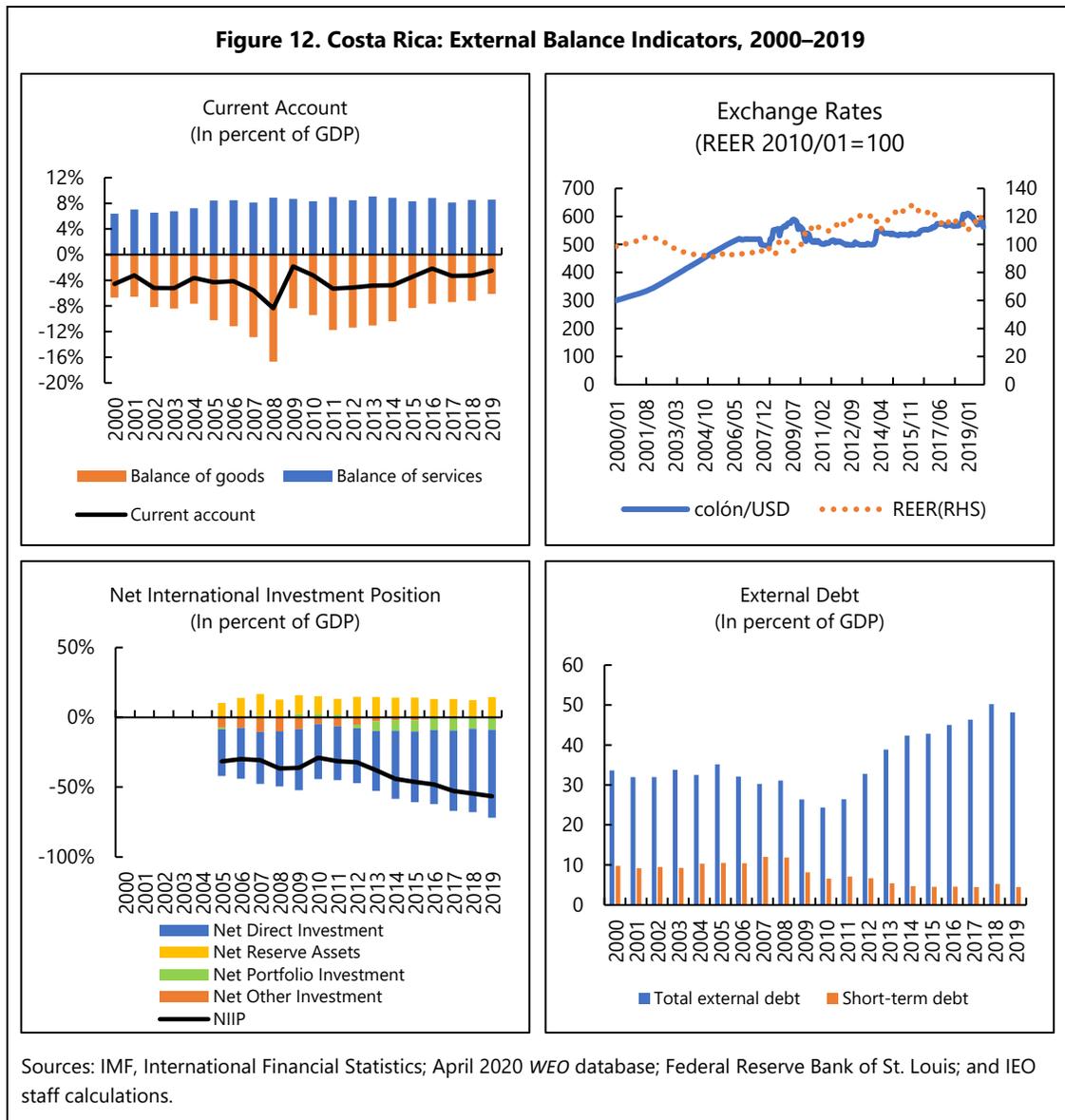
Key developments in capital flows

101. Foreign direct investment has contributed greatly to Costa Rica's development, fostering export diversification and upgrading, the creation of more and better jobs, and the accumulation of business capabilities. For a country that initially specialized in exporting a few primary products (e.g., coffee, bananas, and sugar), the arrival of the major information and communications technology company Intel in the late 1990s helped forge a national reputation as a place for investment. Since then, Costa Rica has developed a strong track record in attracting FDI, especially in knowledge-intensive sectors. By 2017, the stock of net direct investment to Costa Rica amounted to about 55 percent of GDP, up around 15 percentage points from a decade before (Figures 11 and 12).



102. Portfolio and other flows have played a considerably lesser role. In the second half of 2012 and early 2013, portfolio flows increased abruptly on the back of widening foreign interest rate differentials especially vis-à-vis the United States, amidst ample global liquidity. The

increase, however, proved to be temporary as flows quickly reversed reflecting a turnaround in global conditions and monetary accommodation at home, with the share of short- to long-term flows stabilizing rapidly at historical levels. In 2018, the stock of portfolio investment amounted to a mere 7.3 percent of GDP, mostly reflecting external finance of Costa Rica’s expanding fiscal deficits. The prevalence of direct over portfolio investment largely reflects the fact that Costa Rica is a small country with a big public sector and a shallow financial market (to date only 4–5 private companies are listed), and thus only limited short-term investment opportunities.



103. During the GFC, and most recently during the COVID-19 crisis, political stability and limited reliance on external finance meant that the country was relatively unaffected by capital flow swings. The government reinforced external resilience in 2009 through a Stand-By Arrangement with the Fund and an additional 40 percent subscription of capital in the Latin

American Reserve Fund (FLAR).²⁴ It did not make use of either of these in practice as net international capital flows to Costa Rica remained relatively stable. In April 2020, Costa Rica obtained US\$500 million in emergency financing under the Rapid Financing Instrument to help meet urgent needs arising from the COVID-19 pandemic including for health spending and for balance of payments needs from hits to trade, tourism, and FDI.²⁵

Policy responses to capital flow volatility

104. Consistent with its market-friendly philosophy, Costa Rica's capital account is largely open with very limited restrictions. Indeed, indices of capital account restrictiveness like those of Fernandez and others (2016) and Quinn-Toyoda (2008) characterize Costa Rica's capital account as completely open. Currently there are no restrictions on capital flows in or out of Costa Rica on portfolio investment in publicly traded companies, but companies are subject to local taxes. Foreigners can own property with no title restrictions, although special care must be taken to comply with laws governing coastal areas.

105. Nonetheless, in 2014, concern about potential inflow volatility led to a decision to provide the Central Bank (BCCR) with the authority, through a qualified majority of its Board of Directors, to activate for a period of up to six months a tax on non-residents' interest earned on fixed income assets and an unremunerated reserve requirement on external borrowing. These measures were never activated, and BCCR's authority to impose them was removed in late 2018 to comply with Costa Rica's accession roadmap to the OECD. Beyond the increased flexibility of the exchange rate from 2006 onwards, since the global financial crisis Costa Rica has introduced a series of currency-based macroprudential measures to reduce the incidence of foreign currency vulnerabilities stemming from its high level of financial dollarization. These included increased reserve requirements for dollar liabilities of financial intermediaries in 2012, and prudential regulations for dollar loans to unhedged borrowers in 2013 (differentiated capital-risk weights). In 2015, reserve requirements were extended to medium- and long-term foreign bank borrowing (in addition to the then-existing requirement on short-term foreign borrowing). Risk weights for mortgage loans to unhedged borrowers for capital adequacy purposes were increased from 100 percent to 125 percent in 2016 (and subsequently reduced back to 100 percent in 2018). And in 2017, the authorities introduced an additional generic provisioning requirement on FX loans to unhedged borrowers.

²⁴ Following this increase, the capital subscribed by Costa Rica in that entity went from US\$234.4 million to US\$328.1 million (2011). Costa Rica's capital subscription in FLAR was increased further to US\$656 million in 2016.

²⁵ The IMF financing is part of the government's plans to use multilateral borrowing of up to \$3.175 billion (5.2 percent of GDP) for 2020. These include, alongside the Fund's Rapid Financing Instrument, loans from the Inter-American Development Bank, Banco de Desarrollo de America Latina (CAF), the World Bank, and Central American Bank for Economic Integration, all of which still require congressional approval, except for a US\$500 million loan from CAF already disbursed.

106. Costa Rica has a long history of intervening frequently in the foreign exchange market, reflecting its monetary regime that for long involved pegging or managing the exchange rate. In turn, the choice of regime reflects in part the need to manage vulnerabilities from the country's high level of credit dollarization, one of the highest in Latin America (about 40 percent).

107. The approach to exchange rate management has evolved over time. After abandoning a crawling peg regime which ended with high inflation, from end-2006 the country first adopted a crawling band and then moved to a managed float, as part of a gradual process aimed at migrating to inflation targeting. During the GFC, the Central Bank was forced to intervene repeatedly in the exchange market to maintain the value of the colón in line with its target, and while it actively engaged in sterilizing the interventions by selling bonds domestically to financial institutions, sterilization was imperfect and inflation remained elevated until 2010. At the end of 2008, BCCR also passed measures to enhance the stability of the financial system, including through establishing a special credit line to meet extraordinary liquidity requirements for financial intermediaries, and negotiated a US\$500 million contingent loan with the Inter-American Development Bank to use in case dollar liquidity had to be injected into the financial system. Since the crawling band regime finally ended in late 2013 the exchange rate has been under a managed float. However, the currency has moved away from the band limits and therefore the Central Bank has not had to intervene to defend the limits (Cubero, Lankester, and Munoz, 2019). Still, the Central Bank has resorted to foreign exchange intervention for various purposes, including to contain excessive volatility. Intervention helped keep the colón relatively stable during the float period, to deal with concerns about the impact of exchange rate volatility on prices and financial stability given the high level of financial dollarization. In 2016, the monetary regime was enhanced by an explicit adoption of a medium-term inflation target, set to 3 percent, ± 1 percent, and in 2018 a fully-fledged inflation targeting regime under a managed floating exchange rate and sterilized foreign exchange intervention.

108. The policy response to the COVID-19 crisis has comprised a mix of fiscal measures to support households and businesses against the economic effects of COVID-19, and measures by the Central Bank to soften the economic damage caused by the pandemic and to improve credit conditions, including cuts to official rates, purchases of government securities, and easing of macroprudential regulations. The BCCR has maintained its commitment to exchange rate flexibility, while intervening in the FX market to temper disorderly market conditions.

B. IMF Engagement

Research and analysis

109. The staff has conducted quite extensive analysis of Costa Rica's exposure to trade and financial spillovers as part of AIV surveillance. In 2015, the staff assessed the potential spillovers to Costa Rica from various shocks originating abroad, using multiple models, and found that Costa Rica is generally sensitive to external growth, monetary and fiscal shocks, in particular those originating in the United States, but less so to financial spillovers (IMF, 2015 AIV Staff

Report). A chapter in the 2016 Selected Issues paper extended this analysis using the IMF Bank Contagion Module to assess the impact of financial spillovers to Costa Rica from stress in international banks, finding that financial spillovers to Costa Rica from changes in asset values of foreign banks are larger than in regional peers. In 2017, another study examined Costa Rica's vulnerability to potential policy changes in the United States after the November 2016 presidential election, finding that changes in the U.S. macroeconomic policy mix could affect Costa Rica through the FDI and trade channels, unlike the rest of Central America, where remittances and immigration played a key role. The staff also found that higher global interest rates may have partially offset positive spillovers from U.S. higher growth with greater force than in other countries in the Central American region because of the Emerging Markets Bond Index spreads of Costa Rica.

110. On the other hand, staff analysis of the magnitude, volatility, and drivers of capital flows to Costa Rica has remained limited to the standard external balance sustainability and balance sheet assessments in the AIV reports. These assessments tended to conclude that changes to the country's net international investor position had been driven by continued FDI flows to the private sector, implying limited external risks; and that risks from currency mismatches appeared limited at the aggregate sectoral level, although unhedged borrowers in foreign currency presented key risks. Costa Rica has been, however, included in samples of countries assembled to conduct staff regional analyses on capital flows in recent issues of the *Regional Economic Outlook (REO)* of the WHD. The 2019 WHD *REO*, for example, examined the evolution of capital flows to Latin America in the aftermath of the commodities super-cycle. The relevant chapter indicates that elevated levels of liability dollarization as experienced in Costa Rica are a robust predictor of vulnerability to sudden stops. Regressions over a sample of sudden stops since 1970 in 165 countries, including 43 Latin American countries (Costa Rica among them), found that the resilience to sudden stops depended negatively on the size of fiscal and current account deficits and the level of liability dollarization, while positively on the degree of exchange rate flexibility.

Policy advice

111. Reflecting the limited volatility in capital flows to Costa Rica, staff advice on capital flow management has generally not been a focus of discussions with authorities. The advice has focused predominantly on monetary policy and exchange rate policy, consistently calling for a gradual shift to a fully-fledged inflation targeting regime, Central Bank independence and limited FX intervention, as recipes to bring inflation down, increase confidence in the regime, and over time reduce liability dollarization. That said, there have been three occasions in the past ten years when the IMF has provided policy advice relevant to capital account measures.

