Brazil 10.25% Sovereign Bonds

Maturity Jan. 2028
Overweight

Global Macro

October 2023

GIS Global Macro Division

US105756BN96

Rhett Miller
Portfolio Manager

John Hoang
Senior Investment Associate

Dara Akhavein
Senior Investment Associate

Aditya Vijayanagaram
Investment Associate

William Wang
Investment Associate

Leo Lee
Investment Associate

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Executive Summary

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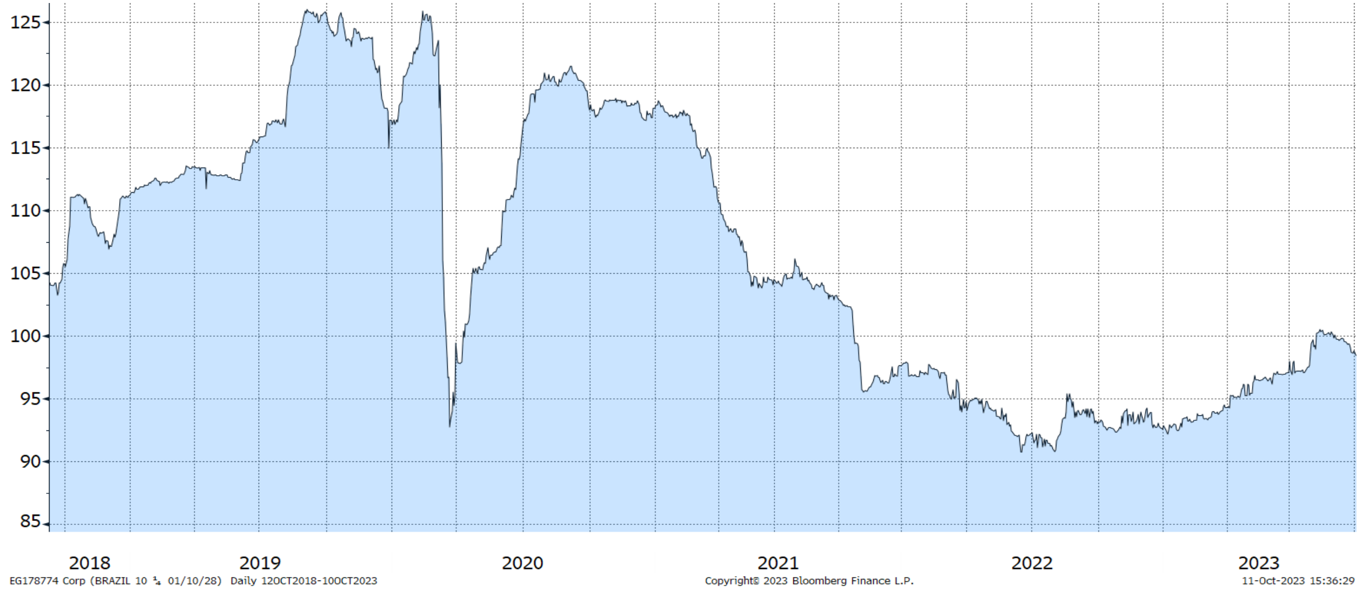
Key Statistics

ISIN:	US105756BN96
Bond Price (10/8/2023):	$96.30
52 Week High:	$99.01
52 Week Low:	$92.00
Volume:	4,887,500,000 $BRL
Issued Date:	1/10/2007
Maturity Date:	1/10/2028
Coupon Rate:	10.25%
Estimated YTM:	11.32%
Debt Level:	Senior Unsecured
Fitch Rating:	BB (Upgrade)

5-Year Price History (10/11/2023)



Valuation Summary

Face Value:	$100.00
Target Price:	$107.57
Estimated Selic Rate (7/10/2027):	7.0-9.0%
Potential ROI (Base Case):	50.7%-58.0%

Key Drivers

1. **Economic Slowdown:** Evidence of slowing GDP growth and reduced foreign investment may drive future rate cuts in Brazil to stimulate economic growth and job creation.
2. **New Fiscal Framework Presented by Brazil's Lula Administration:** Brazil's new fiscal framework, emphasizing fiscal responsibility and debt reduction, is poised to facilitate inflation easing in the future.
3. **Conflict Between President Lula da Silva and Roberto Campos:** Divergent views between President Lula and Roberto Campos, along with Campos' limited term, indicate the potential for future rate cuts in Brazil as a result of changes in leadership and policy direction.
4. **Elevated Household Debt Service:** The recent rise in Brazil's Debt Service Ratio for household is now 26.8% as of Mar 2023, coupled with a historical average of 17.9% since 1999, underscores the need for the Central Bank to lower rates to boost household consumption and reduce financial burdens.

2. Variant Thesis and Market View

Our View

- **Inflation Outlook:** We expect the Brazilian inflation to stabilize at 3.50% during the upcoming years after peaking at 12.13% on 5/5/2022
- **Selic Rate Forecast:** We anticipate the Selic Rate to hit 7.50% by 2027, providing a significant margin of safety for our investment perspective
- **Slowing Economy Propels Rate Cuts:** The current slowdown of the Brazilian economy will continuously encourage the Central Bank to cut rates

The Street View

- **Market Outlook:** The market participants are pricing Brazil's inflation to be 3.86% in 2024 and 3.5% in 2025 versus the Central Bank target of 3.25%
- **Expected Rates:** Market foresees Selic Rate at 8.50% and Brazil 10-Year Bond Yield at 10.00% by the end of 2025
- **Investor Sentiment:** The attractiveness of Brazilian investment appears to be diminished due to the country's ongoing political and economic uncertainties

Economic Landscape

3. Brazil Economy Overview

A Cyclical Based Economy

- Brazil's economy from the 16th century to the mid 20th century was heavily concentrated in one or two agricultural products (Rubber, Coffee, Sugar Boom).
- Brazil is still the leading producer of coffee, oranges, sugar, and the second largest beef and poultry producer.
- Brazil's concentration in agriculture declined in the mid-20th century when the country rapidly urbanized to exploit its mineral, industrial, and hydroelectric potential.

