EXECUTIVE BOARD MEETING

SM/20/138
Supplement 6
Correction 1

September 28, 2020

To: Members of the Executive Board

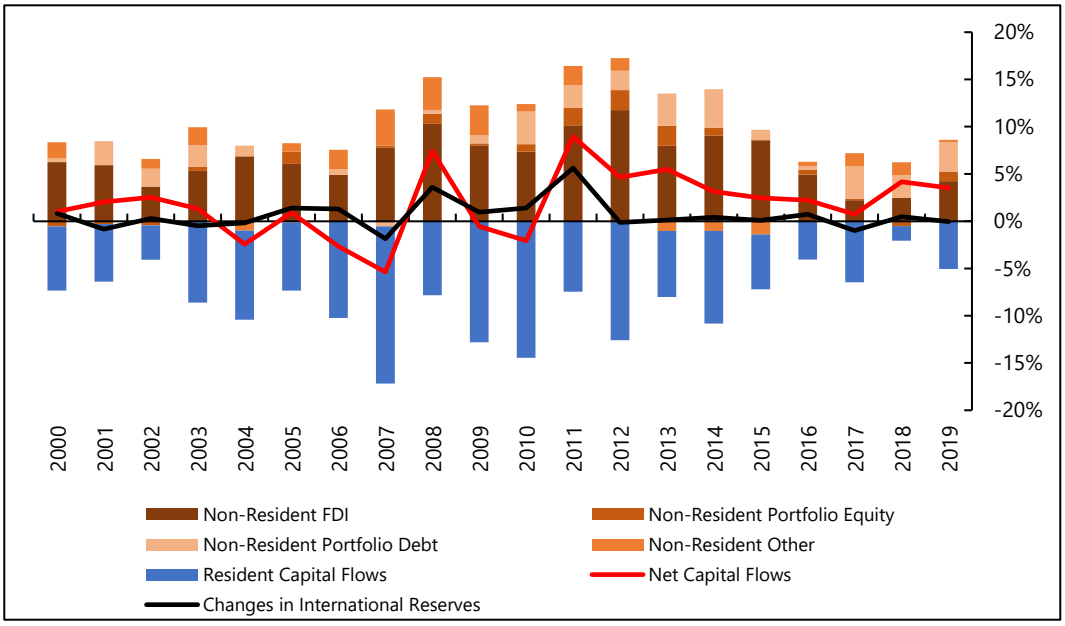
From: The Secretary

Subject: **Independent Evaluation Office—IMF Advice on Capital Flows—Latin America**

Board Action:	The attached corrections to SM/20/138, Sup. 6 (8/20/20) have been provided by the IEO:
Factual Errors Not Affecting the Presentation of Staff's Analysis or Views	**Pages 21, 23, 24, 25, 55, 56**
Questions:	Mr. Loungani, IEO (ext. 37043) Ms. Batini, IEO (ext. 35763)

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.

Figure 7. Chile: Capital Flows, 2000–2019
(In percent of GDP)



Sources: Institute of International Finance; April 2020 *WEO* database.

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

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

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[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.

ratios for each of these portfolios, according to their riskiness in terms of local currency. As the 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 ~~an exchange rate~~ 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 ~~corporate~~ 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

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 BRCP 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

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[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 ~~9~~80 percent to ~~10~~90 percent in 2018~~5~~, 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