112. The first case occurred during the inflow surge in the second half of 2012 and early 2013. At that time, a significant rise in capital inflows—including robust FDI, higher public and private external borrowing, and, since late August 2012, a rise in net portfolio inflows—more than offset a modest increase in the external current account deficit and placed strong appreciating pressure on the colón. The rise in private capital inflows kept the colón at the bottom of the exchange rate

band and prompted the Central Bank to step up its foreign exchange purchases. As a result, net international reserves at end-2012 rose to US\$6.9 billion, close to the Fund's reserve adequacy metric.

113. The capital surge did not pose specific concerns for the Fund staff, although the staff suggested in the 2013 AIV consultation that a tighter fiscal stance would help to mitigate risks of inflation and a wider external imbalance. The authorities agreed that a tighter policy stance would help safeguard macro stability but indicated that major fiscal adjustment was not possible in 2013. The staff highlighted that, in the absence of fiscal adjustment, other actions would be required to keep inflation within the target range, calling for a widening of the currency band, increases in interest rates, and the establishment of the inflation target as the sole nominal anchor of the economy. The staff argued that foreign exchange market interventions by the Central Bank to smooth out exchange rate fluctuations and strengthen the net international reserve position would still be possible provided that these did not undermine the inflation target. If necessary, these policies could be complemented for a limited period by macroprudential and capital flow management measures to limit inflows although, in line with the IV, CFMs should not replace fiscal and monetary policies as the key levers for preventing excessive real effective exchange rate appreciation over the medium term.

114. In line with these discussions, in early 2014 Costa Rica legislated the mechanism for two CFMs on inflows, mentioned above. These measures were listed in Table 1 appended to the 2015 AIV Staff Report documenting Costa Rica's preparedness for greater exchange rate flexibility, although they were not mentioned in the text of that report, which was the first that followed the introduction of the measures. The 2019 AIV report noted that "In line with staff's advice and the IMF's Institutional View on Capital Flows, in December 2018, the CFMs on inflows were removed" but with no further discussion.

115. The second episode occurred in mid-2016, when domestic residents moved considerable amounts of cash from their colón-denominated deposit accounts to their deposit accounts in U.S. dollars, to benefit from a widening of interest rate differentials paid on the two currencies. While this development did not lead to actual flows of capital out of the country, the fact that residents faced technically no restraint in moving local deposits denominated in U.S. dollars to foreign accounts, also in dollars, was a cause of concern for the authorities because it raised the possibility of significant, sudden resident outflows. The Fund staff, consulted by telephone as the event occurred outside the standard AIV cycle, suggested raising colón rates to reduce the interest rate differential—a suggestion that was followed by the authorities and helped to reduce the movement across deposits at national banks, allaying the authorities' fears.

116. Third, following this incident, and at the request of the Costa Rican authorities, a Financial Sector Stability Review (FSSR) mission from MCM visited in 2017 to provide advice on how to address solvency and liquidity risks associated with high dollarization, which continues to

generate solvency risks and liquidity risks in the banking system.²⁶ To enhance the resilience and inclusiveness of the financial system and limit the risk associated with vulnerabilities from dollarization-related currency mismatches of the nonfinancial private sector, MCM staff advocated a series of measures including: (i) increasing liquidity and reserve requirements on foreign currency deposits, while reducing the reserve requirement rate in domestic currency to levels closer to banks' operating requirements; and (ii) imposing additional capital requirements contingent on the expansion of credit to unhedged borrowers. The staff intended these measures as responses to financial stability risks and not as ways to deal with capital flow volatility per se. Reflecting this, these measures were considered MPMs—rather than CFMs/MPMs. Overall, the authorities welcomed the advice, and put in place a comprehensive package of reforms in line with FSAP/FSSR recommendations. Some policy steps were moving in the opposite direction, however. For example, actions to relax foreign exchange lending requirements introduced by the Costa Rican National Council of Financial System Supervision (CONASSIF) in June 2018 were described by the staff as a “step back” in the 2019 Costa Rica AIV Staff Report, which called for a prompt and effective implementation of FSSR recommendations.

Assessment

117. Since the GFC, the Fund's advice to Costa Rica on how to manage capital inflows has been limited, reflecting in part that Costa Rica's capital account has been largely liberalized and that strong volatility in flows has been episodic. At times of capital inflow surges (for example, 2012–13), the staff supported the use of an extended toolkit of policy levers including CFMs on a temporary basis, while, in line with the IV, prioritizing monetary, exchange rate, and fiscal levers in adjustment. While the staff did not pioneer the idea, the Costa Rican authorities appreciated staff openness to the idea of embedding CFMs in their policy toolkit, given the likelihood of policy lags in carrying out to the full the macroeconomic adjustment that the staff recommended. From a medium-term perspective, the authorities also found the Fund's calls in staff reports for more ambitious fiscal consolidation to be useful in guiding the domestic debate about fiscal policy and saw this as helpful in carrying out the fiscal reform and, in turn, in buttressing the economy's resilience to external shocks.

118. The staff's advice in the 2018 FSSR for the introduction of currency-based capital account measures to help dispel financial stability risks from foreign exchange lending, given Costa Rica's already elevated level of financial dollarization, was generally well received by the authorities and deemed timely and influential given the scenario of heightened exchange rate and capital flow volatility. The Central Bank also valued other staff advice aimed at strengthening the Central Bank's inflation targeting regime and at making it more explicitly forward-looking. And it

²⁶ A financial sector assessment was carried out in 2003 and updated in 2008. Some pending recommendations from that assessment, listed in the 2017, 2018, and 2019 Staff Reports (Annex I, Past Fund Staff Recommendations and Implementation) were reiterated in the 2018 FSSR. They included a call for measures to reduce dollarization through modifications to the prudential regulatory framework so that banks properly internalized foreign exchange rate risks.

welcomed the staff's understanding that the process of adopting its managed float regime, with intervention aimed at preventing excessive colón volatility, needed to be gradual and sequential in a context of partial dollarization.

119. Regarding risks associated with the possibility of accelerated capital outflows, the staff focused primarily on private sector deleveraging risks and paid less attention to possible implications for public sector sustainability. While the Fund's own analysis showed that Costa Rica's is one of the most sensitive economies in the region to foreign shocks, in 2018, the staff advised the authorities to increase their external indebtedness in U.S. dollars to finance public borrowing needs, on the grounds of potential cost savings and ease of funding—advice that was seemingly at odds with conclusions contained in its own assessment in the Public Debt Sustainability Analysis which flagged risks associated with high reliance on floating rate and dollar-denominated bonds 2019 AIV Staff Report Annex VI, para 4).

VII. MEXICO²⁷

A. Background

Economic context

120. Mexico is an upper-middle-income G20 and OECD member, the second-largest economy in Latin America, and the 15th-largest economy in the world. Its large, diversified economy boasts strong trade and investment relations with the United States since the signing of North American Free Trade Agreement (NAFTA) in 1993. Still, Mexico's 2.5 percent average annual GDP growth rate has been slower than those of most other emerging markets, due in part to its high rates of labor informality (57 percent), poverty (43 percent), and declining oil production.

121. Since the Tequila crisis in 1994, Mexico has established a strong track record of prudent monetary and fiscal policies based on the adoption of a flexible exchange rate, an inflation-targeting regime, an independent central bank, fiscal consolidation, improved debt management, and strengthened macroprudential regulations. It has also undertaken deep structural reforms, including privatization, deregulation, a lifting of restrictions on foreign investment in many sectors, and trade liberalization, garnering credibility in international markets. In the social sectors, Mexico has been active in reshaping social protection, health care, and education policies.

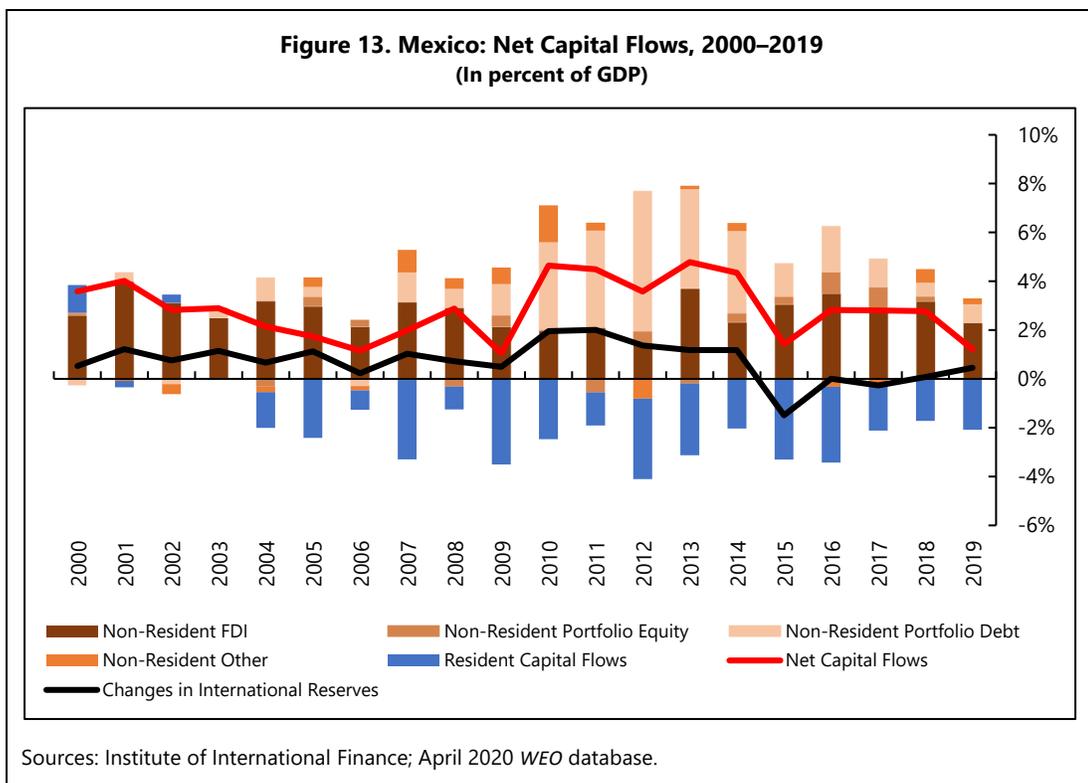
122. The opening up of the financial sector to foreign participation as well as disciplined macroeconomic policies have contributed to financial market deepening. Derivative markets started being developed—notably, Mexico's over-the-counter (OTC) derivatives market is now fully integrated with the global derivatives market.

²⁷ Prepared by Nicoletta Batini.

Key developments in capital flows

123. Historically, capital flows to and from Mexico have been volatile, leading to major crises. Mexico was hit by the Latin American debt crisis in 1982 as commercial bank lending came to a sudden stop and by the “Tequila crisis” in early 1994 when short-term debt portfolio flows dried up. Flows resumed around 1996–97, thanks to bold economic reforms including liberalization and privatization as well as the establishment of a credible macroeconomic policy framework.

124. Since the 2000s, capital flows have continued to grow and have been less subject to sudden stops than in other Latin American countries, thanks to Mexico’s stable macroeconomic framework as well as dedicated initiatives over the years aiming to create an open and secure environment for foreign investors (Figures 13 and 14).

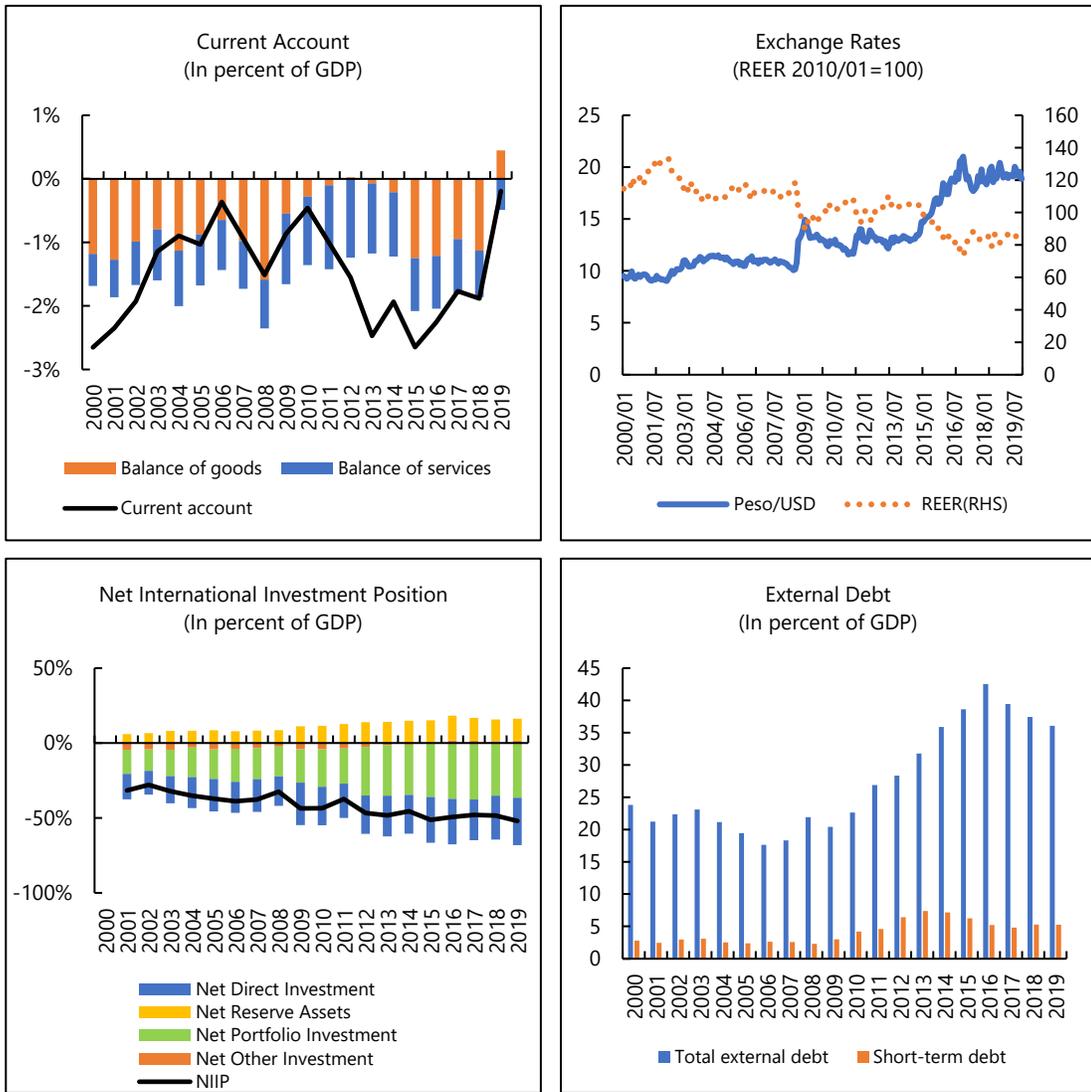


125. Foreign direct investment has provided a steady source of capital inflows, as the country became deeply integrated into regional and global value chains following NAFTA’s signing. The elimination of restrictions has paved the way for large foreign investment into securities, loans, bonds (sovereign and private), and derivatives.