Consequences of Urbanization

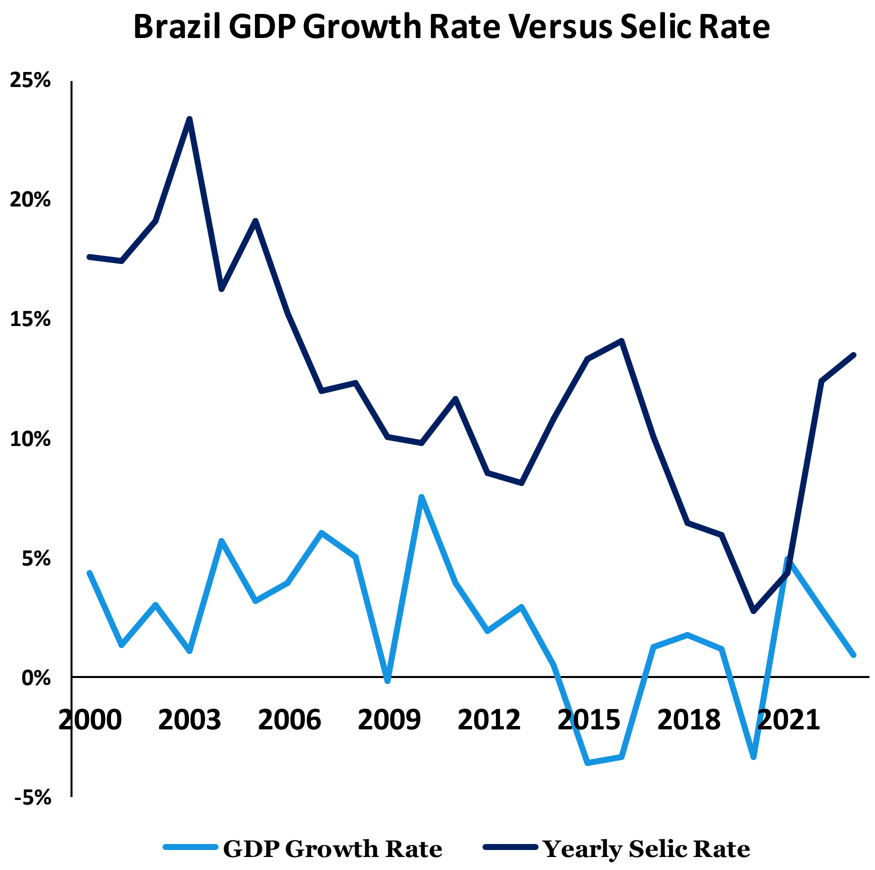
- Brazil's attempts to industrialize the economy created continuously high rates of inflation in the late 20th century due to deficit spending, heavily financed industrial projects, and subsidized business loans.
- The Populus of Brazil accepted institutionalized inflation and believed it was inevitable until the **Real Plan** was introduced in the mid-1990s.

Lasting Effects of Real Plan

- The Real Plan severely limited government spending and introduced the new currency $BRL (Brazilian Real) that was partially linked to the U.S Dollar.
- The Real Plan brought down monthly inflation from 50% in June 1994 to below 2% by the end of the year.

2014 Recession

- Brazil had unprecedented growth preceding the global financial crisis. Brazil was able to weather the storm as capital inflows stayed consistent and elevated commodity prices stimulated trade.
- The downturn of the non-energy commodity price cycle revealed the underlying structural weaknesses.



3. Economic Policy

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Fiscal Health:

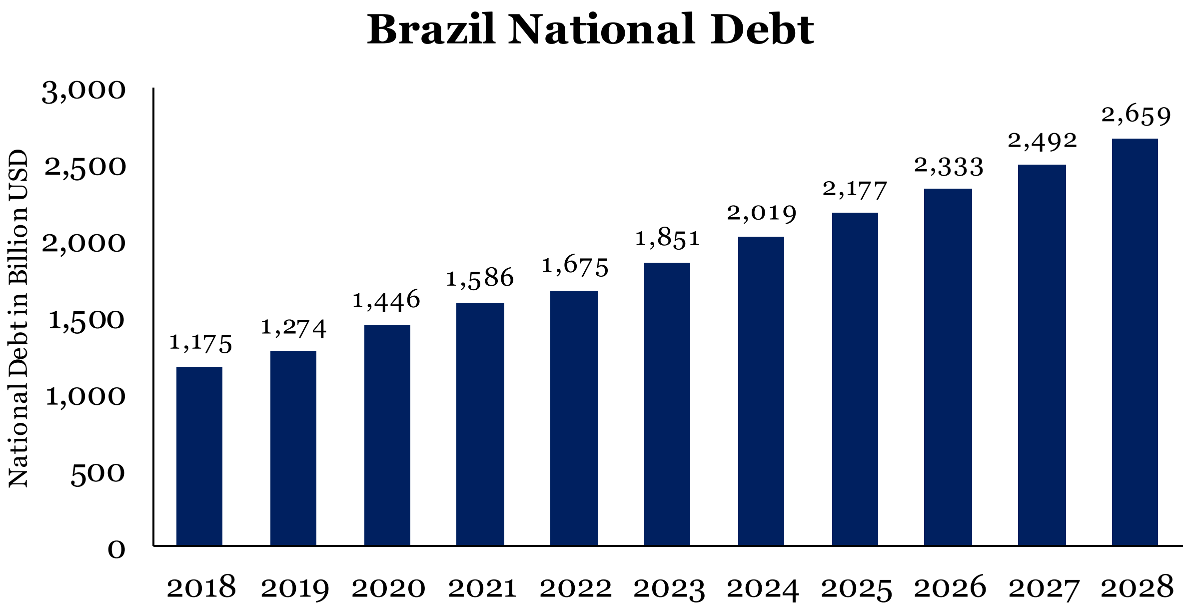
- Deficit: Approx. 10% of GDP.
- Public Debt: PSND at 59.6% of GDP, GGGD at 74.1% of GDP.
- Annual Interest Payments: USD $144,007,316,433.47.
- Social Security: 40% of government budget.
- Debt to Nominal GDP: 73.5%

