

Current account and equilibrium exchange rate

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01 Motivation and stylized facts

Between 2010–19, Colombia had one of the largest external deficits among LatAm countries and other commodity exporters

CURRENT ACCOUNT BALANCE

(AVERAGES BY DECADES, % OF GDP)



Source: BBVA Research with data from the World Bank.

On average, the current-account deficit of the Colombian economy rose to levels of almost 4% of GDP in the most recent decade.

The widening of the deficit in 2010–19 was not the case solely in Colombia, but it did have one of the largest increases

CURRENT ACCOUNT BALANCE (AVERAGES BY FIVE-YEAR PERIODS, % OF GDP)



Source: BBVA Research with data from the World Bank.

In addition, many countries corrected the deficit in the second five-year period of the decade, unlike Colombia, whose deficit continued to increase.

The fall in domestic savings may have been an idiosyncratic reason for Colombia's deficit to further increase



SAVINGS, INVESTMENT AND CURRENT ACCOUNT

BREAKDOWN OF DOMESTIC SAVINGS (% OF GDP)



(f): BBVA Research forecast. Source: BBVA Research based on data from DANE and Banco de la República.

The reduction in domestic savings was determined by the fall in public savings to negative levels (dissaving) and lower household savings.

Moreover, the saving rate has been lower than the world average, and even lower than LatAm for long periods of time

SAVING RATE (% OF GDP)



Source: BBVA Research with data from the World Bank.

In the first decade of this century, Colombia was closing the savings gap with the rest of the world. However, in the most recent decade, the gap re-opened.

IMPORTS AND DOMESTIC SUPPLY AND DEMAND

(CHANGE IN SHARES, NOMINAL VALUES, %)

At the same time, domestic investment also put upward pressure on the current account through the higher imports it brought along with it

IMPORTS AND FIXED INVESTMENT (SHARE OF GDP, %)



In addition to the collapse of consumption during the COVID-19 pandemic, the sharp drop in investment will lead to a significant reduction in the share of imports in supply and GDP.

Indeed, the impact of imports of machinery and equipment on the current account was significant

SIGNIFICANCE OF CAPITAL GOODS IMPORTS (CUMULATIVE FOUR QUARTERS, % OF GDP)



CAPITAL GOODS IMPORTS BY TYPE (MILLIONS OF USD)



The industry (including the mining and oil industries) was the main determinant of capital goods imports.

Investment goods, technology services and grains stood out among the goods with the highest incidence of imports

WEIGHT OF IMPORTS ON DOMESTIC SUPPLY (GOODS WITH THE HIGHEST INCIDENCE OF IMPORTS, MOST RECENT DATE AVAILABLE, %)



Source: BBVA Research based on DANE data.

According to a study by the Banco de la República, more than 80% of the investment in machinery and equipment is imported.

Since 2014, the weight of imports on domestic supply has seen relevant changes when analyzed by type of good.



WEIGHT OF IMPORTS ON DOMESTIC SUPPLY (GOODS WITH THE GREATEST REDUCTION IN WEIGHT OF IMPORTS, %) WEIGHT OF IMPORTS ON DOMESTIC SUPPLY (GOODS WITH THE GREATEST INCREASE IN WEIGHT OF IMPORTS, %)



Source: BBVA Research based on DANE data.

Imports of fuel, weapons and some services saw the greatest reduction in the weight of domestic supply. On the contrary, imports increased most in wood, corn, automobiles and textiles.

CONTRIBUTION OF BALANCE OF SERVICES TO THE

CURRENT ACCOUNT (% GDP)

In addition, Colombia has considerably increased the foreign sale of its services since 2014, especially tourism

FOREIGN TRADE OF SERVICES

(% OF THE SUM OF EXPORTS -X- AND IMPORTS -M-)



(*): Data as of September.

Source: BBVA Research based on data from Banco de la República.

However, in 2020, the exportation of services dropped much more than importation, such that the services account increased its negative contribution to the external balance sheet.

Meanwhile, remittances from workers abroad increased in significance among the variables that contributed positively to the external balance

REMITTANCES FROM WORKERS ABROAD (% OF EXPORTS AND % OF GDP)



REMITTANCES BY SOURCE (% OF EACH YEAR'S TOTAL)



(*): Data as of September. Source: BBVA Research based on data from *Banco de la República*.