126. During the GFC, deleveraging and the increased risk aversion of foreign investors placed strains on many asset classes and institutions in emerging markets, including in Mexico, causing a hiatus in capital inflows. Inflows picked up soon after in parallel with the recovery of global markets in mid-2009, and both net and gross inflows reached historical highs over 2010–13. However,

inflows moderated after the “taper tantrum” episode in mid-2013. The oil shock of 2014 put pressure on Mexico’s fundamentals, leading to an outflow of capital and a 40 percent depreciation of the peso over a two-year period (2014–16), despite large-scale FX interventions. The entry of Donald Trump into the presidential race in 2015, which culminated in his election in 2016, put net flows for a few quarters into a nosedive, reflecting concerns about a possible NAFTA renegotiation, a curb on the influx of migrants, a block on the outflow of remittances, and the building of a wall along the U.S.–Mexico border. At the time, the peso dropped to historic lows, prompting the Central Bank (Banxico) to raise interest rates for the third time in a year in a bid to shore up the national currency, although capital flows stabilized and restarted after a new U.S.–Mexico–Canada (USMCA) free trade deal agreement was reached (Ibarra and Tellez-Leon, 2020).

Figure 14. Mexico: External Balance Indicators, 2000–2019



Sources: IMF, International Financial Statistics; April 2020 WEO database; and IEO staff calculations.

127. Like other large EMs, during early 2020 Mexico was hit hard by the global sell-off in financial markets as well as by the sharp decline in the price of oil following the COVID-19 outbreak. In March and April 2020, local government bond markets saw cumulative non-resident portfolio outflows of around US\$12.3 billion (1 percent of 2019 GDP), leading to a doubling of the ten-year dollar credit spreads for the sovereign and for Pemex—while the peso depreciated more than 20 percent vis-à-vis the U.S. dollar in March 2020, similar to the sharp loss during the global financial crisis. The situation stabilized in the following months, with the peso recovering about a third of the ground lost by end-May 2020.

128. The composition of capital flows has changed over time. There was a clear shift from portfolio investment to FDI after the Tequila crisis of 1994. Since then Mexico has been less attractive to speculative flows in part because of its slow but stable growth, as well as the low level of returns offered by domestic bonds. Policy initiatives over the years, like the creation in 2016 of special economic zones to attract investment to the economically underdeveloped areas in the southern states of the country, have sustained this trend. Portfolio debt inflows were strong over the 2010–14 surge, but Mexican corporates have been able to issue in local currency, facilitated by the local dollar derivatives market. As a result, concerns about dollarization and FX balance sheet mismatches are much less than elsewhere in Latin America.

129. Following years of relative stability, the Mexican peso ranks today as the ninth most traded currency in the world and the third in the Western Hemisphere behind the U.S. and Canadian dollars, offering highly liquid access to Latin American and emerging-market growth opportunities. The liquidity of the Mexican peso is fostered further by three favorable conditions: first, the country has large oil reserves that contribute to international trade; second, physical proximity to the United States encourages billions of dollars in commercial activity; and third, Mexico attracts international capital due to higher yields than those found in mature markets.

Policy responses to capital flow volatility

130. Embracing the new foreign capital liberalization provisions in NAFTA, Mexico eliminated most capital and exchange controls in the early 1990s (Audley and others, 2004). Aggressive privatization and anticipation of the opening of new markets through NAFTA fostered exuberance in equity markets and large inflows. But then a shift in sentiment connected to changes in global financial conditions and adverse events at home led to a flight of much of the portfolio equity that was so instrumental in Mexico's boom and to a precipitous fall in the peso during the Tequila crisis of 1994–95. Attempts to sustain the peso during the crisis completely wiped out Mexico's foreign exchange, leading to the free floating of the peso on December 22, 1994 (Carstens and Werner, 1999). Large external support, including from the IMF and the United States, helped Mexico overcome the crisis without reimposing capital restrictions. The Central Bank also moved gradually to strengthen its monetary policy framework, a process that culminated in the adoption of fully-fledged inflation targeting in 2001.

131. The years that followed the Tequila crisis saw a gradual reinstatement of several currency-based measures, mostly with the explicit aim to reduce financial vulnerabilities,²⁸ particularly by limiting residents' borrowing in foreign currency that had propagated the shock to the peso to domestic financial markets. These restrictions remain in place to this date. Mexico has also kept in place restrictions on investments by foreign nationals to strategic sectors of the economy in line with the Mexican Constitution, which expressly reserves to the state the operation of activities like the postal service, the national electricity system, hydrocarbons, and transportation infrastructure.

132. During 2012–18, Mexico embarked on an ambitious program of reforms including liberalization of its foreign investment frameworks to encourage an increase in the flow of foreign investment into the country. Although Mexico has historically been open to foreign investment, and indeed is one of the top recipients of FDI in Latin America, the reforms focused mainly on the energy and telecommunications sectors, which had lagged behind significantly on account of previous foreign investment restrictions. Today Mexico ranks as relatively open according to both the Fernandez and others (2016) and the Quinn and Toyoda (2008) indices, at 0.4 and 0.5, respectively (where 1 indicates that the capital account is totally closed).

133. Capital account measures have not been used as a countercyclical policy tool at times of capital flow volatility. This approach is rooted in the strongly held belief that such measures are not needed for cyclical purposes given the depth and resilience of Mexico's financial markets, and concern that their use could be detrimental by calling into question Mexico's commitment to supporting market development. Against this background, shifts in capital flows have been met by adjustment of the policy mix (fiscal, monetary, and macroprudential), and foreign exchange intervention.

134. Foreign exchange intervention to contain the effect of volatile capital flows on the Mexican peso was particularly intense during the global financial crisis. From April 2008 to July 2009, foreign exchange sales amounted to more than US\$30 billion. Together with 13 other central banks around the world, Banxico benefited from access to a dollar liquidity swap facility from the U.S. Federal Reserve. It also agreed on a US\$47 billion precautionary arrangement under the FCL facility from the IMF. To restore international reserves, from February 2010 to November 2011 the Foreign Exchange Commission implemented a reserve accumulation mechanism, under which Banxico sold U.S. dollar put options to the market through monthly auctions as well as purchasing part of the dollars from Pemex exports under an automatic rule. Further sales were required during the severe downward oil price shock of 2014–16, which put pressure on fiscal revenues, reducing both FDI inflows into Mexico's oil sector and portfolio inflows. To sustain the peso, Banxico introduced rules-based as well as discretionary foreign exchange sales. Under the first scheme, introduced in 2014, it sold US\$200 million whenever the

²⁸ Remaining residency-based portfolio restrictions are mostly driven by the need to create impediments for illicit activities.

daily depreciation exceeded 1.5 percent. In 2015, Banxico started auctioning preset daily amounts, increasing to US\$200 million. At the end of 2015, the unconditional daily auctions were suspended, but the depreciation-based mechanism was augmented so that US\$200 million was offered first when daily depreciation exceeded 1 percent, and then again if it reached 1.5 percent.

135. In early 2016, all rules-based interventions were terminated, and replaced by the use of discretionary intervention. Alongside intervening in the foreign exchange rate market, the authorities raised interest rates to bring the domestic rate more in line with the U.S. Federal funds rate and deter arbitrage that might have triggered investor flight from local currency bonds. The authorities also made purchases in the local currency government bond markets to contain risk premia, given the large share of foreign bond holders in these markets, and they advanced significantly on their structural reform agenda. In order to mitigate market participants' exposure to FX risk and to maintain the proper functioning of the local exchange market, in 2017, Banxico introduced a new foreign exchange market mechanism, consisting of non-deliverable forward auctions for a total of up to US\$20 billion, to be settled in pesos. During the 2016–18 policy uncertainty episode related to U.S./Mexico elections and the tensions that followed, foreign exchange intervention was used conservatively, as the authorities increasingly intervened only in the context of disorderly market conditions.

136. Following the large COVID-related sell-off in early 2020, the Mexican authorities took wide-ranging measures to contain the pandemic, support the economy during the crisis, and limit financial and exchange rate market disruptions. The government introduced a fiscal support package, including funding for additional health services to contain the outbreak, and credit for households and businesses in distress. The principal monetary measures included cuts in official rates, "long" repos of sovereign and corporate bonds, additional measures to provide MXN and U.S. dollar liquidity to the banking system and improve the functioning of the domestic financial markets; and the provision of U.S. dollar liquidity (via auctions) to banks by drawing on the US\$60 billion swap line with the U.S. Fed that was reintroduced in March for the first time since the GFC. At the same time, the exchange rate has been allowed to adjust flexibly, with the central bank intervening to support U.S. dollar liquidity. It held two NDF auctions for a total of US\$4 billion, of which half had been taken up at the time of writing) after increasing the DNDF facility by US\$10 billion to US\$30 billion. In addition, a new tool was added permitting the Central Bank to intervene in offshore non-deliverable forward markets, in case intervention is warranted during European or Asian trading hours.

137. Given relatively low levels of reserves, the Mexican authorities have augmented their capacity to address volatile capital flows by maintaining their precautionary access to Fund resources. Successive Flexible Credit Line arrangements have been agreed with the IMF since 2009, reaching a maximum access of SDR 62.4 billion (about US\$86 billion) in 2017, and in 2020 SDR 44.6 billion (about US\$61 billion at the time of approval). Since FCL arrangements are only granted to countries with sound policies which may be affected by external shocks and volatile conditions in capital markets, the approval of the line signaled strong macroeconomic

fundamentals and became an additional shield for the Mexican economy against capital flow volatility.

B. IMF Engagement

Research and analysis

138. Fund analysis of capital flows specifically to Mexico over the past ten years has focused on spillovers from international developments, notably in the United States, and the resilience of flows in the event of shocks. The IMF's 2014 *REO* for WHD found that, while on average increases in U.S. rates boost Mexican yields by about half as much, pass-through can be larger than one-to-one during exceptional times. In the case of the "taper tantrum" episode, for example, Mexico's yields rose by about 200 basis points, and more than half of the increase appears to have been the result of a reaction to the U.S. monetary shock—a result corroborated by research in Ebeke and Kyobe (2015). The 2019 *REO* reaffirmed the view that Mexico's significant cross-border financial and trade exposure makes it more sensitive than most countries in the region to growth developments in large systemic global countries, including China.

139. In 2015, one chapter of the Selected Issues paper to the AIV Staff Report found that Mexico is relatively resilient to shifts in market sentiment toward emerging markets if these are accompanied by buoyant U.S. growth. Other analysis in the 2014 and 2016 AIV Staff Reports identified herding behavior among foreign mutual funds active in Mexico and found that global factors, such as changes in risk aversion or commodity prices, affect Mexico's capital account mostly through the bond market. The staff also found that during times of stress in global financial markets, bond inflows to Mexico have declined more sharply than models can explain, for example during the stress in European sovereign debt markets prior to ECB President Draghi's "whatever it takes" speech, the "taper tantrum," and the initial decrease in oil prices (IMF, 2016 AIV Staff Report).

Policy advice

140. The staff has been broadly supportive of Mexico's policy framework and its application to address the four large outflow episodes since 2008. During the GFC, the staff largely supported Mexico's response to capital outflows and the tightening of global liquidity and financial conditions, which centered on intervention to contain demand pressures on the peso, a fiscal stimulus financed with proceeds from the oil hedge, monetary accommodation, structural reforms, and liquidity provision to allay incipient financial market stresses. As mentioned already, the Fund approved a substantial arrangement under the FCL to bolster Mexico's external firepower, recognizing Mexico's robust policy framework.