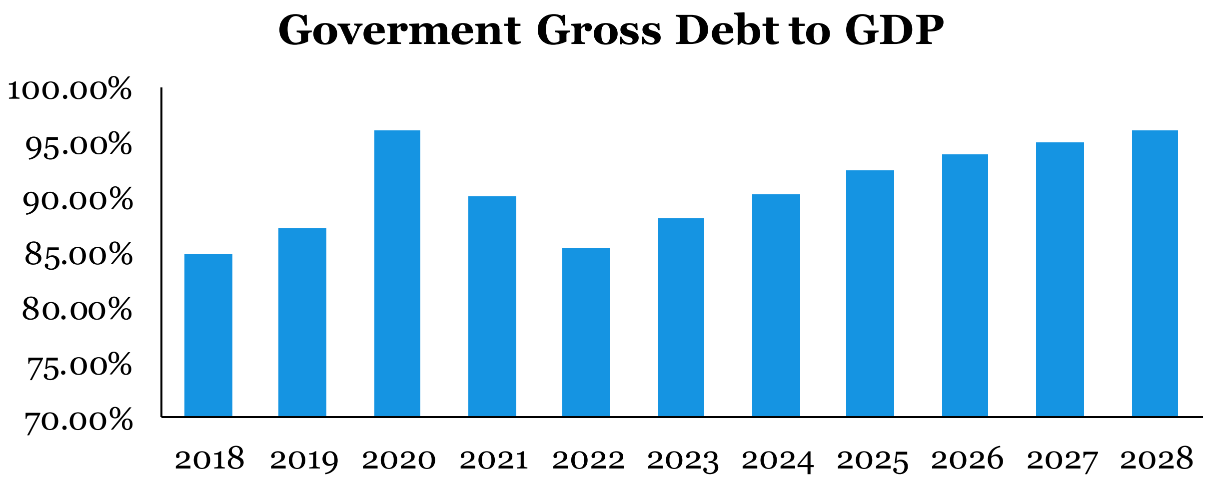
Economic Landscape:

- Primarily driven by population growth, Brazil's economy has been characterized by a never-ending rollercoaster ride of busts and booms over the past 60 years.
- With limited productivity-driven growth and low trade penetration (27.6%), Brazil lags significantly in regard to its infrastructure investment (ranking 78th out of 141 countries; 2% of GDP investment.)

Societal Dynamics:

- Like many other economically developed countries, Brazil suffers from the endemic trend of mass-ageing as the population aged 60+ increased by 39.8% to 14.7%, while a decline in those under 30 is linked to dropping fertility rates.
- Other metrics such as a decline in youth dependency ratios and declines in middle-aged demographic groups point towards an increasingly stark economic picture for Brazil in the long term.





3. Macro Overview – Inflation

Central Bank Dynamics:

- With legislation passed in 2021 maintaining independence in setting monetary policy until end of 2024; the new political administration has sought to take a new approach to absolving the Brazilian Economy's maladies with Campos Neto favoring 50bps cut. Such a move is a contrast to previous efforts as the Selic rate is at a six-year high for 12 months.

President Lula:

- President Lula advocates for a 4.5% inflation target over the current 3% inflation target to allow for economic growth. President Lula has openly discussed his opposition to high interest rates and how it is a danger to Brazil's future.

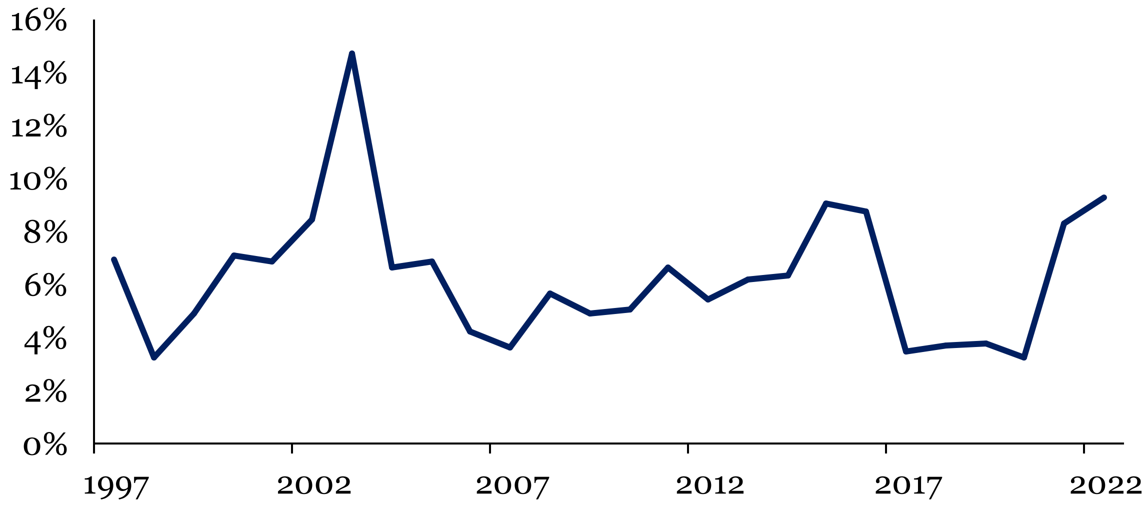
Central Bank (Campos Neto):

- Seeking to distance themselves from previous economic regimes, the Central Bank advocates for autonomy in regards to public communication and interest rate decisions; highlighting the need for "firm conduct" of fiscal health.

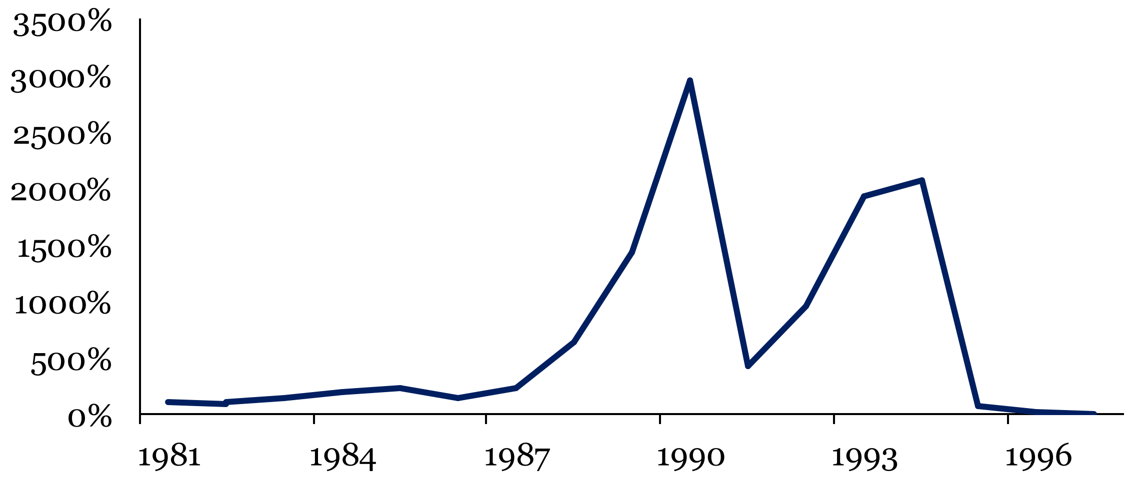
Broad Implications:

- With investor's holding their breath regarding macro-expectations; fiscal health and the Central Bank's long-term stance remain ambiguous moving forward.
- Market players expect inflation at 3.86% in 2024, 3.5% in 2025.

