

Straw, Wood and Brick: Latin American Economies in the Context of Global Inflation

Latin America and the Caribbean (LAC) has been the most affected region during the COVID-19 pandemic. In spite of the fact that the recovery has been faster than originally expected due to a favorable context of external factors (i.e., low global interest rates and high international prices of relevant commodities), the gap between projected and actual growth still needs to be closed by means of structural reforms. Likewise, Russia's invasion to Ukraine has increased the uncertainty around the world, leading to many trade disturbances as well as a boom in some commodity prices, both shocks with heterogeneous impact across the LAC region. Beyond this new global episode, the post-pandemic era has set policy challenges for governments. An unprecedented increase in money supply given by a major monetary emission by Central Banks and well-functioning credit markets generated the highest inflation rate ever recorded in 40 years in most of the advanced economies. To fight against that, the usual recipe for the Central Banks is to raise interest rates. The twofold setback of higher financing costs and a possible capital outflow could be dangerous for LAC countries. Taking that into account, this report presents "The Three-Little-Pigs" Index to evaluate the liquidity situation of LAC economies, concluding that whereas the majority of the countries are well prepared for higher global interest rates others are in a delicate situation.

LAC Economic Outlook: The Aftermath of the Pandemic

Latin America and the Caribbean (LAC) has been the most affected region by the COVID-19 pandemic. It underwent both the strictest lockdown measures and the deepest economic activity contraction.

In 2021, LAC economies experienced a significant growth, due to both statistical drag and favorable external factors. A better-than-expected performance and a rapid growth can be explained by a favorable external context. The CERES External Factors Index (CEFI) measures the context LAC is facing in terms of global economic outlook and shows how they are expected to perform under such circumstances (see CERES/CLA, October 2021).

According to its historical performance, current CEFI levels suggests that LAC is facing favorable external conditions. CEFI values greater than zero define a favorable context and values less than zero unfavorable context. Taking into account the period that spans from 1991 up to pre-pandemic days, the highest value (CEFI=100) was registered in 2004, while the lowest (CEFI=-56) in

1999. Regarding the stages of the business cycle in South America, GDP expansions (1991-1997: 7.6% and 2004-2014: 13.1%) and recessions (1998-2003: -21.0% and 2015-2019: -15.0%) are in line with stages depicted by the CEFI. In fact, the index dropped below minimum levels (CEFI=-100) during the first months of the COVID-19 crisis, returning to the positive zone in the first half of 2021. During 2021 and the first quarter of 2022 the external factors were favorable for the region (on average CEFI=44).

This was explained by low international interest rates and mainly by high commodity prices. Table 1 presents the current increase in international commodity prices (oil, foods and metals) in comparison to the previous boom. The surge in commodity prices between 2019 and 2022 was stronger than the observed between 2008 and 2011 but the initial level in 2019 were well below the ones observed in 2008.

Furthermore, the large COVID-19 fiscal stimulus aimed to revive global trade, as well as the International Monetary Fund's support through the issuance last year of \$650bn worth of Special

Drawing Rights to preserve the financial stability of emerging economies.¹ Nevertheless, a significant growth gap persists in the region compared to what was projected before the pandemic.

The pandemic was not the first global shock faced by the LAC region in the last decades. The 21st century has seen a similar episode in the form of the 2008-2009 Global Financial Crisis. Beyond the differences between these two episodes in terms of origin, dynamics, and recovery, both crises left a growth gap between what was expected before the crisis and what happened. These existing gaps—defined as the difference between actual and projected economic growth—are quite similar. The LAC region's GDP gap is -6.7 percentage points for the COVID-19 episode, while it was -6.4 for the 2008 Global Financial Crisis (see Figure 1).