141. Likewise, the staff welcomed the authorities' response to the "taper tantrum" in mid-2013, applauding the "sound and predictable management of economic policies," supporting the authorities' fiscal, monetary, and financial stances in response to the situation of heightened

capital flow volatility and noticing that Mexico's asset markets showed more resilience than those of many other emerging markets during this period, thanks to the government policy framework (2013 AIV Staff Report, para 33).

142. Following the collapse of oil prices in 2014, which was accompanied by the drop in asset prices and portfolio outflows from many large emerging markets, including Mexico, the staff again supported the authorities' decision to intervene heavily in the foreign exchange market to enhance market liquidity and reduce the risk of excess volatility, although at the same time noting the importance of a flexible exchange rate for absorbing external shocks (IMF, 2015 AIV Staff Report). Alongside, the staff welcomed Banxico's decision to shift from a system of rules-based to discretionary intervention. The staff endorsed the plan to consolidate fiscally, gradually, and to keep the monetary stance accommodative, while continuing to make progress on financial reforms, including by taking measures to increase competition among banks, strengthen consumer protection, and improve credit data collection.

143. Similarly, the Fund staff endorsed Mexico's reaction to renewed volatility in global financial markets and outflows that manifested at the time of the U.S. presidential election in 2016, when many investors left the country fearing the possibility of a stark rise in protectionism, weaker-than-expected global growth, particularly U.S. growth, and a lower-than-expected path for oil prices or domestic oil production. Specifically, the Fund welcomed the authorities' decision to allay concerns by adhering to the plan to accelerate the reduction in Mexico's fiscal deficit and consider more ambitious fiscal targets beyond 2018; by enhancing the credibility of the fiscal framework; and by reforming Pemex. At that time, staff particularly welcomed the decision to intervene discretionally in the foreign exchange market, rather than following predetermined and preannounced intervention rules, with the aim to ensure functional markets and to prevent build-up of one-sided bets, a decision that was in line with 2015 AIV advice.

144. The staff has generally supported Mexico's commitment to an open capital account, given Mexico's relatively deep financial integration throughout the period, with no particular advice on the need to further develop liberalization or to remove existing capital account restrictions in the run-up to or during the global financial crisis, or after the launch of the IV. In none of the capital outflow episodes did the staff raise the possibility of introducing measures to modify (either by tightening or loosening) inflow/outflow (price or quantity) restrictions as a way to temper outflows or raise inflows. In both the authorities' and the staff's views, a steady course on fiscal policy, monetary stimuli, and FXI to mitigate accelerated exchange rate appreciations or depreciations was the best course of action to deal with volatile flows.

Assessment

145. The Mexican authorities have been appreciative of Fund advice, which generally accorded with their own policy decisions, boosting the credibility of their approach. Analytical investigations of financial spillover effects, as well as simulations exploring heterogeneities between the response of the Mexican economy and those of peers, were found to be useful and

informative. However, the authorities also felt that the Fund's policy advice did not always add value substantially to the internal debate, given the overall alignment between staff and Mexico on the direction and calibration of policies.

146. The authorities welcomed the approval of the IV as a timely development, but have worried about its implementation and a more "permissive" attitude to capital restrictions, because a wider use of this instrument could potentially generate "demonstration" effects in Mexico and elsewhere as well as causing "diversion," whereby a country restricting capital flows to its own country basically diverts flows to other countries, exacerbating capital flow volatility in those countries. The authorities have also expressed the view that Fund advice to countries that are not yet fully financially integrated should give greater emphasis to how to develop deep and liquid currency and financial markets given the important benefits these provide.

147. The authorities have broadly agreed with the Fund's view that while Mexico's integration in global financial markets confers important benefits, it also increases exposure to external shocks (IMF, 2014 AIV Staff Report, paras 12–13). However, perhaps the Fund could have complemented its work on sensitivities to spillovers and spillover risks with research to explore alternative policy mixes in response to capital flows, which could have provided value added to the otherwise uniform institutional policy debate in Mexico.

148. The authorities have been extremely appreciative of the FCL arrangements, which in their view have buttressed confidence in Mexico's external position and facilitated a smooth transition to deeper, more liquid financial markets and ultimately, the making of a more resilient Mexican economy. The sustained pattern of request and renewal of the FCL arrangement over ten years, however, raises the question of whether more could have been done to strengthen further the Mexican policy framework to make it more resilient to capital flow and other shocks, allowing the FCL arrangement to be wound down. The Fund could have examined how reliant Mexico's macroeconomic and macro financial stability is on the Fund's FCL arrangement, especially with reference to periods of heightened capital and exchange rate volatility, like in 2014 and 2016. Understanding the sensitivity of debt sustainability, real exchange rate norms, and reserve adequacy with and without the FCL arrangements could have thrown light on how to bolster the resilience of Mexico's external and internal balances.

VIII. PERU²⁹

A. Background

Economic context

149. Peru is the sixth largest economy in Latin America and the 48th largest in the world. Historically, the country's economic performance has been tied to commodity exports, especially metals, textiles, and fish meal. GDP growth was the second highest (at 5.1 percent on average)

²⁹ Prepared by Nicoletta Batini.

and inflation the second lowest in the region (2.7 percent on average) during 2001–18. This strong performance represents a remarkable turnaround for an economy that experienced hyperinflation at the end of the 1980s.

150. After achieving macroeconomic stabilization during the 1990s, in 2002 the Central Bank (BCRP) began to implement a fully-fledged inflation targeting regime, making Peru the first case of a financially dollarized economy to adopt an inflation targeting framework. The design and implementation of inflation targeting in a financially dollarized economy differs from that in countries without dollarization, because dollarization amplifies the reaction of financial intermediaries to sharp movements in their funding or to high exchange rate volatility and creates balance sheet vulnerabilities for dollar borrowers operating in the domestic economy. As a result, the economy is prone to credit booms and busts associated with flows of foreign currency deposits, foreign credit lines, or other capital flows, and to exchange rate movements that affect the quality of the credit portfolio.

151. To reduce the negative effects of stressed markets on a financially dollarized economy, BCRP has implemented several policies that aim to promote financial de-dollarization, induce economic agents to internalize financial dollarization risks, and contain the adverse balance sheet effect of large domestic currency depreciations, while trying to assure the availability of liquid funds in foreign currency for a contingent financial sector liquidity shortage. The latter type of policy has involved continuous, sterilized foreign exchange rate intervention to moderate excessive exchange rate volatility, requiring commercial banks to have large reserves on their foreign currency liabilities, and the maintenance of a high level of international reserves. The de-dollarization policy has achieved considerable success, as credit-dollarization declined substantially between 2001 and 2019, dropping from 80 percent to 26 percent.

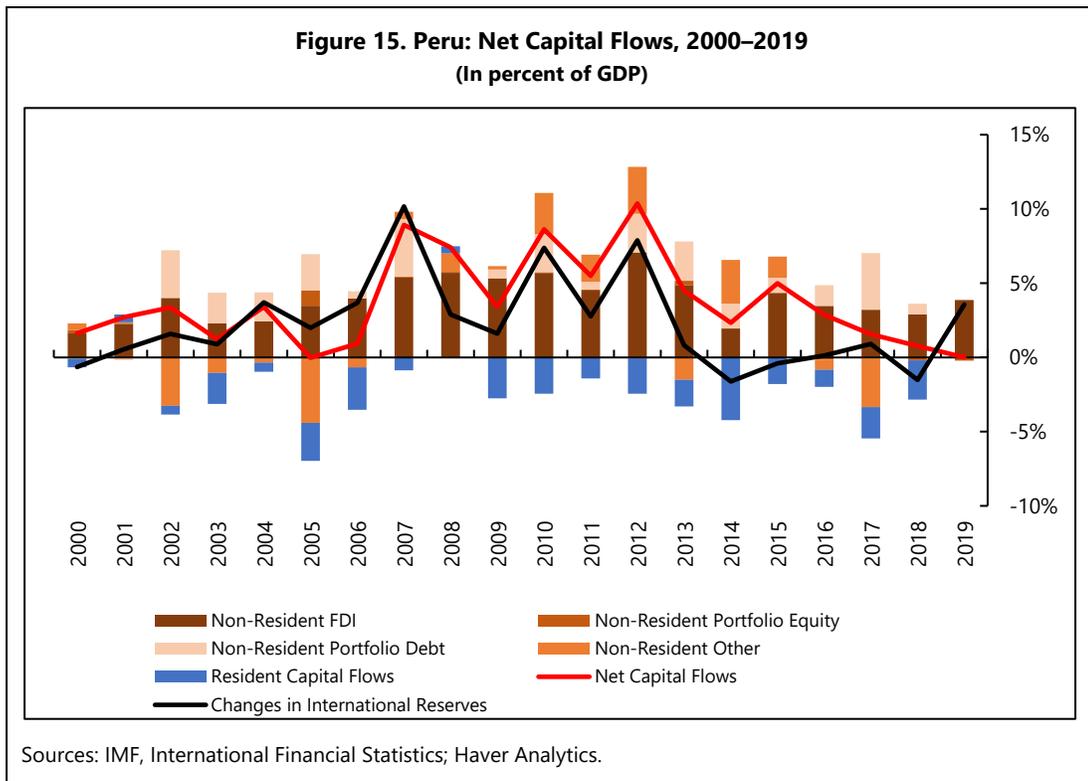
152. Beyond sound monetary and fiscal frameworks, Peru's rapid growth owes much to an aggressive trade opening policy: since 2006, Peru has signed trade deals with the United States, China, the European Union, Canada, Japan, Mexico, Singapore, and several other countries, and concluded negotiations with the Trans-Pacific Partnership. Peru also has signed a trade pact with Chile, Colombia, and Mexico (the Pacific Alliance), which seeks regional integration of services, capital, investment and movement of people.

Key developments in capital flows

153. Capital inflows have historically been an important source of funding for investment in Peru. In the last two decades, inflows have averaged 6 percent of GDP, consisting mostly of FDI and long-term bank loans (Figure 15).

154. As flows to Peru tend to be sensitive to global factors, capital flows have created important challenges to macroeconomic management, particularly in periods when portfolio and short-term capital flows have surged or receded. These challenges are exacerbated since Peru

has also been affected by the commodity price cycle—which is itself partly driven by the global financial cycle, which has exerted strong indirect effects on Peru’s terms of trade.

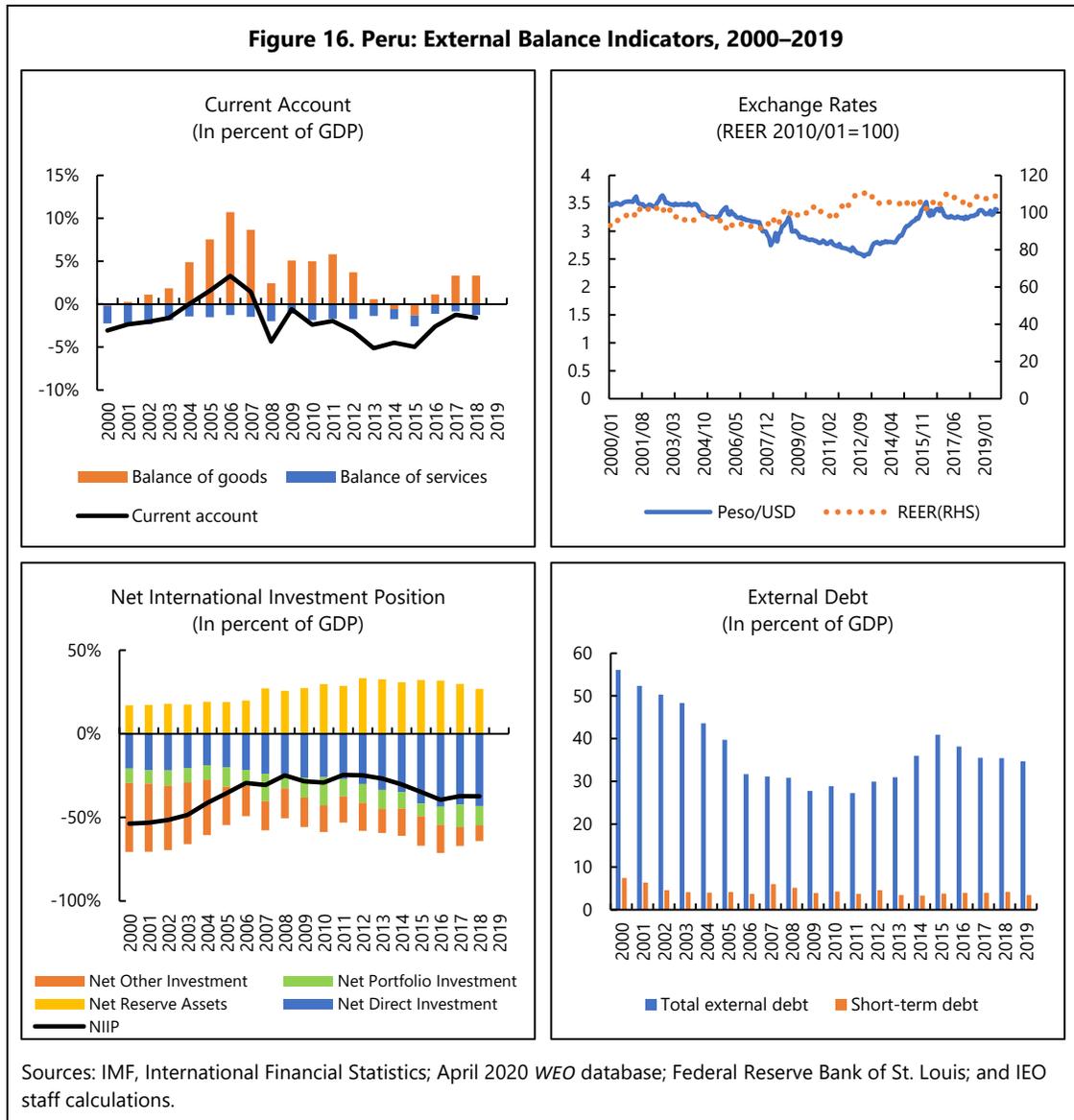


155. The largest recent episodes of capital inflows were during the commodity price boom that took off in the early 2000s, lasting until a few quarters before the global financial crisis in 2008 and from the end of 2009 until 2012. This latter period was characterized by an improvement in Peru’s terms of trade, fiscal surpluses, positive output gaps, rapid credit growth, and leveraging of the domestic private sector, and by above-target inflation despite continuous upward pressures on the exchange rate and a gradual de-dollarization (Figure 16).