1997-Current Inflation Rate



1981-1997 Inflation Rate



COPOM:

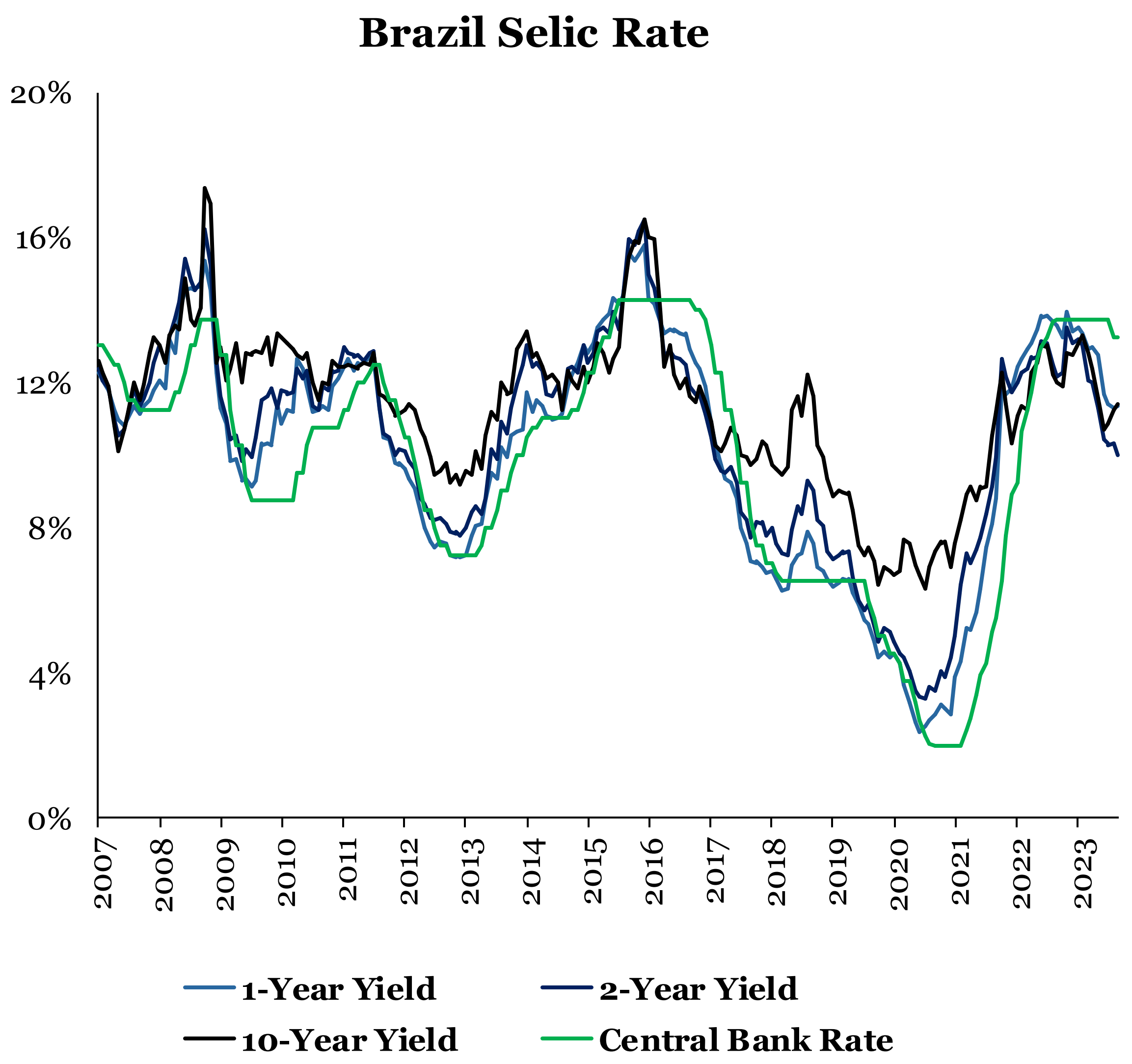
- Analogous to the FED, the Monetary Policy Committee (COPOM) is responsible for conducting monetary policy, primarily utilizing the Selic Interest Rate as their main tool (Current Rate of 12.75% (Aug 2023)
- The COPOM meets 8 times a year (every 45 days) to set the policy rate, utilizing primary open market operations to ensure the Selic Rate is aligned with the target rate

Selic Rate:

- Daily average of the overnight lending rate of interbank loans backed by federal securities

Current Environment:

- Annual inflation in Brazil reached 4.7% in March, the lowest since January 2021. While current inflation remains higher than the target of 3.25%, inflation is now within the current 1.5% tolerance band.
- Lagged effects of previous monetary tightening are expected to continue as inflation stickiness remains endemic to the Brazilian economy
- Many remain skeptical regarding the schedule of further Selic Rate cuts as a result of political pressure stemming from the new administration



Market Expectations

4. Constant Maturity Swap Analysis

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Brazilian constant maturity swap yield curve data suggests a decrease in shorter-term rates from a year ago while projecting higher rates for further out tenors. Market is pricing higher rates than 1 month/quarter ago.