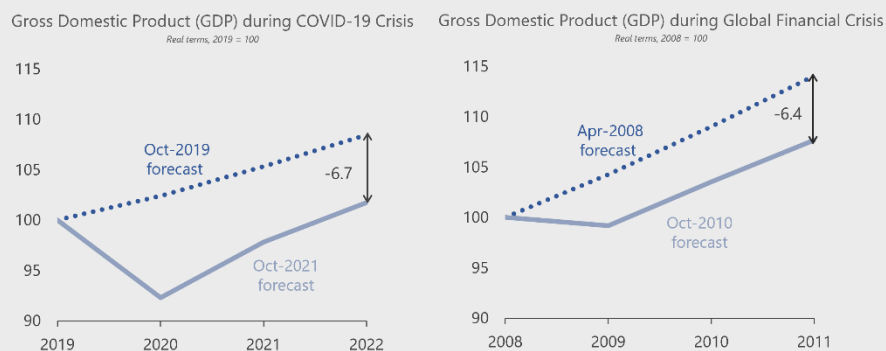
The same analysis is conducted for the advanced economies and the rest of the emerging world (see Table 2). As it shown, advanced countries outperformed the rest of the world in terms of the revision of the pre-shock expected economic performance, mainly due to a better policy toolbox. Likewise, an interesting case to analyze is the behavior of

Table 1. Commodity Prices

	2008-2011		2019-2021	
	Starting point above historical average	Variation (Jan-2008/Dec-2011)	Starting point above historical average	Variation (Dec-2019/Dec-2021)
Food	45.5%	9.4%	28.6%	57.9%
Oil	69.4%	4.2%	24.9%	90.4%
Metals	87.8%	11.0%	33.2%	57.5%

Source: World Bank.
Note: To calculate the historical average, values are taken since January 1980.

Figure 1. Real GDP Forecast Gaps in Latin America and the Caribbean



Source: International Monetary Fund (IMF) - World Economic Outlook (WEO).
Note: The computed gap is the variation between the projected and actual economic activity for the last year of the period considered. This measure does not consider the sum of the gap in the entire period.

Table 2. Real GDP Forecast Gaps by Region

	Variation 2019-2022		
	Oct-19 forecast	Oct-21 forecast	Gap
	A	B	C = B - A
Emerging and Developing Asia	18%	7%	-11.4
Sub-Saharan Africa	14%	6%	-8.6
Middle East and Central Asia	11%	3%	-8.2
Latin America and the Caribbean	8%	2%	-6.7
Emerging and Developing Europe	9%	7%	-2.5
Advanced Economies	6%	5%	-1.4

	Variation 2008-2011		
	Apr-08 forecast	Oct-10 forecast	Gap
	A	B	C = B - A
Emerging and Developing Europe	15,7%	-0,2%	-15.9
Middle East and Central Asia	21,6%	12,3%	-9.3
Advanced Economies	9,1%	0,3%	-8.8
Emerging and Developing Asia	23,2%	15,4%	-7.9
Latin America and the Caribbean	14,1%	7,7%	-6.4
Sub-Saharan Africa	18,1%	13,5%	-4.6

Source: International Monetary Fund (IMF) - World Economic Outlook (WEO).

emerging Asia which, if we take the gap as an indicator, can be considered a winner for the period of the 2008 financial crisis and a loser in the case of the COVID-19 crisis. Also, this region was considered a winner in 2008 (see Talvi, Munyo & Perez, 2012). One possible explanation for this may be that the 2008 crisis did not cut the growth “super cycle” in Southeast Asia, while the COVID-19 pandemic affected the region severely (recall the current worldwide pandemic started in 2019 in China).

As Table 3 shows, none of the considered LAC countries exhibited a positive gap (excluding Nicaragua). Besides, the gap value does not present a strong association with certain subregion of LAC. It could be supposed that those economies with more movement restrictions, should be the ones who suffered the most in terms of both gap and outcome. However, there is no correlation between Oxford University’s Lockdown Stringency Index and the gap at a country level for 2020.

To accelerate recovery and close the growth gap, LAC countries must

urgently implement a structural reform agenda to improve competitiveness and boost economic activity through private investment. Lackluster productivity, a deep and long-lasting problem of the region, translates into low growth rates and the bleak outlook exacerbated by the current sanitary crisis. The post pandemic situation imposes a twofold agenda of reforms for the region: reforms to enhance historically-low productivity coupled with social policies reforms to address long-term technological unemployment (see CERES/CLA, April 2021).