156. Large outflow episodes took place during the GFC and its aftermath and then after the “taper tantrum” in 2013 and then in 2017. In these periods, the economy decelerated, leading to the opening up of negative output gaps; slowing credit growth generated negative balance sheet effects, leading on occasions to sharp corrections in property and other asset prices; the fiscal accounts deteriorated as revenues from commodity exports dwindled; and the Peruvian sol weakened. Despite the lower demand pressures, inflation remained very close to the upper bound of the target range (eventually breaching it again), creating a dilemma for monetary policy.

157. The impact of the COVID-19 crisis on Peru’s capital flows has been relatively contained, as Peru experienced less financial market pressure than other Latin American countries, as shown by more muted increases in bond yields and successful new sovereign bond issues in April 2020.

Nonetheless, the lockdowns to contain the outbreak have had severe repercussions on the economy which depends heavily on commodity exports and has a large informal sector. Given the uncertain outlook, Peru obtained a two-year Flexible Credit Line arrangement from the IMF for about US\$11 billion to boost confidence and provide insurance against downside risks.



Policy responses to capital flow volatility

158. To mitigate the impact of large swings in capital flows and associated risks in a dollarized financial system, the BCRP has combined unconventional instruments, such as reserve requirements on external liabilities and intervention in foreign exchange markets, with its inflation targeting monetary policy regime. Reserve requirements on the short-term external liabilities of banks are typically increased during periods of capital inflows to encourage banks to

build liquidity buffers and lowered during periods of capital outflows to ease liquidity, while a minimum differential in reserve requirements between domestic and foreign currency deposits is imposed at all times to discourage domestic financial intermediation in foreign currency. In addition, the Central Bank intervenes frequently in the foreign exchange market to smooth abrupt movements in the exchange rate that are viewed as inconsistent with the fundamentals of the economy. This hybrid framework aims to provide more space for the BCRP to vary its monetary policy rate and allow it to respond countercyclically to domestic conditions. The authorities consider broader restrictions on capital flows less useful than the bank-based instruments used by the BCRP, since in Peru the highest volume of financial intermediation occurs through the banking system and not through the capital market. Reflecting these practices, indices of capital account restrictiveness focusing on the capital transactions section of the AREAER show Peru's capital account as completely open (IMF, 2018b).³⁰

159. Within this broad policy framework, policies have been adjusted to specific capital flow surge and reversal episodes.

160. *GFC and its aftermath.* After the long boom experienced in the first part of the decade, Peru came under pressure during the GFC as commodity prices started declining and capital inflows dwindled. The BCRP responded by using a broad range of instruments to provide liquidity (including dollar liquidity)—currency swaps and repo operations, as well as the repurchase of central bank certificates of deposit—and sold 20 percent of its international reserves. Starting in February 2009, as the GFC began to unwind and capital account pressures eased, the BCRP initiated a series of aggressive rate cuts and relaxed liquidity support measures. These cuts were reversed rapidly, however, as commodity prices and demand recovered in mid-2010, monetary policy was eased in the United States, and a revival of risk appetite revived capital inflows. The monetary policy measures were accompanied by several measures, including increases in foreign currency reserve requirements in the domestic banking system accompanied by cuts in domestic currency reserve requirements, to contain the increase in demand for domestic deposits in foreign currency. In February 2010, the Central Bank also introduced a 50 percent reserve requirement on short-term external liabilities, as well as thresholds for foreign currency lending combined with currency repos, to help limit dollar-denominated credit and further stabilize domestic credit conditions. A limit on the net position in derivatives in foreign currency, and a tax surcharge (at a rate of 30 percent) on all non-resident gains on financial derivatives transactions with residents, were implemented in the first half of 2011.³¹ As a result of

³⁰ Restrictions shown in the Financial Services section of the AREAER database for Peru relate to measures implemented for financial stability purposes only and as such have no effect on the level of capital account openness in weighted third-party indices, which only look at the capital transactions section of the AREAER. The restrictions shown in the Financial Services section include differential reserve requirements on balances denominated in different currencies, for example.

³¹ Both measures were subsequently eased in part in 2015.

all these measures, short-term external financing remained limited and Peruvian banks remained well capitalized, liquid, and profitable in the aftermath of the GFC.

161. *The “taper tantrum” and subsequent shocks.* External conditions started to deteriorate again in 2013, prompting a preemptive easing of monetary policy, FX sales, and measures aimed at supporting monetary policy. Concerns about the unwinding of unconventional monetary policy in the U.S. and weaker metals prices contributed to a deterioration of domestic confidence and increased uncertainty. Strains continued in 2014–16 as the BCRP cut the policy rate and reserve requirements and both introduced additional and raised existing reserve requirements on short positions in foreign exchange derivatives in 2015.³² During this period, Peru faced a challenging external environment: lower metals prices, renminbi uncertainty, geopolitical tensions, and weaker demand from trading partners were a major drag on private investment and exports. Faced with rising inflation, the Central Bank tightened the monetary stance in 2015 and 2016. At the same time, it twice tightened existing reserve requirements on domestic currency deposits for financial institutions with certain levels of daily operations in foreign exchange derivatives or with sizable equity operations, or which had a certain level of short position in foreign exchange derivatives. However, the BCRP was less aggressive with foreign exchange rate intervention, allowing the sol/U.S. dollar exchange rate to depreciate by 14 percent over a year in 2015—the largest yearly exchange rate movement since the adoption of inflation targeting.

162. In 2016, as part of a package of capital market reforms,³³ the Peruvian bank supervisor (SBS) continued to tighten the countercyclical capital buffers on outstanding lending, and reserve requirements on FX deposits were cut further, reflecting the progress attained in reducing dollarization while quantitative limits on FX credit growth remained in place. In 2017, global trade tensions and adverse domestic factors prompted a cycle of monetary easing and relaxation of some macroprudential measures that continued into 2019.³⁴

163. Since 2012, the Peruvian authorities have cut back on foreign exchange intervention while making more active use of the monetary policy rate, while continuing to expand their toolkit of macroprudential and capital account measures. This combination of policies has

³² Other measures introduced at this time included increases in capital buffers on foreign exchange denominated loans to reduce foreign exchange related credit risk, additional capital buffers on consumption loans, and higher risk weights on mortgages with high loan-to-value ratios. Similarly, new liquidity coverage ratios (LCRs) were introduced in 2014; and LCRs in both local and foreign currency were increased from 80 percent to 90 percent in 2018, and to 100 percent in 2019.

³³ In 2016, fearing a downgrade by the New York-based index provider MSCI to “frontier” from “emerging market” status, the authorities suspended a capital gains tax on share transactions, made changes to allow brokers to act as market makers, introduced short selling and authorized a range of new products, including factoring and new real estate and property investment trusts.

³⁴ During 2018–19, the use of foreign exchange intervention amounted to less than 3 percent of GDP, with balances on swap agreements reduced to zero, and they were broadly symmetric.

enabled a gradual reduction of dollarization and associated vulnerabilities and allowed the authorities to respond to capital outflow episodes effectively.

164. This framework contributed to Peru's relative resilience in the face of the COVID-19 shock. In response to the sharp deterioration in the economic outlook and associated financial and exchange rate volatility, Peru rapidly implemented the biggest package of fiscal measures and credit guarantees in Latin America, equivalent to 17 percent of gross domestic product, to aid families and businesses. This was accompanied by an array of monetary, exchange rate, macroprudential, and capital account measures. Actions included a 200 basis point cut in the official rate, bringing this to a historical low; an asymmetric reduction in reserve requirements on accounts in soles (from 5 percent to 4 percent) and on dollar liabilities with a maturity of less than two years (from 50 percent to 9 percent) with foreign financial institutions (classified as a CFM/MPM under the IV), and the provision of liquidity to the financial system through an extension in the accepted collateral and duration for repo operations, as well as additional liquidity assistance to support lending and the payment chain via a new package of 60 billion soles (at more than 8 percent of GDP, equivalent to almost half of the overall stimulus package) backed by government guarantees. The Central Bank has intervened moderately using mainly derivative instruments (FX swaps and CDR-BCRP – central bank securities indexed to the exchange rate) to mitigate disorderly conditions in the foreign exchange market, with most of the intervention taking place in March–April. In addition, BRCP widened two limits on additional reserve requirements on FX derivative transactions (also classified as CFM/MPM under the Institutional View). These steps helped Peru to limit exchange rate depreciation relative to other Latin American countries. Confidence in Peru's external position further benefited from approval of the FCL arrangement with the IMF in May 2020.

B. IMF Engagement

Research and analysis

165. Staff research and analysis on issues related to the capital account have focused on two areas: (i) the reasons for and implications of dollarization; and (ii) the role of foreign exchange intervention. In one study before the GFC (Leiderman, Maino, and Parrado, 2006), the staff examined various aspects of monetary transmission and policy formulation in Peru and Bolivia—two highly dollarized economies—vis-à-vis economies with low levels of dollarization and found that, while dollarization imposes differences in both the transmission capacity of monetary policy and its impact on real and financial sectors, it is compatible with the adoption of an inflation targeting regime. The staff also explored the drivers behind the observed decrease in financial dollarization, concluding that these were mainly ascribable to Peru's macroeconomic stability, introduction of prudential policies to better reflect currency risk (such as the management of reserve requirements), and the development of the capital market in soles (Garcia-Escribano and Sosa, 2011).

166. On foreign exchange intervention, the staff assessed empirically the motives and effectiveness of Peru's foreign exchange interventions as a policy instrument to safeguard the foreign exchange market from high and volatile capital flows (IMF, 2014 AIV Staff Report). It interpreted the results as indicating asymmetries both in the BCRP's reaction and in the effectiveness of foreign exchange interventions (with attempts to resist appreciations through foreign exchange intervention proving less effective), which suggested a "leaning against the wind" motive behind foreign exchange purchases and foreign exchange sales, that is, resisting appreciation in the former case and resisting depreciation in the latter.

167. In other areas, Fund analytical work has been more limited. Since the GFC, the Fund staff has not produced substantive analysis on the evolution, characteristics, or drivers of Peru's capital flows beyond cursory accounts in the context of AIV reports. The reasons for the limits of Peru's financial integration, for example the shallowness of Peru's derivative markets, also remain under investigation.

Policy advice

168. For most of the period following Peru's adoption of an inflation targeting regime in 2002, the staff maintained a critical view of the Central Bank's active use of foreign exchange interventions as a way to smooth the exchange rate and deal with capital flow volatility—contrary to the more accommodating approach taken when advising such countries as Costa Rica and Uruguay, two countries in the region that are also highly dollarized. The staff has argued that allowing greater exchange rate flexibility would provide a useful stabilizer for the economy and encourage a process of de-dollarization.

169. Advice during Peru's most significant inflow and outflow episodes since the GFC broadly reflected this stance. In 2010–12, the staff continued to call for greater exchange rate flexibility and thus for limited—and sterilized—foreign exchange intervention, arguing that the exchange rate should continue to be used as a shock absorber and to stimulate the de-dollarization of the economy. On the other hand, the staff endorsed the authorities' macroprudential policies to reduce vulnerabilities, welcoming the maintenance of a widespread between reserve requirements on dollar deposits and on local currency deposits to discourage dollarization.

170. Equivalent calls, *mutatis mutandis*, were made by the staff later on, when capital was flowing out. Following the "taper tantrum" in mid-2013, the Fund staff advised the BCRP to pursue "greater exchange rate flexibility," allowing "the exchange rate to be driven by fundamentals over the medium and long term, while recognizing that limited foreign exchange intervention could be necessary to reduce volatility and to contain excessive risks to the balance sheets in a still highly dollarized economy" (IMF, 2014 AIV Staff Report). Staff also called for "resolute actions (by the Central Bank)" but without much concreteness, in case "the "tapering" of asset purchases by the U.S. Federal Reserve led to a reversal of capital inflows. In this event, monetary and macroprudential policies should be relaxed to support economic activity. If the economic slowdown was too pronounced, consideration could be given to use a measured and

temporary fiscal impulse.” Neither CFMs nor CFMs/MPMs were mentioned by the staff as possible responses to outflows.