Going forward, the performance of external sales of services and remittance inflows will be important to continue to positively offset the other sources of deficit.



02 Structural current account estimate: methodology and results

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Structural current account methodology







The analysis is based on measuring the impact of various structural factors on the current account.

Such structural factors include demographic trends, investment, fiscal balance, among others. The model is estimated based on panel of data for 87 countries from 1980 to 2019.

The database is constructed using data from the IMF, World Bank, United Nations, OECD and BBVA Research. Several variables are expressed in terms of their deviations from their global average.

Econometric model specification

Empirical exercise

$$CC_{it} = X'_{i}\beta_{LT} + (X^{MA5y}_{it} - X_{i})'\beta_{MT} + (X_{it} - X^{MA5y}_{it})'\beta_{ST} + Z'_{it}\varphi_{CYC} + \delta_{i} + \mu_{it}$$

Each explanatory variable is broken down into three fluctuation frequencies: long, medium and short term.

It is assumed that the medium- and long-term components represent the structural component and the short-term component is associated with the cyclical component.

- X_i : Historical average of each variable observed
- CCit: Current account observed as a proportion of GDP
- X_{it}^{MA5y} X_{it} : Medium-term deviation between its explanatory variables and its long-term values
- X_{it} $X_{it}^{\rm MA5y}$: Deviation between its explanatory variables and its medium-term values
 - Z_{it} : Vector of cyclical explanatory variables

Adjusted values of the structural current account

$$\Rightarrow \beta_{LT} + \beta_{MT}$$

The estimation of the short and medium-term coefficients resulting from the longitudinal model is adapted for Colombia. Specifically, these coefficients are re-estimated using Bayesian time series models.

Explanatory variables

Aggregate factor	Variable	Long-term	Medium-term	Short-term
Demographics	Senior dependency ratio (%) Population growth (%)	0	0	
Growth and investment	Investment (% GDP) GDP per capita (GDP in PPP)	0	O	
Fiscal balance	Fiscal balance (% GDP) Public health expenditure (% GDP)	©	⊘	Ø
Private credit	Private credit (% GDP)	0	Ø	Ø
Commercial factors	Trade liberalization (% GDP) Oil balance (% GDP)	0	O	S
Private savings	Net Financial Assets (NFA, % GDP)		Ø	O
Cycle	Short-term interest rate Output gap Real exchange rate Health expenditure Exchange terms (% change) VIX (% change)			00000

The exercise breaks down the structural current account deficit into eight explanatory factors during the period from 1982 to 2020

BREAKDOWN BY CONTRIBUTION OF THE STRUCTURAL CURRENT ACCOUNT DEFICIT (PERCENTAGE POINTS OF GDP)



Some of the factors that are most explanatory are other, demographics, private debt and net financial assets.

Demographics contribute to a structural current account surplus thanks to the increase in the working-age population

CURRENT ACCOUNT AND DEMOGRAPHICS (% OF GDP AND CONTRIBUTION, %)



- At the beginning of the period, the contribution was high and stable due to the high demographic bonus and population growth.
- Then, in the period between 2000 and 2015, there is evidence of a moderation in its contribution due to the gradual reduction of the demographic bonus and a slowdown in population growth.
- In recent years, the trend has been reversed due to the contribution of migration to population growth and the demographic bonus.

The fiscal balance shifted from supporting structural current account surpluses to running deficits, especially at the turn of the century

CURRENT ACCOUNT AND FISCAL BALANCE (% OF GDP AND CONTRIBUTION)



- Colombia's tradition of fiscal responsibility is reflected in a public balance sheet that supported an external surplus until before 1996, when a major cycle of public spending growth began.
- This was followed by a period of crisis in emerging economies (partly due to debt), which manifested itself locally with a significant deterioration in the fiscal accounts, putting pressure on the current account deficit.
- The effects have been more marginal in this century. There was an initial adjustment period until 2014 when the drop in crude oil prices reversed the balance sheet contribution to negative territory.