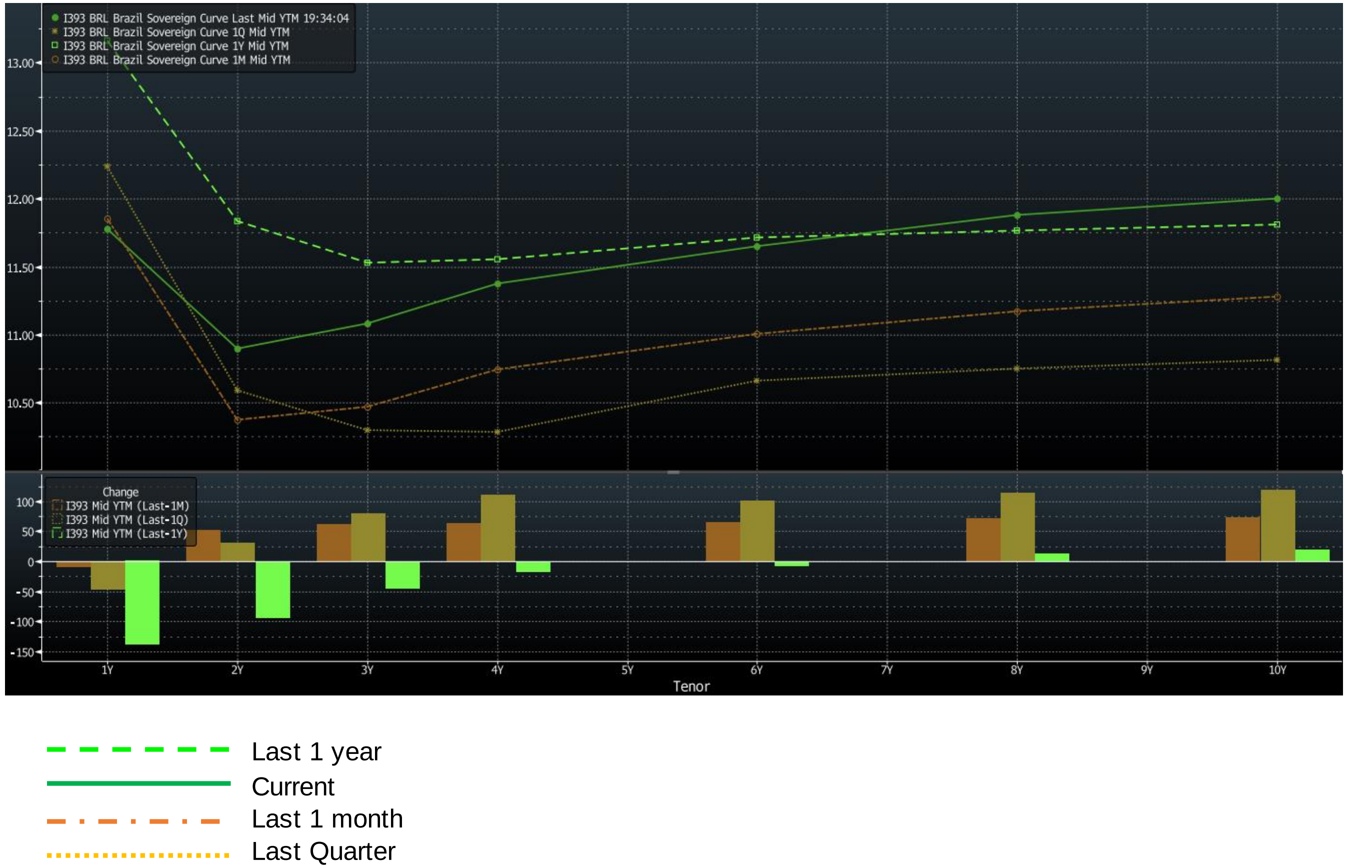
The Constant-Maturity Swap Yield Curve reflects projections of future interest rates across different maturities.

Summary:

- Since last quarter there has been a notable decrease in ultra short-term rates which is aligned with recent rate cuts.
- Higher rates from 2-year tenor + aligns with Neto's stance on preserving $BRL's valuation.
- The most recent yield curve (1Y Mid-YTM bright green) suggests that rates will be higher than what was previous market perceptions a year ago, reflecting changes in consensus on increasing rates

Interpretations:

- Market participants factor in higher inflation.
- However, the market is pricing lower rates in the immediate future with volatility rising once the economic rebound has occurred.



4. Credit Default Swap Analysis

Brazilian credit default swap data suggests a tempering of credit risk from a year ago, but an increase in credit risk from a quarter/month ago.

The Credit Default Swap (CDS) charts the cost of insuring against the default of a borrower over various time horizons and conditions.

Substantial decrease in Brazil's Credit Risk YoY

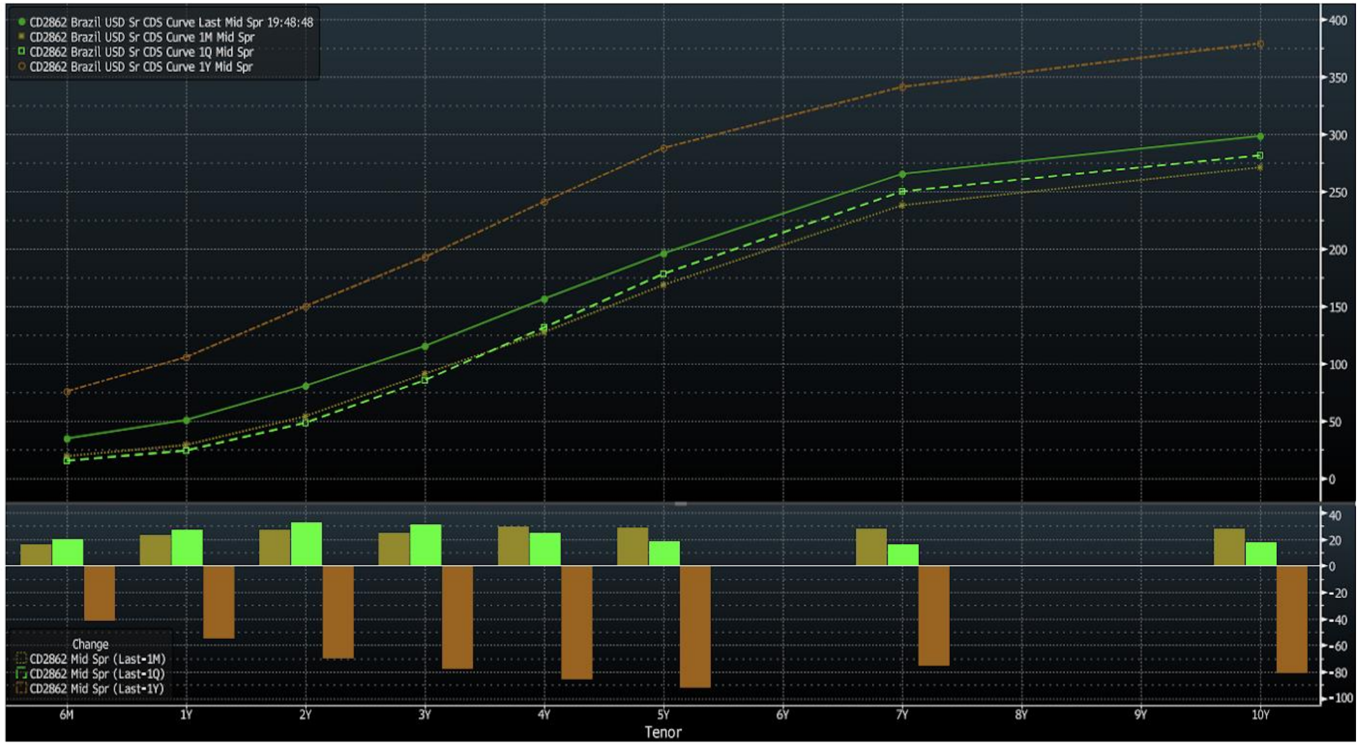
Could be due to:

- Upgrades by credit rating agencies around mid-year.
- Neto's commitment to upholding central bank integrity.
- BCB's promise to raise rates if inflation rises.

Increase in Credit Risk QoQ

Could be due to:

- President Lula's critiques of the central bank & general political division regarding BCB.
- Lula's preference for monetary easing to allow for infrastructure development and additional deficit expansion.



Last Quarter
Current
Last 1 year
Last 1 month

4. Interest Rate Swap-Option Cube

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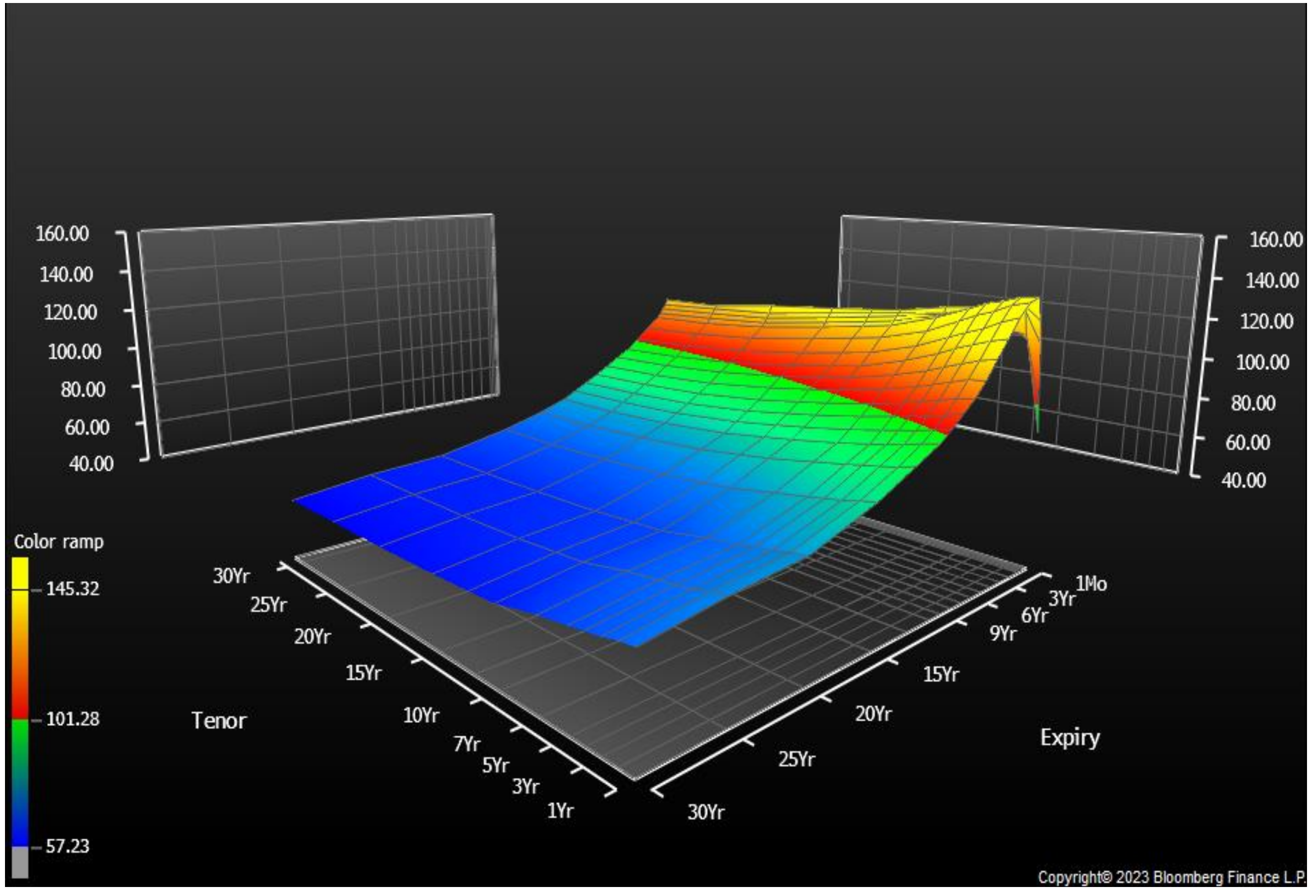
Brazilian Interest Rate Swap-Option data suggests significant interest rate movements in the short-term and tempered long-term volatility.

The Interest Rate Swap-Option Surface Model provides insights into the implied volatility expectations of interest rate swaps at different tenors and expiries.



Short-Term Implied Volatility

- Shorter expiries and tenors are elevated in anticipation of significant interest rate movements in the near term.

Long-Term Implied Volatility

- Long-Term expiries and tenors are showing stability.