171. Assessing Peru’s various measures to handle risks from dollarization and volatile capital flows under the IV has required the staff to make a series of judgments on how different measures should be treated. In the 2013 AIV Report, the staff indicated that BCRP’s marginal reserve requirements on domestic currency and dollar bank deposits and their adjustment to different levels were “macroprudential measures aimed at enhancing financial stability, and do not constitute capital flow management measures as Peru has an open capital account.” The staff welcomed the use of these measures and saw them as timely and effective in reducing financial risk stemming from capital flows. The 2013 AIV Report made no explicit mention of the reserve requirements on foreign credit lines, introduced in 2010—which were not tightened between their introduction and 2013—or of the tightening in December 2012 of the limit on the net position on foreign currency derivatives from 20 percent to 40 percent. In 2015, the AIV Report explicitly classified the raising of the marginal reserve requirement rate in foreign currency credit lines (from 50 percent to 60 percent) as a CFM under the IV. The staff recommended implementing the measures “flexibly” and proposed other de-dollarization options, such as a strengthening of prudential requirements on dollar lending to unhedged borrowers and increased exchange rate flexibility as a way to dealing with external stability issues (IMF, 2015 AIV Staff Report, Box 2 and para 19). In the 2015 AIV, the staff also applied the CFM label to foreign exchange derivative transaction limits and taxes on related non-resident gains that had been introduced in 2011 and 2015. In 2017, after the measures had been eased, in a footnote, the staff indicated that relaxation in the context of receding inflows was “in line with the Fund’s institutional view on capital flows” (IMF, 2017 and 2018 AIV Staff Reports). Finally, the 2019 AIV Staff Report affirmed that Peru’s reserve requirements on short-term external liabilities, the limit on net FX derivative position, the reserve requirement related to short position in FX derivatives, and the reserve requirements of FX derivative transactions were CFMs/MPMs (Table 1).

172. In recent years, the Fund has started recognizing that the measures introduced by BCRP could be credited with having helped accelerate the process of de-dollarization, while continuing to call for greater exchange rate flexibility (see, for example, the 2016 and 2018 AIV Reports). In 2019, the staff acknowledged that Peru’s multi-instrument policy framework, which included active use of CFMs, CFMs/MPMs, MPMs, and FXI, has worked well since the adoption of inflation targeting, observing that Peru’s macroeconomic performance in terms of inflation and output compares well with that of other EMs, particularly on inflation (IMF, 2019 AIV Report). The staff concluded that the success of this framework in achieving macroeconomic stability and lowering dollarization has likely strengthened the monetary policy transmission mechanism, allowing a gradual reduction of exchange rate intervention, something from which other EMs with medium-to-high financial dollarization may be able to draw useful lessons.

Assessment of IMF role

173. Although this does not emerge clearly from published Fund documents, interviews with both the authorities and staff members indicated that the staff's use of the CFM classification for certain measures that the authorities viewed as purely macroprudential, and the continuing call for more exchange rate flexibility to accelerate de-dollarization, have created tensions between the staff and authorities on various occasions and distracted from more macro-relevant economic policy issues. Peruvian officials perceived that the advice being given to Peru was also typically more conservative than the advice given to other countries facing similar challenges and having more room for macroeconomic adjustment. For example, the staff advised Costa Rica to differentiate its reserve requirements on domestic and foreign-currency-denominated deposits to reduce de-dollarization, classifying these measures upfront as MPMs because they addressed financial stability risks (Costa Rica, 2018 FSSR). The staff initially proposed to classify similar measures as CFMs, something that was strongly opposed by the authorities. In the end, the Fund agreed to classify these measures as MPMs.

Table 1. Peru: Capital Flow Management Measures According to IMF Taxonomy

CFMs	Introduced	Tightened	Eased
1. Reserve requirement on foreign credit lines and other external obligations	February 2010	July-September 2010	January 2011, August-October 2013 March 2020*
2. Income tax surcharge on gains from derivative transactions by nonresidents with residents	July 2011		April 2015
3. Reserve requirements in domestic currency increased for financial institutions whose daily operations with foreign exchange derivatives exceed certain benchmarks	February 2015	May-August 2015	April-May 2017, February 2019, March 2020*
4. Limits for net position in FX derivatives	January 2011	October 2011, December 2012	August 2015
5. Additional reserve requirement set for financial institutions whose short position in foreign exchange derivatives exceed certain benchmarks	March 2015	May-August 2015	March 2020*

Source: IMF (2018b).

* These measures are not in the IMF Taxonomy yet but have already been classified as CFMs under different calibrations in earlier taxonomies (IMF, 2018c and IMF, 2019b).

174. Peruvian authorities have also questioned the classification of reserve requirements on short-term liabilities of domestic banks with foreign banks. The authorities have repeatedly indicated to the Fund staff that these reserves are macroprudential in that they aim to reduce banks' incentives to maintain a high volume of short-term liabilities abroad, which are highly volatile. The experience of the late 1990s suggests that when the banks' short-term liabilities abroad are not subject to reserve requirements, banks have a strong incentive to borrow short-term offshore to reduce the impact of the domestic reserve requirements on their funding cost, which increases their vulnerability to funding risks from capital outflows. With the use of reserve requirements on short-term liabilities abroad, banks tend to extend the duration of these

liabilities, reducing funding risks during stress. According to the authorities, this measure therefore does not seek to reduce the influx of capital to Peru, only to prevent banks from taking on excessive volumes of risky short-term liabilities. Additionally, the Peruvian authorities pointed out that this reserve requirement abroad applies only to domestic financial entities, and not to non-financial entities as was the case in Chile in the 1990s.

175. Similar labeling disputes occurred with regard to: (i) a CFM classification for capital gains taxes for derivative transactions (since this tax applies only to operations with a term of less than three days, which represent a small fraction of the volume traded in the market, and is non-discriminatory because the same tax rate is applied to the capital gains made by resident agents for the same type of operations); (ii) a CFM classification for additional reserve requirements in domestic currency when the volume of monthly operations selling foreign currency through forwards and swaps exceeds a prudential limit (since these requirements only operate when there are abrupt movements in the positions in the exchange market, and they are in soles and thus do not discriminate between financial entities, or between resident and non-resident agents); and (iii) a CFM classification for additional reserve requirements in domestic currency when the balance of foreign currency sales through forwards and swaps exceeds a prudential limit (since these have a similar objective to reserve requirements in (ii)). In none of these cases did the authorities manage to convince the Fund staff of their reasons, and they saw these discussions as distracting from more macro-relevant economic issues. These persistent difficult discussions on classification issues were complicated by changes in mission chiefs and the constraints imposed by the Fund's internal review process.

176. Turning to exchange rate policy, the staff's repeated calls since the global financial crisis to allow the exchange rate to fluctuate more widely in response to market forces so as to discourage dollarization—and, to that end, limit foreign exchange intervention to exceptional conditions—have been questioned by the authorities because of the lack of strong empirical support. In the authorities' view, evidence from countries such as Turkey—where greater exchange rate volatility has triggered an increase in financial dollarization—and the experience of Peru itself indicated that the pace of de-dollarization depended on the strength of fundamentals, not on the degree of exchange rate volatility. In this context, Fund advice with respect to FXI seems also to have been more orthodox than that offered at the time to other dollarized member countries such as Costa Rica and Uruguay.

177. For the authorities, foreign exchange intervention is an effective instrument against excessive volatility of the exchange rate, and thus averts potential balance sheet effects harmful to financial stability. They noticed that FXI in periods of significant capital inflows allowed the accumulation of international reserves in a preventive way, while it limited a very rapid expansion of credit and greater risk taking by domestic agents. In the face of capital outflows, they stressed that FXI, by limiting the depreciation of the local currency, contributed to reducing the potential contraction in domestic credit, and minimizing the risk of insolvency associated with companies and families indebted in dollars. With this, the authorities remarked, domestic credit conditions

and the ability of the Central Bank to respond countercyclically with monetary policy are preserved, as was the case in the fourth quarter of 2008, and the first quarter of 2009 in the face of the global financial crisis.³⁵

178. In the authorities' view, exchange rate assessment based on the external balance assessment methodology has also proved unconvincing. The authorities believe that the external balance assessment remains an unhelpful instrument for emerging economies like Peru because the models have used estimate parameters common to all countries.³⁶ Residuals of the equations do not have zero average, and for several EMs they are large and persistent.³⁷ This has led to a wide range of estimates for the real equilibrium exchange rate in the different models—which blurs the credibility of Fund advice on exchange rate matters, including the advocated degree of exchange rate flexibility and relatedly, the desirability of more or less FXI. This distorts, in turn, the advice given on the adequacy of capital account measures vis-à-vis the adequacy of alternative measures in dealing with capital flow volatility and exchange rate market pressure.

179. The authorities acknowledged that in recent years Fund advice on capital flow management to member countries has become more pragmatic. They commented that staff recognition of the value of using a wider range of instruments against an extremely volatile global financial cycle and highly volatile capital flows, particularly in open economies in which exchange mismatches are significant, has been a positive change in vision from the IMF. In this context, the authorities appreciated the IMF's acknowledgement of the need to continuously monitor the microeconomic costs that capital account measures can generate and weigh them against the benefits of greater resilience of financial systems to external shocks and greater capacity to implement anti-cyclical policies to refine the intensity and amplitude of these instruments. They generally valued the useful work offered by the Fund on the characteristics of non-resident investors in the Peruvian bond market, and the determinants of financial dollarization in Peru, as well as recommendations on ways to strengthen the financial system in the 2011 and 2017 financial sector stability assessments.³⁸

³⁵ Empirical evidence supports the position of the authorities. In a recent article, Hofmann, Shin, and Villamizar-Villegas (2019) show, using a large database of bank loans in Colombia, that purchases of foreign currency by the Central Bank reduced the expansion of domestic credit—evidence consistent with the countercyclical nature of exchange interventions.

³⁶ In the case of Peru, the poor fit of the models is due mainly to their failure to capture Peru's ongoing export diversification and large mining-related outflows from earnings repatriation, and its large infrastructure gap and other investment needs, which cannot be properly captured in a panel model that uses the same coefficients for countries with very different economic structures and links the global economy such as the United States, Japan, or Peru.

³⁷ In 2017, for example, the standard deviation of the model residuals for Peru is 3.3 percent, almost 100 percent of the standard deviation of the observed current account, one of the largest standard errors among the countries considered in the estimation sample.

³⁸ Peru was one of the first countries to volunteer for the original FSAP pilot in 2000, and an FSAP Update was undertaken in February 2005.

180. They see the Fund’s work on an Integrated Policy Framework as a further evolution in the right direction. The characteristics on which this evolving framework seems to be based (i.e., more realistic measures of the impact of depreciation on export demand, reflecting the high share of dollar invoicing; the role of exchange mismatches and the negative effects of the appreciation of the dollar on domestic credit conditions; and the acknowledgement of different degrees of exchange rate/inflation pass-through in emerging economies relative to advanced economies) are key to providing helpful advice on economies like Peru’s, because they allow better highlighting of the policy tradeoffs that emerging market economies face during episodes of heightened capital flow volatility.

181. All told, IMF staff advice on how to integrate successfully macroprudential policy and capital account measures has not had much impact in Peru. In part, this seems to have reflected slow recognition of the complexities of policy design in dollarized countries subject to trend and cyclical exchange rate pressures, an area of analysis pioneered by the Peruvian authorities with both research and active learning from constant policymaking practice. In general, the Fund staff could have done more to integrate macroeconomic and macroprudential policy recommendations and to weave together short- and longer-term recommendations to accommodate both responses to current shocks and the need to deepen and integrate financial markets over the longer run, based on empirical analysis of costs and benefits of alternative approaches.

182. One final issue relates to the limited connections between staff advice on how to manage capital flow volatility and other external analysis in the same surveillance documents—even though Peru’s CFMs appear in the 2019 Taxonomy by virtue of their macro-criticality (IMF, 2019b). For example, neither the 2018 AIV Staff Report’s External Sector Assessment (Annex II) nor the Macro-Financial Stability Update (Annex III) discuss the impact on the external balance and financial stability of changes that the authorities implemented in the 2017 foreign exchange derivative transactions limits, a measure appearing in the 2019 Taxonomy of CFMs.