Private borrowing has maintained a relatively stable contribution over time: toward a structural current account deficit

CURRENT ACCOUNT AND PRIVATE DEBT (% OF GDP AND CONTRIBUTION)



- Prior to the economic liberalization in the early 1990s, this factor contributed less to the current account deficit.
- In recent years, there has been a slight increase in the contribution to the private debt deficit, resulting in a deterioration of the structural current account deficit.

Colombia's investment has been similar to the global investment. Except for the liberalization period and later during the crisis in EM

CURRENT ACCOUNT AND INVESTMENT (% OF GDP AND CONTRIBUTION)



- Prior to the economic liberalization, investment contributed very little to the trade balance.
- With the liberalization (untimely in Colombia) and the first local oil boom, pressure was put on the structural deficit in the current account.
- For the post-crisis period in emerging countries, the contribution shifted sharply and contributed to a larger current account surplus.
- The latest data again points to a small contribution from investment, in this case to the structural current account surplus.

Colombia has traditionally been a country with little depth in trade. The oil boom contributed to the structural external surplus

(% OF GDP AND CONTRIBUTION)



- The late economic liberalization in Colombia is shown by a contribution to the current account deficit in the 1980s, which gradually closed.
- This gradual closure may be linked both to the economic liberalization of the 1990s (very gradual) and to the first oil boom.
- The second oil boom, following Ecopetrol's partial transfer, shows a contribution to the current account surplus.
- However, this effect has been modest since the fall in the price of crude oil and its impact on the volumes and value of oil exports.

Colombia's net financial asset position is structurally negative, but became more significant after liberalization

CURRENT ACCOUNT AND NET FINANCIAL ASSETS (% OF GDP AND CONTRIBUTION)



- Prior to the liberalization, the position of net financial assets was limited. Although it gradually grew, it did so very slowly.
- With the liberalization, the availability of external resources to finance the imbalance of local savings and investment increased, resulting in a more negative net financial asset position.
- External financing presented a small (relatively stable) cycle during the period of high risk in the crisis in emerging economies (late 1990s).
- This net position has become more of a deficit in recent years.

Finally, the exercise is complemented by a constant explaining a high percentage of the average level of the structural deficit

CURRENT ACCOUNT AND OTHERS (% OF GDP AND CONTRIBUTION, %)



Source: BBVA Research with data from multilateral agencies.

RELATIONSHIPS BETWEEN THE CONSTANT AND SAVINGS, TECHNOLOGY AND CURRENT ACCOUNT DEFICIT



	Av erage sav ing rate	Average technological intensity	Total current account
Countries with positive constant	27.4	34.8	1.6
Countries with negative constant	23.7	28.4	-1.0
Correlation	0.22	0.29	0.42
Beta (pending)	0.10	0.07	0.31

Countries with the highest constant have, on average, a higher saving rate, a higher technological intensity, and a better current account balance.



03

Sensitivity to the exercise of the structural current account

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The exercise anticipates a structural current account deficit that would be around -3.2%, on average, between 2020 and 2025

BREAKDOWN BY CONTRIBUTION TO STRUCTURAL CURRENT ACCOUNT DEFICIT (PERCENTAGE POINTS OF GDP)



The structural deficit between 2021 and 2025 is explained in particular by the net financial assets, private debt and, to a lesser extent, the global oil market cycle.

Based on the panel exercise, we can update some variables relevant to the case of Colombia with the information available (Dec. 2020)

STRUCTURAL CURRENT ACCOUNT COMPARISON WITH ADJUSTMENT (PERCENTAGE OF GDP, %)

	Structural def.		Investment		Fiscal balance		Commercial factors			
	Panel Scenario	Act. Colombia	Panel Scenario	Act. Colombia	Panel Scenario	Act. Colombia	Panel Scenario	Act. Colombia		
2020	-3.20	-3.25	0.69	0.66	-0.12	-0.12	-0.16	-0.18		
2021 (Forecast)	-3.11	-3.24	0.92	0.91	-0.15	-0.23	-0.14	-0.17		
2022 (Forecast)	-3.06	-3.34	0.98	0.93	-0.08	-0.26	-0.14	-0.19		
2023 (Forecast)	-3.05	-3.48	0.96	0.87	0.14	-0.15	-0.23	-0.31		
2024 (Forecast)	-3.12	-3.71	1.00	0.90	0.23	-0.20	-0.32	-0.41		
2025 (Forecast)	-3.38	-4.05	0.87	0.76	0.27	-0.26	-0.30	-0.38		
Average 23–25	-3.18	-3.75	0.94	0.84	0.21	-0.20	-0.28	-0.36		
-2.5		I						I		
-4.0										
-5.5		~ ~			1	-	.			
	2017	2018	2020	20211	20221	20231	20241	20251		
— Panel Scenario — Act. Colombia										