Beyond the geopolitical issues involved in the Russia-Ukraine war, another effect generated was a sharp rise in many of the commodity’s prices that both Ukraine and Russia produce, due to potential world supply problems. Increases in oil and grains prices, as well as fertilizers, were the most striking. The existing heterogeneities across LAC countries imply different impacts in terms of individual terms of trade. This generates some uncertainty about the region’s growth projections. On the one hand, the World Bank revised downwards its regional growth forecast by 0.4% (World Bank, 2022). On the other hand, the Inter-American Development Bank revised its regional projections upwards, from 2.1% to 2.5%. (IDB 2022).

It should be noted that the projections used to compute the gap do not take into account the economic impact of the war between Russia and Ukraine, which could be a possible slowdown in the recovery of the global economy. However, it seems rather early to predict with certainty what will be the effect on the world economy and how it will culminate in 2022.

Figure 2 shows a matrix based on each LAC country’s dependence on both food and oil. The top-left quadrant shows the

Table 3. Real GDP Forecast Gaps in Latin America and the Caribbean

	Variation 2019-2022		
	Oct-19 forecast	Oct-21 forecast	Gap
	A	B	C = B - A
Panama	17.4%	-3.6%	-21.0
Bolivia	11.6%	-0.5%	-12.1
Honduras	11.3%	-0.4%	-11.7
Peru	12.1%	2.4%	-9.7
Dominican Republic	16.0%	7.8%	-8.2
Colombia	11.6%	4.1%	-7.4
Uruguay	7.5%	0.2%	-7.3
Ecuador	4.9%	-1.8%	-6.7
Costa Rica	8.5%	3.2%	-5.4
Paraguay	12.8%	7.9%	-4.9
Brazil	6.9%	2.5%	-4.4
Mexico	5.4%	1.3%	-4.1
Argentina	2.4%	-0.8%	-3.2
El Salvador	6.9%	3.9%	-2.9
Chile	9.8%	7.1%	-2.7
Guatemala	11.3%	8.6%	-2.7
Nicaragua	-0.5%	6.5%	7.0

Source: International Monetary Fund (IMF) - World Economic Outlook (WEO).

Figure 2. Net Commodity Exporters and Importers in LAC



Source: National data.
Note. * indicates net exporter countries of metals and/or minerals.

exporters of both goods, while in the bottom-right quadrant are food and oil importers. Finally, countries that export one of the goods and import the others are in the non-principal diagonal. In such cases, the effects are counterbalanced, and it depends on each country's magnitude of trade. In order to make the matrix easier, we did not add net exporters of metals and minerals, whose prices were also partly affected by the Russia-Ukraine War.

As well, the increase in input costs, together with a new rise in transportation prices, will sooner or later translate into an increase in consumer prices. This can undoubtedly generate social tensions. In a context of high international and local inflation, an alarm is raised as to how consumption will react in times

of household income recovery. In particular, the situation would worsen in low-income households, where food represents a higher proportion of total expenditure. Therefore, it is important to analyze the inflationary acceleration in LAC countries with respect to their inflation prior to the pandemic.² Taking 3% as the median inflationary acceleration, the countries that have exceeded this measure are: Brazil (+10.4), Dominican Republic (+6.9), El Salvador (+6.4), Chile (+5.4), Paraguay (+5.1), Colombia (+4.5), Peru (+4.0) and Mexico (+3.5). On the other hand, those countries that had an inflationary acceleration of less than 3% are: Ecuador (+2.3), Honduras (+2.1), Nicaragua (+1.6), Costa Rica (+1.4), Uruguay (+1.0), Guatemala (-0.8), Bolivia (-1.1) and Argentina (-1.3).