IX. URUGUAY³⁹

A. Background

Economic context

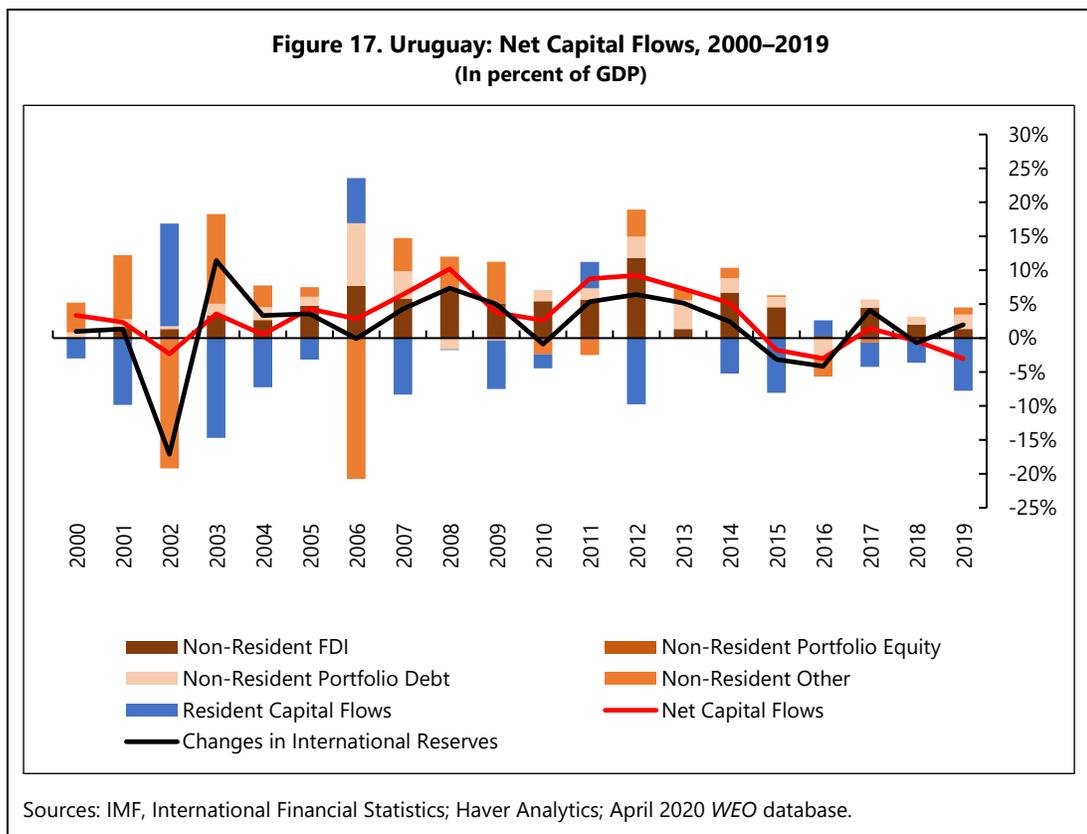
183. Uruguay is the richest country in Latin America in terms of GDP per capita measured in current U.S. dollars. It has a small population (3.5 million) and a relatively open economy bordering with two much larger neighbors which are partners in the Mercosur trade agreement, and which have at times been the source of large external shocks. Since recovering from a deep financial crisis in 2002, Uruguay has achieved a reasonable degree of macroeconomic stability and regained an investment grade rating, while maintaining an open capital account. Policy credibility is still incomplete, however, and the level of currency substitution (“dollarization”) of

³⁹ Prepared by Eduardo Borensztein.

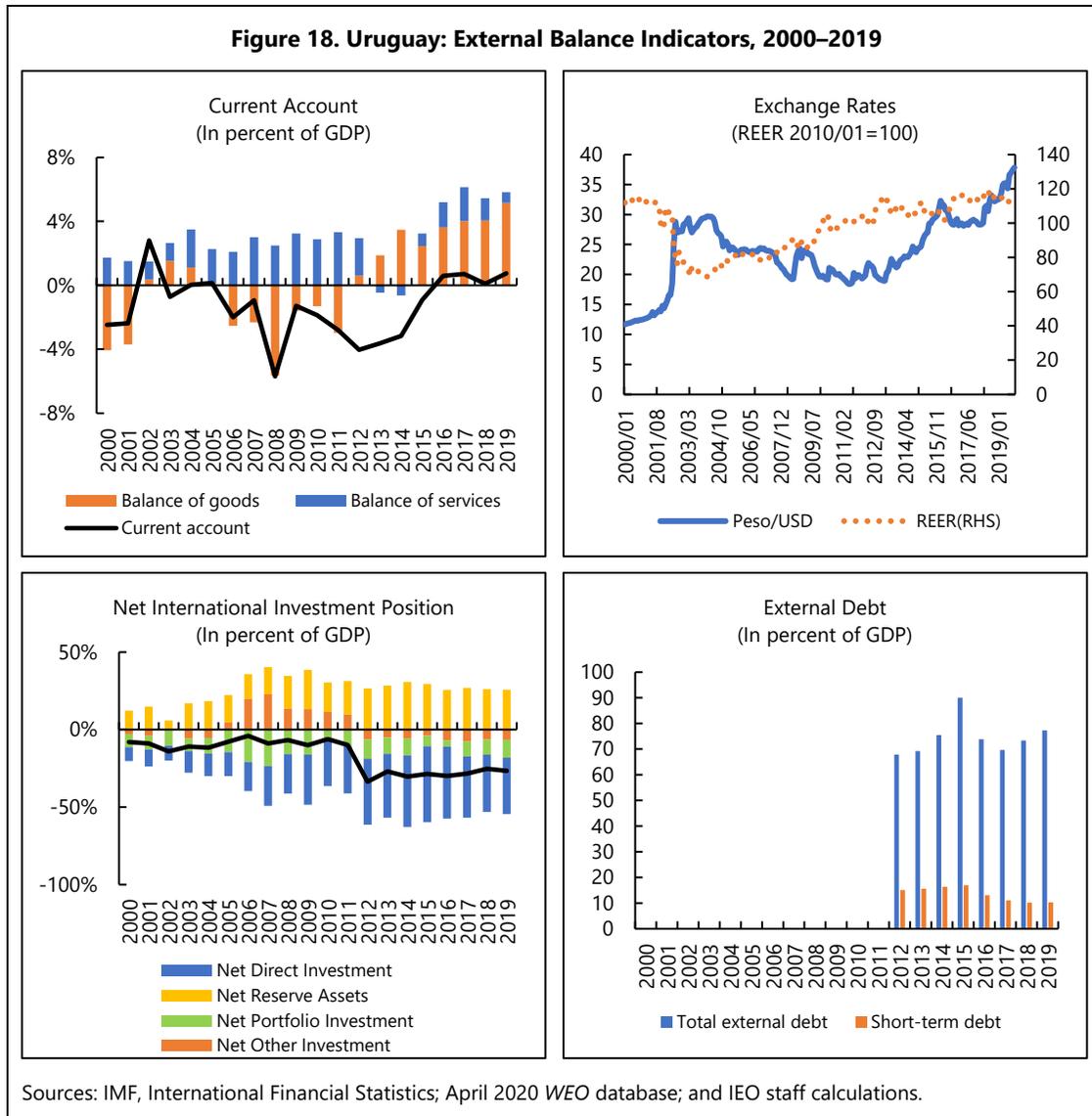
large transactions and financial assets remains stubbornly high. Uruguay enjoys a high level of institutional capital with a high public trust in the quality of government institutions and perceptions of low corruption.⁴⁰

Key developments in capital flows

184. Capital movements have been quite large and volatile in Uruguay (Figure 17). This was especially true, for example, at the time of the 2002 financial crisis, when outflows of Argentine non-resident deposits shook the local banking sector. During periods of surges, financial capital inflows can reach 6 percent or 7 percent of GDP. FDI inflows are also quite significant. Some individual investment projects, such as paper mills, can be so large as to have macroeconomic implications. The Central Bank (BCU) holds sizable international reserves and intervenes actively in the foreign exchange market in view of the high level of domestic financial dollarization and the small size of the foreign exchange market (Figure 18).



⁴⁰ "The country's institutional capital is high compared not only with Latin America but also to OECD economies." (OECD, 2014).



185. Because of the country's small size, capital flows into Uruguay can easily overwhelm domestic financial markets. Moreover, the financial sector is not especially large: bank deposits (by far the largest financial asset) barely reach 50 percent of GDP. This has occasionally magnified the disruptive effect of short-term inflows on monetary policy. In particular, in 2012–13, after Uruguay had recovered its investment grade rating and with the short-term domestic interest rate set relatively high so as to battle inflation, capital inflows were overwhelming BCU's efforts to set the policy rate. The surge in inflows ended rather abruptly as a normalization of U.S. monetary policy became a closer prospect.

186. Institutional strength and a developed welfare system have helped Uruguay contain the COVID-19 pandemic's economic damage relative to that in other Latin American countries, as have better terms of trade (the cost of imported oil has fallen more than prices of Uruguay's

agricultural exports). Capital flow volatility during the COVID-19 crisis has been limited, reflecting sizable financial buffers and long-dated debt that are allowing Uruguay to weather the storm.

Policy responses to capital flows

187. As it recovered from the deep 2002 crisis, Uruguay adopted a floating exchange rate and an inflation targeting monetary regime. This framework has helped Uruguay regain monetary and external stability, although inflation and inflation expectations have often hovered just above the upper end of the target band for inflation. International reserves are fairly large at more than 25 percent of GDP but a high level of financial dollarization persists. More than 70 percent of bank deposits and more than 50 percent of bank loans are U.S. dollar denominated. Despite that, the latest financial sector assessment (IMF, 2013b) found the financial system to be sound overall, with no signs of near-term vulnerabilities. Uruguay has maintained an open capital account and has received a score of zero in the FKRSU capital control index since the earliest computation (in 1995), with the exception of the 2012–14 period.

188. In response to the surge in capital inflows in 2012, as Uruguay regained an investment grade rating for its sovereign debt, the BCU introduced a measure designed to discourage flows into its *Letras*, which were the instrument used to manage monetary policy. The inflow surge had become so large that foreign investors were absorbing nearly all the securities offered at BCU's weekly auctions, rendering monetary policy totally ineffectual. The measure was a URR on 40 percent of non-resident purchases of *Letras*. The inflows quickly spilled over to other instruments like Treasury bonds, however, and the non-resident holdings of these securities shot up from 2 percent to 45 percent (IMF, 2013 AIV Staff Report, Box 2). As a result, the government extended the URR to Treasury bonds in May 2013, and it also increased the rate to 50 percent. On the same day, however, Chairman Bernanke of the U.S. Federal Reserve mentioned the possible future "tapering" of quantitative easing, and the mood in international capital markets started to shift substantially. Thus, Uruguay's reserve requirements were eased in 2014 and completely eliminated in April 2015.

189. Despite the overwhelming volume of inflows in 2012–13, the imposition of capital restrictions was not an easy decision for Uruguay. Uruguay had maintained an open capital account since the 1970s and some officials, especially in the debt management area, were concerned that the measure could affect Uruguay's debt spreads and its long-term reputation in international capital markets just when it had regained an investment grade rating. Ultimately, there has been no perceptible effect on Uruguay's international debt spreads. While foreign investors have not gone back to Uruguay's domestic debt markets, there are significant holdings of Uruguay's global peso-denominated securities.⁴¹

⁴¹ While the reserve requirements did not affect positions that existed at the time of their imposition, the shallowness of the domestic capital market affected the divestment of the longer-term securities by foreign investors.

190. While Uruguay has traditionally maintained an open capital account, high dollarization has forced the Central Bank to intervene extensively in the foreign exchange market in order to attain (or approach) its inflation targets. Currency substitution by the public means that a large share of goods is priced in U.S. dollars in the domestic markets, resulting in an exchange rate pass-through to prices estimated at about 15 percent on impact and 30 percent overall (IMF, 2018a). In addition, large exchange rate movements carry a high risk of adverse balance sheet effects, given the widespread dollarization of domestic liabilities. As a result, Uruguay accumulated a high level of reserves between the start of the commodity price rise super-cycle and 2014, when its international reserves surpassed 30 percent of GDP and exceeded the Assessment of Reserve Adequacy norm by more than 100 percent. The authorities considered this high level appropriate given the high degree of financial dollarization and commercial banks' foreign currency requirements, as well as the volatility of trade and capital flows caused by shocks in Uruguay's much larger Mercosur partners. Reserves were also more than adequate to fully shield the financial system from a shock similar in magnitude to the one that had caused the 2002 crisis (IMF, 2015 AIV Staff Report). In addition, the small size of the foreign exchange market—with daily turnover of about US\$25 million—often required BCU to intervene to avoid big exchange rate swings when pension funds or large state-owned enterprises, in addition to non-resident investors, brought large operations to the market (Chamon and others, 2019).

191. In response to the COVID-19 shock, as in other Latin American countries the government has deployed a multi-tool package. Fiscal measures estimated at about 1.5 percent of GDP have buttressed funding of the health system and supported households and businesses. The Central Bank has focused on maintaining liquidity and has temporarily reduced the reserve requirements that apply to peso deposits in the commercial banks. The exchange rate has been allowed to adjust, with the Central Bank intervening to limit undue volatility in the market.

B. IMF Engagement

Research and analysis

192. In 2019, the staff carried out an evaluation of the effectiveness of foreign exchange market intervention in Uruguay. The study (IMF, 2019a) found that BCU was highly prone to intervene in foreign exchange markets when the exchange rate moved outside a historical range of values. It also found an asymmetric impact of intervention, in the sense that foreign exchange sales by BCU had a larger effect on the exchange rate than did foreign exchange purchases. The IMF staff did not formulate any policy advice based on these results. The paper studied the effects at a daily frequency and complemented a BCU study commissioned by WHD that looked at monthly and weekly frequencies and obtained broadly consistent results (Bucacos and others, 2019). In addition, focusing on the issue of dollarization of balance sheets, which may constitute a vulnerability in the context of high exchange rate volatility, the staff conducted a comprehensive exercise to review exposure and mismatches in both the private and public sectors (IMF, 2017). This concluded that the vulnerabilities appeared to be moderate but also

recommended continuing to monitor exposures closely and persevering in efforts to develop local financial markets in pesos and manage public debt appropriately.