(*): Act. Colombia: most up-to-date variable projections for Colombia (as of Dec. 2020). Source: BBVA Research with data from multilateral agencies.

- An alternative scenario with a higher fiscal deficit was evaluated based on a slower reduction of the public imbalance. The effects on the external balance sheet from higher investment than initially estimated and with lower terms of trade due to the fall in the oil price in 2020 and its gradual recovery for the most recent two years were limited.
- Overall, the adjustments explain a structural current account with a 56bp deficit between 2023 and 2025 (on average), reaching average levels of 3.7% of GDP.
- This makes it more appropriate to define the structural current account deficit in the range of 3.2% to 3.7%. This range depends largely on the relative behavior of the Colombian fiscal balance.

We identified four post-COVID risks and measured their sensitivity: lower investment, more fiscal deficit, less trade, and more migration

POST-COVID RISK SCENARIOS

(% OF GDP, AVG. 2023–25, INDEPENDENT EFFECT)



(*): Act. Colombia: most up-to-date variable projections for Colombia (as of Dec. 2020). Post-COVID: this is a risk scenario.

Source: BBVA Research with data from multilateral agencies.

In this risk scenario, we assumed that:

- Investment will return to the levels of the beginning of the century, prior to the second oil boom. This explains a current account (CA) with a 33bp lower deficit than the panel scenario.
- Fiscal adjustment is proceeding at the same pace as the world, slower than estimated. This explains a CA with a 48bp lower deficit.
- The recovery of the price of crude oil is slower, affecting the trade factors. This explains a CA with a 15bp greater deficit.
- Immigration to the country is increasing, allowing it to return to a demographic bonus between 2023–25. This explained a CA with a 75bp lower deficit.



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Discussion on current account financing

FINANCING FREQUENCY HISTOGRAM

(NUMBER OF TIMES IN THE 51 YEARS BETWEEN 1970 AND

Since 1970, the average annual external financing of the economy has stood at 2.6% of GDP. However, in the last decade, it increased to 4.6%

CAPITAL ACCOUNT (% OF GDP)



(*): Data as of September.

Source: BBVA Research with data from Banco de la República and Bloomberg.

In 35 out of the 51 years since 1970, external financing has been less than 3.8% of GDP. However, since 2011 (10 years), this situation has only occurred twice (one of them at 3.7% of GDP).

In times of financial stress on markets, public external financing has been more significant than private financing. This was exacerbated in 2020

COMPOSITION OF THE FINANCIAL ACCOUNT BETWEEN PUBLIC AND PRIVATE FINANCING, ACCORDING TO SOURCE

(% OF TOTAL EXTERNAL FINANCING FOR THE YEAR)



■ FDI ■ Portfolio ■ Derivatives ■ Currency and dep. ■ Loans ■ Other • Total

(*): Data as of September.

Source: BBVA Research based on data from Banco de la República.

In 2020, financing through foreign direct investment (FDI) was less significant, which had been the main external source in previous years.

The profitability of FDI has dropped both in Colombia(*) and that of Colombia abroad, though remains higher for the latter.

DIVIDEND REIMBURSEMENTS AND FDI IN COLOMBIA^(**)

S&P Profitability



DIVIDENDS REIMBURESEMENTS AND FDI FROM COLOMBIA^(**)



(*): Measured through the remittance of dividends and the reinvestment of profits. (**) Data as of September2020. Source: BBVA Research with data from *Banco de la República* and Bloomberg.

The sectoral composition of FDI could have influenced this profitability. Foreign investment in Colombia was most concentrated in oil and mining. Colombian investment abroad was concentrated in non-mining sectors.