Moreover, it is warned that any further escalation of the war and of sanctions against Russia is likely to cause indiscriminate capital outflows from all emerging markets.³

The current war added to the tightening that exist with respect to monetary policy, may change the current favorable external context. In fact, money-market traders expect the US Federal Reserve to implement the most aggressive monetary policy tightening in the last three decades due to the commodity-driven inflation spike.⁴

Global inflation

Despite the aforementioned similarities in terms of their impact on LAC's real economy, Global Financial Crisis and Pandemic Crisis have had several differences. First, the 2008 crisis had its origin in the financial markets and generated an abrupt drop in credit, as several financial institutions went bankrupt. On the other hand, the COVID-19 pandemic did not affect credit as banks continued to operate with a certain normality. In turn, many of the Central Banks learned the lessons of 2008, and tried to use all possible means to ensure that liquidity was not cut off and that credit did not suffer a major contraction. Significant interest rate cuts as well as aggressive quantitative easing programs were the main weapons to achieve these goals.⁵

To identify the money supply, M1 is used to consider both primary and secondary creation of money. The primary creation is given by the emission generated by the Central Bank, which will be manifested in the monetary base. On the other hand, in the secondary creation of money, the different financial institutions appear, based on the loans they provide. Taking that into account, it could be concluded that the proper functioning of credit is relevant when considering M1. Therefore, the explanation for the significant difference between the variation of M1 in the 2008 crisis and the current one comes from the fact that credit has not been cut. Besides, the fiscal impulses given this time have also been greater than in the previous episode. The combination of very expansionary monetary and fiscal policies

Table 4. Variation in Monetary and Fiscal variables

	UK		Japan		Euro Area		USA	
	2008-2011	2019-2021	2008-2011	2019-2021	2008-2011	2019-2021	2008-2011	2019-2021
Credit(1)	-5.2%	1.4%	-4.6%	13.3%	-7.3%	12.9%	-12.7%	-2.0%
Monetary Base(2)	21.7%	17.8%	31.2%	28.1%	26.3%	92.0%	215.4%	87.2%
Money Supply(3)	6.5%	31.3%	8.7%	21.8%	21.9%	25.9%	28.7%	40.5%
Inflationary Acceleration(4)	1.2%	3.5%	-0.9%	0.0%	-1.2%	3.6%	-0.5%	4.8%
Government Expenditure(5)	1.9%	17.1%	8.9%	15.8%	1.4%	11.3%	2.5%	16.0%

Source: Bank for International Settlements (BIS), Bank of England (BoE), Bank of Japan (BOJ), European Central Bank (ECB), Federal Reserve (FED), Federal Reserve Economic Data (FRED) and International Monetary Fund (IMF) - World Economic Outlook (WEO).

(1)Variation of real credit for the selected period.

(2)Variation of nominal Monetary Base for the selected period.

(3)Variation of the money supply in the selected period. The reference monetary aggregate is taken as M1, except in the case of the United States, where M2 is taken.

(4)Difference in inflation for the selected period

(5)Variation of real government expenditure for the selected period.

coupled with efficient vaccination programs have generated a "V" shaped recovery from the Coronavirus crisis. Table 4 present the numbers for the advanced economies.

In all the cases, the combination of expansionary policies—especially the monetary one—generated an inflationary acceleration that had not been seen in the last 40 years. The high inflation generates the different Central Banks to rethink their policies and consider changing them. To fight against this phenomenon, the probability of increasing international interest rates rises. An increase in international rates will potentially generate a surge in the cost of financing for countries and a possible outflow of capital from emerging countries. At the same time, with a reference in history, the debt crisis of the 80's showed us how emerging countries can be threatened when the United States suffers inflation problems.⁶

Table 5 shows the evolution of international interest rates. In all countries considered, during the pandemic there was a significant drop, and these rates have already begun to rise. The faster these rates rise, the worse the outlook for LAC countries will be.