193. IMF engagement in Uruguay was also supported by other analytical work on capital flow issues. A study of trends and determinants of FDI into Uruguay (IMF, 2013a) noted that flows were comparatively higher in Uruguay than in the major Latin American countries, and that FDI had increased sharply in the globally favorable environment that began to take hold in the second half of the 2000s. It concluded that the strongest attractors of FDI to Uruguay were long-term factors like the strength of institutions, including rule of law, favorable business climate, and low corruption, rather than shorter-term, cyclical factors. In 2015, the staff carried out an empirical analysis of the potential impact on Uruguay of U.S. monetary policy normalization, drawing on the experience of the market reaction to the first hints in this direction during the “taper tantrum” of 2013. The study (IMF, 2015a) concluded that the impact on government bond yields and the exchange rate of the peso would be moderate and in line with the major inflation-targeting economies in Latin America but recommended to be vigilant about the fundamental determinants of macroeconomic stability. It also noted that the reserve requirement on financial inflows (the *encaje*) that had been imposed just before the taper tantrum may have magnified the effect on the exchange rate.

Policy advice

194. When Uruguay imposed limits on short-term capital inflows in 2012, the IMF staff was supportive, based on analysis that followed the IV very closely. The staff indicated that the value of the Uruguayan peso was broadly in line with long-run fundamentals, that Uruguay had accumulated substantial foreign exchange reserves (27 percent of GDP, exceeding the Fund’s reserve metric), and that with inflation (9.1 percent) above the official target (4–6 percent), there was no room to lower policy rates to discourage capital inflows. While the analysis did not make explicit reference to the IV, these considerations fell fully in line with the conditions under which CFMs should be considered. In addition, the staff noted that the reserve requirement was expected to be a temporary measure (IMF, 2012 AIV Staff Report).

195. In 2013, as the restrictions caused a spillover into the local Treasury bond market and Uruguay expanded the coverage of the reserve requirement and raised its rate, the Fund staff’s position was again supportive of the measure. However, the staff warned that such restrictions should be temporary and that it would be advisable to remove them once the capital inflow surge abated. The Fund staff was probably echoing the concern that the extension of the measure to Treasury bonds might affect perceptions of Uruguay’s sovereign risk at some point. The analysis of the macroeconomic conditions regarding exchange rate overvaluation, level of reserves, and evidence of overheating that had been conducted a year before was not updated, conditions not having changed significantly.

196. On foreign exchange intervention, the IMF staff acknowledged the reasons for Uruguay’s large international reserves accumulation but repeatedly made reference to the desirability of

letting the exchange rate float and respond to market pressures. After 2014, capital account pressures were often shifting, and BCU's stance switched frequently between being a buyer and a seller in the foreign exchange market. The staff was understanding of BCU's motives and judged its actions to be justified, although it regularly pointed out the advantages of exchange rate flexibility and stated that Central Bank intervention could not substitute for needed structural reforms to enhance productivity. Since 2014, BCU has become increasingly concerned about the high cost of sterilization and its effects on the fiscal deficit, and the staff shared those concerns in 2017.

REFERENCES

- Almeida-Marodin, Fabrizio, and Marcelo Savino Portugal, 2018, "Exchange Rate Pass-Through in Brazil: a Markov Switching Estimation for the Inflation Targeting Period (2000–2015)," Central Bank of Brazil Working Paper No. 473, February.
- Audley, John J., and others, 2004, "NAFTA's Promise and Reality: Lessons from Mexico for the Hemisphere" (Washington: Carnegie Endowment for International Peace).
- Baliño, Tomás, Adam Bennett, and Eduardo Borensztein, 1998, "Monetary Policy in Highly Dollarized Economies," IMF Occasional Paper No. 171 (Washington: International Monetary Fund).
- Banco Central de Chile (BCCh), 2018, Financial Stability Report (Santiago: Central Bank of Chile).
- Barata, João and R. B. Barroso, 2019, "Brazil: Taking Stock of the Past Couple of Decades," in Marcos Chamon and others, eds., *Foreign Exchange Intervention in Inflation Targeters in Latin America* (Washington: International Monetary Fund).
- Batini, Nicoletta, and Luigi Durand, 2020, "Capital Account Developments: Flows, Restrictions and Policy Toolkits," IEO Background Paper No. BP/20-02/03 for IEO evaluation of "IMF Advice on Capital Flows" (Washington: International Monetary Fund).
- Borensztein, Eduardo, 2019, "IMF Advice on Unconventional Monetary Policies to Selected Emerging Markets—Brazil and Mexico," Chapter 1 in "IMF Advice on Unconventional Monetary Policies to Selected Emerging Markets," IEO Background Paper No. BP/19-01/04 for IEO evaluation of *IMF Advice on Unconventional Monetary Policies* (Washington: International Monetary Fund).
- Bucacos, Elizabeth, and others, 2019, "Uruguay: Interventions and their Effects," in Marcos Chamon and others, eds., *Foreign Exchange Intervention in Inflation Targeters in Latin America* (Washington: International Monetary Fund).
- Carrière-Swallow, Yan, and Pablo García-Silva, 2013, "Capital Account Policies in Chile: Macro-Financial Considerations along the Path to Liberalization," IMF Working Paper No. WP/13/107 (Washington: International Monetary Fund).
- Carstens, Agustín G., and Alejandro M. Werner, 1999, "Mexico's Monetary Policy Framework under a Floating Exchange Rate Regime," Banco De Mexico Documento de Trabajo 9905 (Mexico City: Bank of Mexico).
- Chamon, Marcos, and Marcio Garcia, 2016, "Capital Controls in Brazil: Effective?" *Journal of International Money and Finance* 61(C): 163–187.

- Chamon, Marcos, and others, eds., 2019, *Foreign Exchange Intervention in Inflation Targeters in Latin America* (Washington: International Monetary Fund).
- Clements, Benedict, and Herman Kamil, 2009, "Are Capital Controls Effective in the 21st Century? The Recent Experience of Colombia," IMF Working Paper No. WP/09/30 (Washington: International Monetary Fund).
- Correa, Gerardo Hernández, 2017, *Regulación de cambios internacionales* (Bogotá: Universidad Externado de Colombia).
- Cowan, Kevin, and José De Gregorio, 2005, "International Borrowing, Capital Controls and the Exchange Rate: Lessons from Chile," NBER Working Paper No. W11382 (Cambridge, MA: National Bureau of Economic Research).
- Cubero, Rodrigo, Valerie Lankester, and Eduardo Munoz, 2019, "Costa Rica: Learning to Float," in Marcos Chamon and others, eds., *Foreign Exchange Intervention in Inflation Targeters in Latin America* (Washington: International Monetary Fund).
- Ebeke, Christian, and Annette Kyobe, 2015, "Global Financial Spillovers to Emerging Market Sovereign Bond Markets," IMF Working Paper No. 15/141 (Washington: International Monetary Fund).
- Fernández, A., and others, 2016, "Capital Control Measures: A New Dataset," *IMF Economic Review* 64(3): 548-574.
- García-Escribano, Mercedes, and Sebastián Sosa, 2011, "What is Driving Financial De-dollarization in Latin America?" IMF Working Paper No. WP/11/10 (Washington: International Monetary Fund).
- Hofmann, Boris, Hyun Song Shin, and Mauricio Villamizar-Villegas, 2019, "FX Intervention and Domestic Credit: Evidence from High-Frequency Micro Data," March, BIS Working Paper 774 (Basel: Bank for International Settlements).
- Ibarra, Raul, and Isabela-Elizabeth Tellez-Leon, 2020, "Are all types of capital flows driven by the same factors? Evidence from Mexico," *Empirical Economics* 59: 461–502.
- Independent Evaluation Office of the International Monetary Fund (IEO), 2019, *IMF Advice on Unconventional Monetary Policies* (Washington: International Monetary Fund).
- International Monetary Fund (IMF), various years, Argentina—Staff Report for the Article IV Consultation (Washington).
- _____, various years, Brazil—Staff Report for the Article IV Consultation (Washington).
- _____, various years, Chile—Staff Report for the Article IV Consultation (Washington).

- _____, various years, Colombia—Staff Report for the Article IV Consultation (Washington).
- _____, various years, Costa Rica—Staff Report for the Article IV Consultation (Washington).
- _____, various years, Mexico—Staff Report for the Article IV Consultation (Washington).
- _____, various years, Peru—Staff Report for the Article IV Consultation (Washington).
- _____, various years, Uruguay—Staff Report for the Article IV Consultation (Washington).
- _____, various years, *Global Financial Stability Report* (Washington).
- _____, various years, *"Regional Economic Outlook: Western Hemisphere"* (Washington).
- _____, 2011a, "Brazil—Staff Report for the 2011 Article IV Consultation," SM/11/152, June (Washington).
- _____, 2011b, "Brazil's Experience Managing Capital Inflows: The Role of Capital Flow Management Measures," in Brazil—Selected Issues, SM/11/153, July (Washington).
- _____, 2011c, "Chile—Financial Sector Stability Assessment Update," IMF Country Report 11/261, August (Washington).
- _____, 2012a, "Output Fluctuations in Chile—The Role of External Factors," in Chile—Selected Issues, IMF Country Report 12/266, August (Washington).
- _____, 2012b, "Financial Spillovers to Chile" in Chile—Selected Issues, IMF Country Report 12/266, August (Washington).
- _____, 2012c, "The Liberalization and Management of Capital Flows: An Institutional View" (Washington).
- _____, 2013a, "FDI in Uruguay: Recent Trends and Determinants," in Uruguay—Selected Issues, IMF Country Report 13/109, April (Washington).
- _____, 2013b, "Uruguay: Financial Sector Stability Assessment," IMF Country Report 13/152, May (Washington).
- _____, 2014, "Why Foreign Ownership of Locally Issued Sovereign Bonds is so Low in Chile" in Chile—Selected Issues, IMF Country Report 14/219, June (Washington).
- _____, 2015a, "How Will the Normalization of U.S. Monetary Policy Affect Uruguay?" in Uruguay—Selected Issues, IMF Country Report 15/82, March (Washington).

- _____, 2015b, "Assessment of Foreign Exchange Intervention," in Brazil—Selected Issues, IMF Country Report 15/122, March (Washington).
- _____, 2016a, "Argentina—Policy Note for the 2016 Article IV Consultation," September (Washington).
- _____, 2016b, "Effectiveness of Intervention in Brazil," in Brazil—Selected Issues, IMF Country Report 16/349, October (Washington).
- _____, 2017, "Balance Sheet Analysis in Uruguay—High Dollarization but Limited Risks," in Uruguay—Selected Issues, IMF Country Report 17/29, February (Washington).
- _____, 2018a, "The Impact of Exchange Rate Movements on Consumption in Uruguay," in Uruguay—Selected Issues, IMF Country Report 18/24, January (Washington).
- _____, 2018b, *Annual Report on Exchange Arrangements and Exchange Restrictions, 2018* (Washington).
- _____, 2018c, "Taxonomy of Capital Flow Management Measures," August (Washington).
- _____, 2019a, "Effectiveness of Foreign Exchange Intervention in Uruguay," in Uruguay—Selected Issues, IMF Country Report 19/65, February (Washington).
- _____, 2019b, "Taxonomy of Capital Flow Management Measures," September (Washington).
- _____, 2020, "IMF Statement on Argentina," February (Washington).
- Larraín, Catalina, and Diego Saravia, 2019, "Interventions in Chile," in Marcos Chamon and others, eds., *Foreign Exchange Intervention in Inflation Targeters in Latin America*, (Washington: International Monetary Fund).
- Leiderman, Leonardo, Rodolfo Maino, and Eric Parrado, 2006, "Inflation Targeting in Dollarized Economies" (Washington: International Monetary Fund).
- Montiel, Peter, 2020, "IMF Advice on Capital Flows: How Well is it Supported by Empirical Evidence?" IEO Background Paper BP/20-02/02 for IEO evaluation of "IMF Advice on Capital Flows" (Washington: International Monetary Fund).
- Ocampo, J.A., and C.E. Tovar, 2003, "La experiencia colombiana con los encajes a los flujos de capital," *Revista de la CEPAL* (Santiago: Economic Commission for Latin America).
- Organization for Economic Cooperation and Development (OECD), 2014, "Multi-dimensional Review of Uruguay" (Paris: OECD).

- Quinn, D. P., and Toyoda, A. M., 2008, "Does capital account liberalization lead to growth?" *The Review of Financial Studies* 21(3): 1403–1449.
- Rincón, Hernán, and Jorge Toro, 2010, "Are Capital Controls and Central Bank Intervention Effective?" *Borradores de Economía* 625 (Bogotá: Banco de la República).
- Sansone, Andres, and Santiago Justel, 2016, "Exchange Rate Pass-through to Prices: VAR Evidence for Chile," *Economía Chilena* 19(1): 20–37.
- Sturzenegger, Federico, 2019, "Macri's Macro: The Meandering Road to Stability and Growth," *Brookings Papers in Economic Activity*, BPEA Conference Drafts September 5–6 (Washington: Brookings Institution).
- Valdés, Rodrigo, 2008, "Policy Response to Sudden Stops in Capital Flows: The Case of Chile in 1998," IADB Working Paper CH-P1061 (Washington: Inter-American Development Bank).
- Vial, Joaquin, 2020, "Social Unrest and Economic Performance in Chile," Presentation at the 6th BBVA Latin American Conference, London, January 20. Available at <https://www.bcentral.cl/documents/33528/133214/jvr20012020.pdf/732a352d-f725-607f-752b-9d8eb178d898?t=1579525258280>.