In fact, the share of mining-oil sectors has exceeded 40% of FDI in Colombia since 1994, and was most significant between 2000 and 2014

HISTORICAL COMPOSITION OF FDI IN COLOMBIA (% OF ACCUMULATED FLOWS BETWEEN 1994 AND SEP. 2020)



SECTORAL SHARE IN FDI BY YEAR (% OF TOTAL PER YEAR^(†))



(*): Data as of September for 2020. Source: BBVA Research based on data from *Banco de la República*.

The financial sector has become an important source of foreign direct investment, especially in the profit reinvestment component.

On the contrary, over half of Colombian investment abroad was accumulated in the financial and manufacturing sectors (food in particular)

HISTORICAL COMPOSITION OF FDI IN COLOMBIA (% OF ACCUMULATED FLOWS BETWEEN 1994 AND SEP. 2020)



SECTORAL SHARE OF FDI BY YEAR (% OF TOTAL PER YEAR^(†))



(*): Data as of September for 2020. Source: BBVA Research based on data from *Banco de la República*.

Although, since 2008, mining-oil investment has been gaining a stake.

The reinvestment of profits is more significant for Colombian FDI abroad. On the contrary, its share in FDI in Colombia fell in 2019 and 2020

REINVESTMENT OF PROFITS (% OF ACCUMULATED FLOWS BETWEEN 1994 AND SEP. 2020)



Reinvestment in Colombia may fall due to less coal mining activity:

- coal production fell drastically
- the replacement of energy sources throughout the world may result in a structural decline.
- On the contrary, Colombia's reinvestment abroad may remain high because it is in the process of expansion.

(*) Data as of September 2020. Source: BBVA Research based on data from *Banco de la República*.

On the FDI from Colombia abroad

Thus, the profits reinvestment component may become less important for financing the current account deficit in Colombia.

Since the 1990s, the oil market has been important in increasing FDI inflows, which has helped finance the current account deficit

FDI AND OIL EXPORTS (% OF EXPORTS AND GDP)



OIL MARKET AND FDI INFLOWS (DOLLARS PER BRENT BARREL AND PERCENTAGE)



(f): BBVA Researchforecast

Source: BBVA Research based on data from Banco de la República.

When the price of oil rises (falls), FDI to that sector increases (falls) more than exports. That is why the recovery of the Brent price is good news for external financing.

In 2021–25, if FDI in Colombia maintains on average the same ratio to exports, it would stand at 3.1% of GDP

FDI SCENARIOS: BASED ON THE PERFORMANCE OF EXPORTS (MILLIONS OF DOLLARS AND % OF GDP)



- The best year of inflows would be 2022, thanks to the strong export recovery expected for that year.
- However, because FDI is often highly related to oil exports, another scenario was developed.
- Given that oil production and price are expected to be solidly on the rise...

...when FDI is forecast based on oil exports, it would be 2.8% of GDP on average between 2021 and 2025. 2022 would also be the best year.

In 2021–25, to maintain the same percentage of TES holdings by foreigners (25%), portfolio inflows would have to be USD 2.5 bn/year

EXTERNAL PORTFOLIO INVESTMENT IN TES (% OF TES HOLDING BY FOREIGNERS AND MILLIONS OF USD)



- Foreign Portfolio Inv. (PI) (Annual activity) (right axis) Predicted range of PI (right axis)
- (f): BBVA Research scenarios

Source: Projections from BBVA Research based on data from Banco de la República and the Ministry of Finance.

- In this scenario, the largest inflows would happen in 2023.
- After accumulating resources between 2021– 25, the country would have portfolio inflows of at least USD 12.6 billion (0.7% of GDP).
- We believe that the holding of TES by foreigners (as a % of the total) is solidly on the rise.

In another scenario, in which the share of foreigners gradually falls to 20% in 2025, the inflows would be USD 966 million per year or USD 4.8 billion for the whole 2021–25 period (0.3% of GDP).

In addition to good revenue prospects for FDI (due to the oil recovery) and the portfolio, Colombia achieved a good accumulation of reserves

SOME EXTERNAL INDICATORS ON COLOMBIA (RATIOS)



- The country's short-term external debt (less than one year) also increased significantly during the analysis period.
- This is in addition to the support provided by the IMF's flexible credit line.