"The Three-Little-Pigs" Index

In view of this possible trouble to finance LAC countries' short-term deal with requirements, it is critical to analyze the current state of these countries with respect to their existing debt amortizations, fiscal deficits and their available reserves to repay them. For this purpose, we developed "The Three-Little-Pigs" Index, which combines the international reserves as a percent of GDP (vertical axis) and the sum of short-term

debt and fiscal deficit, both also as a percent of GDP (horizontal axis). In this way, this index represents the financial strengths of each country. The horizontal axis represents the short-term payments that a country should make, both in terms of debt and expenditures already incurred. On the other hand, the vertical axis shows the liquidity that the country has to make such disbursements (see Figure 3).

Taking that, the name "The Three-Little-Pigs" Index arise since we define three zones that could become an allegory with "The Three Little Pigs" famous fable. The tale is about three pigs who build three houses of different materials and a big bad wolf blows down the first two pigs' houses, made of straw and sticks respectively, but is unable to

destroy the third pig's house, made of bricks.

On the upper-left area, the "brick zone" represents those countries with financial strength, with few debts to pay and a high number of available reserves. The countries in this zone have one and a half times more international reserves than debts to be repaid. On the bottom-right area, the "straw zone" represents certain financial fragility, explained by a

deficient performance on both indicators. Countries in this zone have more debts to pay than international reserves. Finally, the "wood zone" is the intermediate between these two, designed for those countries whose financial strength may be in doubt.

In general terms, there are countries in the three areas. These vulnerabilities are present in some LAC countries, in case of a scenario of bigger rate hikes.

In case an increase in international interest rates impacts negatively on LAC's terms of trade, these financial vulnerabilities may be exacerbated. In addition, the Index is limited by the fact that it only looks at the debt to be paid in one year and does not have a more medium- and long-term perspective of debt sustainability. Therefore, in case that a country's debt sustainability is threatened, beyond this year, the index as it is designed, cannot detect it.

Final remarks

LAC has been the region that has suffered the most from the COVID-19 pandemic, even though the latest forecasts have improved due to a favorable external context. Despite that, this pandemic has generated irremediable social consequences, and, for economic activity, the gap will be far from being reached in 2022.

In the 21st century, in terms of contraction of economic activity, a similar episode hit the Earth: The Global Financial Crisis in 2008. On that episode, the gap generated between the projected growth

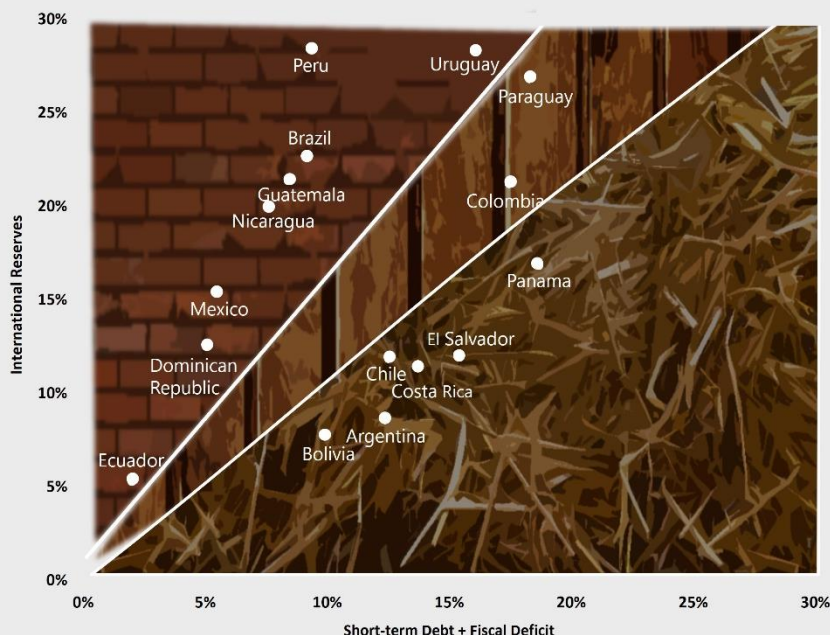
Table 5. International Interest Rates in %