Interpretations:

- Upcoming central bank decisions, imminent economic data releases, and other market-influencing events are likely skewing the near term.
- Lack of consensus on immediate interest rate path shows that there is higher variance among participants.
- Showing the increased demand for short-term hedging as seen in elevated volatility

4. Interest Rate Swap-Option Risk Reversal

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Brazilian Interest Rate Swap-Option Risk Reversal data suggests a short term market bias towards payer options and lower forward rates.

The Interest Rate Swap-Option Risk Reversal Surface Model provides insights into the implied volatility expectation skews between payer and receiver options at the same moneyness levels and durations.

Negative forward rates (left side)

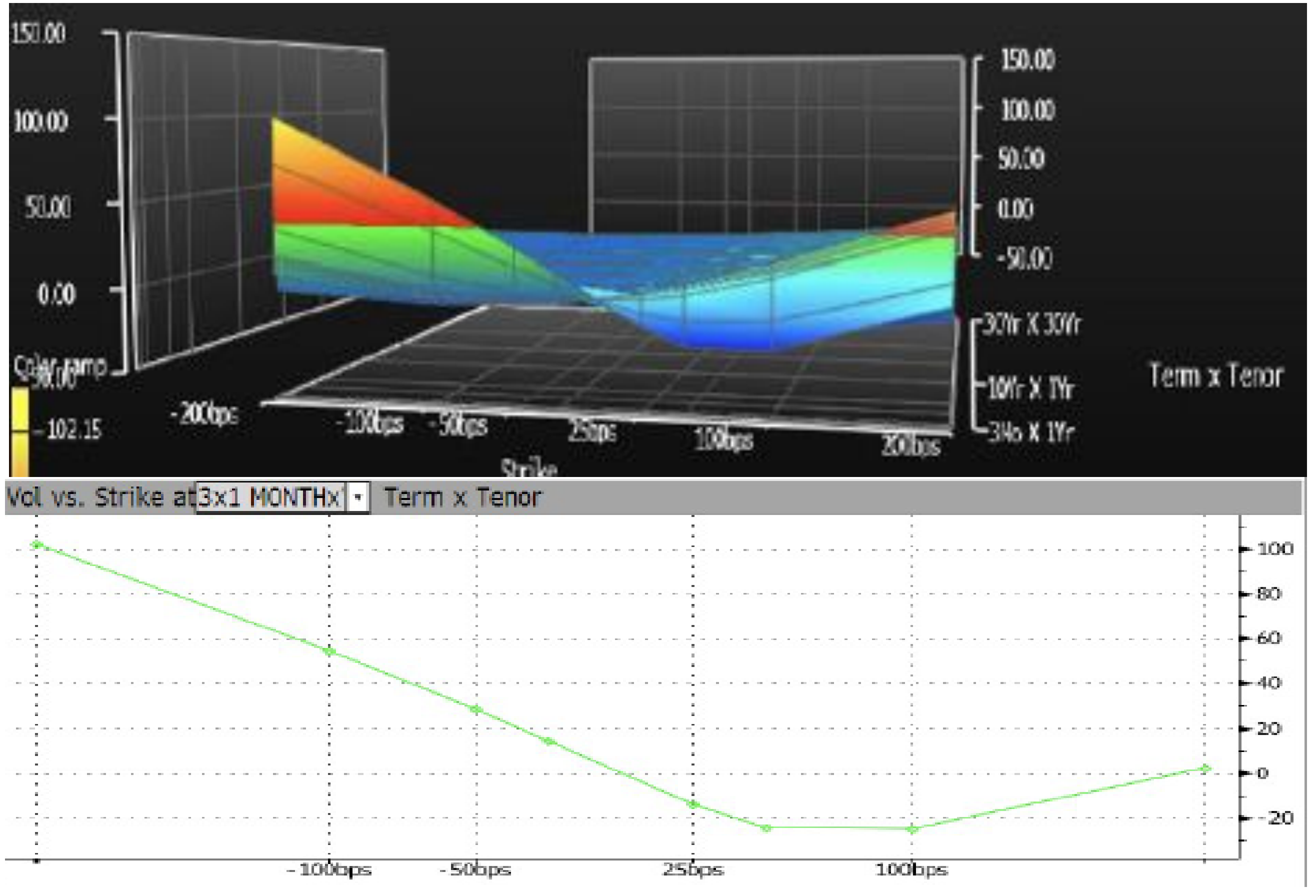
- For lower interest rate strikes, relative payer IV grows significantly higher than receiver IV, demonstrating the markets demand for hedging lower forward rates.

Positive forward rates (right side)

- For higher interest rate strikes, relative receiver IV exceeds payer IV up until around 100bps, then the IV spread seems to diminish with both swaptions being equally priced at 200bps.

Interpretations:

- At this point in time, the market is associating a higher insurance cost to protect against rates decreasing, than to protect against rates increasing for interest rate swaptions expiring in 3 months, with the option to initiate a swap for 1 year.



Strike=relative moneyness | Expiry*Tenor =when the swaption expires * how long it is in play for if activated | IV Skew = (Payer IV(put) – Receiver IV(call))