(f): BBVA Researchforecast

Source: BBVA Research based on data from Banco de la República and DANE.

Henceforth, the reserve balance will continue to act as a support for the external soundness of the Colombian economy.



05

Estimate of the equilibrium real exchange rates: methodology and results

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Methodology of estimating the equilibrium real exchange rates

The equilibrium real exchange rate is defined as the exchange rate level that allows the Underlying Current Account to be adjusted to achieve its equilibrium level.

An estimate of the Current Account that would prevail in the economy when cyclical components have been extracted

It is estimated on the basis of the cointegration ratio between:

- Logarithm of real domestic GDP
- Logarithm of real GDP of the US
- Logarithm of the real exchange rate index with the US

 $LTCRE_{t} = LTCRE_{t} + \lambda(CCS_{t} - CCSUB_{t})$ $\lambda = \frac{1}{\delta} \quad \text{where} \quad \delta = \frac{\Delta LTCR}{\Delta(\frac{CC}{PIB})}$

LTCRE: Logarithm of the equilibrium real exchange rate

- LTCR: Logarithm of the real exchange rate
 - λ : Adjustment parameter extracted from the co-integration ratio
 - CCS: Structural current account
- CCSUB: Underlying current account

Conversion of the real exchange rate to the nominal exchange rate

The Real Exchange Rate Index (RERI) is constructed from the following equation:

$$ITCR = \frac{P^*E}{P}$$

The nominal exchange rate can be determined as follows:

$$E = \frac{(ITCR)(P)}{P^*}$$

Where P* is an external price index,E is the domestic nominal exchange rate andP is a domestic price index

The underlying current account is required to calculate the real exchange rate that adjusts the economy to the structural current account

CURRENT ACCOUNT (% OF GDP)



Source: BBVA Research based on data from Banco de la República.

- The exercise of the structural current account shows that between 1996–2011 and 2019– 2023, the structural deficit in the current account is greater than the underlying deficit. On the contrary, between 2012 and 2018, the underlying deficit is greater than the structural deficit.
- These differences between the underlying and structural deficits define the equilibrium exchange rate: it is the level of the exchange rate that is required to equalize the two deficits.
- In periods where the structural deficit is greater (less) than the underlying deficit, a devaluation (appreciation) of the exchange rate is required compared to the observed one.

For this exercise, we obtained two representations through the different filtering methodologies that can be applied: Cubic splines and the Hodrick-Prescott filter.

Thus, based on the co-integration ratio, we obtain the real exchange rate that adjusts the underlying current account to the structural one

REAL EXCHANGE RATE INDEX (INDEX, 2010 = 100)



$LTCRE_t = LTCRE_t + \lambda(CCS_t - CCSUB_t)$

- The exercise uses the long-term ratio parameter (0.14%) to adjust the gap between the structural and underlying current accounts through adjustments to the real exchange rate.
- This exercise is significantly impacted by tails due to using filters. Thus, extreme periods should be disregarded. In this case, we extended the forecast of the exercise.
- The projection of the real exchange rate is based on inflation forecasts in Colombia and the United States until 2025 and the a priori expectation of the exchange rate over the same period. This will serve as a guide to construct the underlying current account filters.

Using the methodology explained above, we obtained the equilibrium nominal exchange rate associated with each RERI

NOMINAL EXCHANGE RATE (NER) (PESOS PER DOLLAR)



Source: BBVA Research based on data from Banco de la República.

- Between 1996 and 2009, the observed exchange rate was more depreciated than required to achieve the structural current account deficit.
- The opposite is true for the period between 2010 and 2018. A more depreciated exchange rate is required in order to close the current account gap.
- The exercise is strongly affected by tails. However, it allows signals to be extracted regarding the long-term level, especially if extreme data (2 or 3 years) is disregarded.
- However, the equilibrium nominal exchange rate could fall between 3186 and 3308 pesos per dollar.

Using the methodology explained above, we obtained the equilibrium nominal exchange rate associated with each RERI (cont.)