		Dic-19	Jun-20	Mar-22
USA	FED Rate	1.75	0.25	0.50
	10-Year Rate	1.92	0.66	2.32
Euro Area	BCE Rate	0.00	0.00	0.00
	10-Year Rate	-0.19	-0.45	0.55
UK	Bank of England Rate	0.75	0.10	0.75
	10-Year Rate	0.83	0.17	1.61
Japan	Bank of Japan Rate	-0.10	-0.10	-0.10
	10-Year Rate	-0.02	0.03	0.21

Source: Investing, Bank of England (BoE), Bank of Japan (BOJ), European Central Bank (ECB), Federal Reserve (FED), Federal Reserve Economic Data (FRED)

Figure 3. "The Three-Little-Pigs" Index

Indicator of vulnerability to external financing cut-off, % of GDP



Source: JP Morgan, World Bank and International Monetary Fund.

and the finally observed growth was extremely similar in terms of magnitude in LAC.

Beyond certain similarities between the two crises, their origin has probably influenced their dynamics and even their recovery. The financial crisis revealed a significant drop in credit due to its origin, which did not happen with the COVID-19 episode. The diverse mechanisms promoted to prevent a cut of liquidity, including a well-functioning financial system, have generated an increase in the supply of money rarely seen in history.

Eventually, an increase in the supply of

money must culminate in an inflationary acceleration, what happened in the last few months. This phenomenon leads Central Banks to assume that they will have to promote contractionary policies, such as rises in interest rates. This scenario brings concern to LAC countries, by the increase in the financing cost and

the possibility of capital outflows.

To analyze the strengths of our countries in financial terms regarding the certain possibility of an increase in international interest rates, "The Three-Little-Pigs" Index has been designed, leaving us with the conclusion that some coun

tries can be in a vulnerable situation in case of a scenario of bigger rate hikes.

In addition, the war between Russia and Ukraine has led to a drop in world economic growth forecasts and changes the terms of trade of the countries in the region. A change in the favorable external conditions of LAC countries can be detrimental in terms of the economic recovery that countries are experiencing. However, this cannot put aside that LAC countries must urgently implement a structural reform agenda to improve competitiveness and boost economic activity mainly through private investment.

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Notes

- ¹ See Financial Times (April 2022): "Is it time to worry about an emerging markets crisis?".
- ² Difference in inflation between December 2019 and February 2022.
- ³ See Financial Times (March 2022): "Ukraine war will increase poverty in developing economies, warns World Bank".
- ⁴ Markets are currently pricing 250 basis points of interest-rate hikes for 2022, the highest record for a single year since 1994. See Bloomberg (April 2022): "Markets Bet on Sharpest Pace of Fed Tightening Since 1994".
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- ⁶ See Financial Times (April 2022): "Is it time to worry about an emerging markets crisis?".

Definitions

- Emerging and Developing Countries:
 - Latin American and the Caribbean: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Trinidad and Tobago, Uruguay, Venezuela.
 - Emerging and Developing Asia: Bangladesh, Cambodia, China, India, Indonesia, Lao P.D.R., Malaysia, Moldova, Mongolia, Nepal, Philippines, Sri Lanka, Thailand, Vietnam.
 - Emerging and Developing Europe: Albania, Bulgaria, Croatia, Hungary, Poland, Romania, Russia, Serbia, Turkey, Ukraine.
 - Middle East and Central Asia: Algeria, Azerbaijan, Bahrain, Egypt, Georgia, Islamic Republic of Iran, Jordan, Kazakhstan, Kuwait, Kyrgyz Republic, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Tajikistan, Tunisia, United Arab Emirates, Yemen.
 - Sub-Saharan Africa: Angola, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Chad, Côte d'Ivoire, Ethiopia, Gabon, Ghana, Guinea, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Seychelles, South Africa, Tanzania, The Gambia, Uganda, Zambia, Zimbabwe.
- Advanced Economies:
 - Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong SAR, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Taiwan Province of China, United Kingdom, United States.