NOMINAL EXCHANGE RATE (NER) (PESOS PER DOLLAR)



The other side of the coin:

- In the period between 2010 and 2018, the underlying current account was able to run a larger deficit than the structural current account thanks to abundant global liquidity. Portfolio inflows increased due to regulatory, global index, and tax adjustments at the time.
- Thus, the economy could have structurally run a larger deficit and not required such a sharp exchange rate depreciation as the exercise suggests.
- In addition, taking the bilateral ratio may require an over-adjustment in the exchange rate to cover potential co-movements with other currencies.



06

Main conclusions

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Conclusions (I)

- The current account deficit in the Colombian economy increased in the most recent decade, even more than in other countries.
- A reduction in the domestic saving rate, partly due to lower public savings, and an increase in investment in machinery and equipment (with a high imported component) were linked to the increase in the external deficit.
- At the same time, the increase in the exports of services (especially tourism) and the inflow
 of remittances partially offset the pressure on the trade balance deficit and the remittance of dividends
 abroad.
- The fundamental variables largely explain the structural current account cycle of the Colombian economy. Nevertheless, the constant of the econometric exercise maintains a relevant role at the level of the structural current account. In a future exercise, the inclusion of other structural variables outside those recommended by the literature could be explored, seeking to reduce the relative importance of the constant. The saving rate and technological intensity, among other factors, may be candidates of variables to include.

Conclusions (II)

- Within the fundamental variables, demographics, net financial assets and private credit maintained a very stable contribution to the structural current account during the estimation period and helped determine the level of the current account. While investment, trade factors and the fiscal balance determined the most cyclical part of the structural current account.
- Net financial assets and private credit are the factors that contributed most negatively to the balance sheet in the current account. On the contrary, demographics was the only variable that contributed positively to this balance sheet, thanks to the demographic bonus maintained by the country.
- The structural current account exercise, through the forecasts made by multilateral agencies for most variables, yielded an average structural current account value of -3.18% for the period between 2023 and 2025. Complementing this exercise with more updated forecasts for the case of Colombia, especially for the fiscal deficit, investment and trade factors variables, the average structural current account deficit for the same period becomes -3.75%.
- Thus, we consider that the structural current account deficit would fall in the range between 3.2% and 3.7% of GDP, depending on the relative progress of Colombia's fiscal balance sheet compared to that of other countries.

Conclusions (III)

- We identified four potential current account risks for the post-COVID scenario: lower investment, higher fiscal deficit, lower trade, and higher migration. Their independent effects were measured. Lower investment and immigration imply a reduction in the structural deficit of 33bp and 75bp, respectively. On the other hand, the greater deficit of the fiscal balance sheet and lower trade imply a greater structural deficit of 7pb in each case.
- Current account financing has been mostly obtained by the private sector, although the government's role in securing external resources is expanding during times of high international volatility.
- Foreign direct investment has been the main source of financing, although times of high international liquidity have also allowed for high financing through portfolio investment.
- Foreign direct investment depends heavily on the dynamism of the oil sector. A recovery in oil prices and exports will improve the inflow of FDI to the country. However, the recovery in FDI profitability in the country, which has fallen below the Fed's rate and the S&P index yield, will also be significant.
- On the contrary, Colombia's FDI profitability abroad remained higher with the pandemic, as a result of the type of foreign investment that the country has, which is more concentrated in non-oil sectors.

Conclusions (IV)

- Portfolio investment will continue to flow into the country, even if foreigners decide to reduce their current share in government-issued TESs. Moreover, FDI will recover at the same pace as exports. However, according to the scenarios constructed, external financing resulting from adding together FDI and portfolio investment could be between 3.1% and 3.8% of GDP, on an annual average, between 2021 and 2025. These figures would be able to finance the estimated range for the structural external deficit.
- Overall, low global interest rates and widespread international liquidity will allow the country to maintain its access to international capital markets.
- Taking the ratio between the structural and underlying current account, we established an equilibrium real exchange rate that would adjust the gap between the two balance sheets. We found that the actual exchange rate was undervalued against the equilibrium rate in the period from 1996–2009 and 2018–2020, while it was overvalued in the period from 2010–2018.
- With this result, we extracted the equilibrium nominal exchange rate. The exchange rate associated with the long-term (2023) would be between 3186 and 3308.



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