Key Drivers

5. Key Driver 1

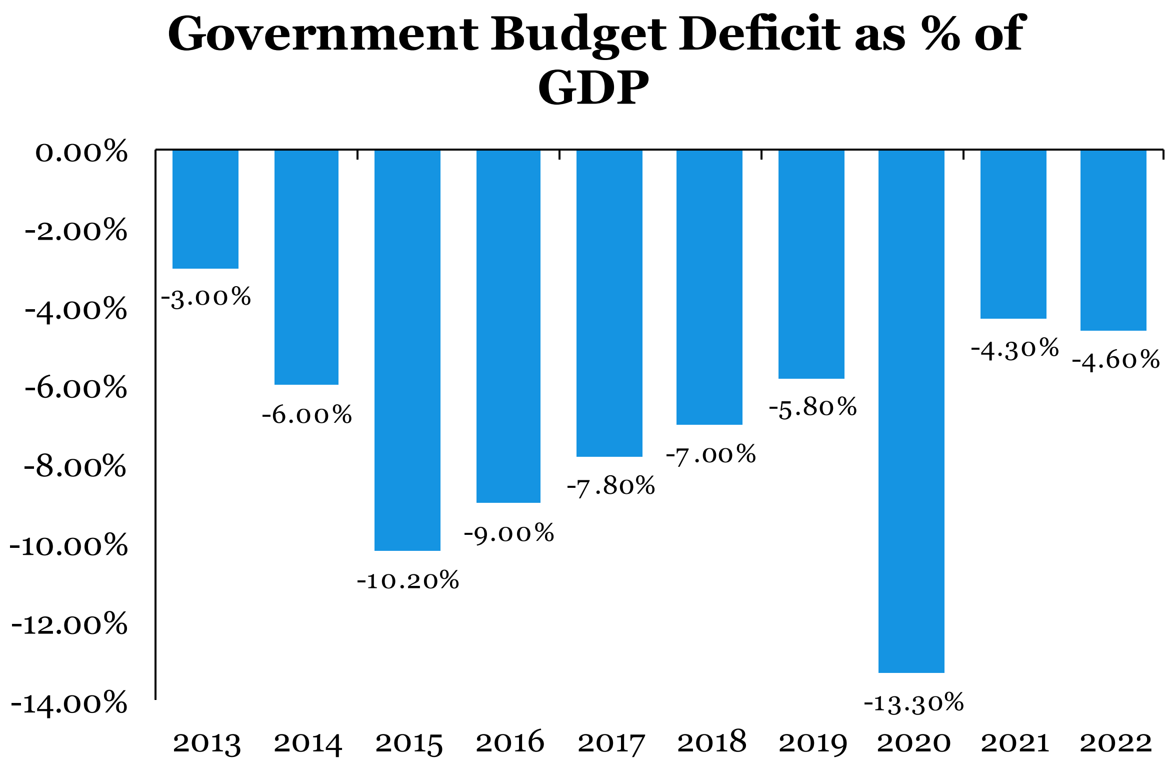
Brazil's GDP growth is decelerating, with projections at 0.92% for 2023, evidenced by a decline in FDI and net international investment position, potentially prompting further interest rate cuts and driving investors towards safer assets like bonds.

- In 2022, Brazil's GDP growth decelerated to 2.9% with a 2023 projection of 0.92%, accompanied by a significant FDI drop from $10 Billion to $4.8 Billion and a $170 Billion decline in the net international investment position.
- Despite the slowdown, it may present opportunities on bond. Reuters indicates a growing foreign investor inclination towards bonds, while the Treasury Secretary aims to amplify the foreign share of domestic public debt to around 20% by 2026.
- Transition observed: net portfolio investment shifted from a $7.6 Billion outflow to a $5.7 Billion inflow post-April 2023, likely due to Brazil's attractive interest rates.

5. Key Driver 2

The New Fiscal Framework from Brazil's Lula Administration establishes a primary budget surplus target and aligns expenditure growth with revenue increases, facilitating further rate cuts through disciplined fiscal spending while protecting key policies

- Clear Fiscal Anchor: A set primary budget surplus target ranges from -0.5% of GDP in 2023 to 1.0% of GDP in 2026
- Under the new fiscal rules, government expenditures will not be allowed to rise by more than 70% of any increase in revenue, with spending growth also limited to between 0.6% and 2.5% per year above inflation
- If the goals are not met, expenditure growth will be restricted to 50% of revenue increases as a penalty
- A reduction in fiscal stimulus could alleviate inflationary pressures by tempering demand-side economic activity, facilitating further rate cuts



Conflict Between President Lula da Silva and Roberto Campos Neto (President of the BCB)

Da Silva Wants to Cut Rates

- President Lula has repeatedly called for cheaper credit and has criticized Brazil's high benchmark interest rates, even stating that "he (Campos) isn't serving Brazil".
- He believes that the country's economic growth is being constrained by these incessant rate hikes.

Imminent Exit of Roberto Campos

- Campos was appointed by the previous president – Jair Bolsonaro, and his term will last till 2024.
- It is likely that he will not continue in the role past 2024 given the differences of opinion with the current president, and in his remaining time, he will likely cut interest rates (as he has in the last 2 months).
- His successor (who will be appointed by da Silva) will likely cut rates going forward.

Da Silva on Inflation Targets

- President Lula also stated that Brazil's inflation targets are too rigid and unrealistic for a country like Brazil.
- He will also appoint the next president of the BCB (who will be on the Copom), and it remains to be seen whether the inflation targets will be revised.

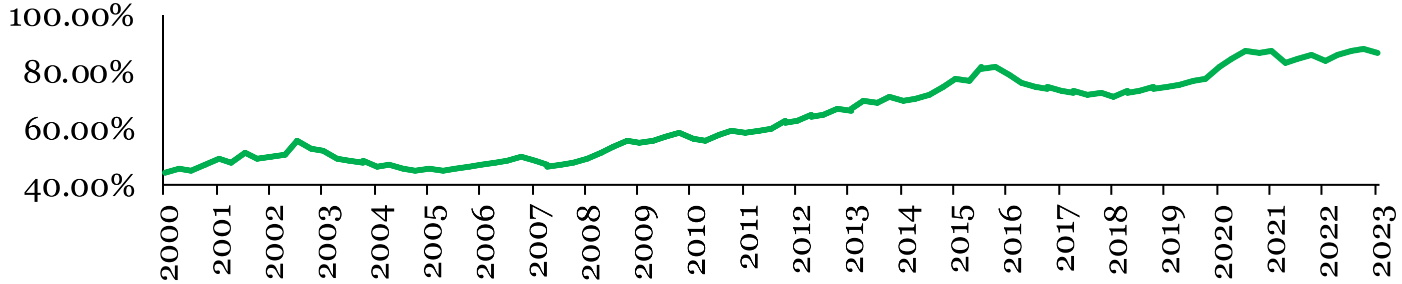
Scenarios

- Scenario 1: Campos continues rate cuts as Brazil stays on track to meet its inflation targets, he is eventually replaced by a candidate chosen by Da Silva.
- Scenario 2: Inflation starts rising again, Campos restarts rate hikes and is eventually replaced by a candidate chosen by Da Silva in 2024. Inflation targets are modified per Da Silva's recommendations and rate cuts start again.
- Scenario 3: Inflation starts rising again, Campos restarts rate hikes and is eventually ousted by Da Silva in 2024, but inflation targets are unchanged, and rate hikes continue

5. Key Driver 4

Elevated Household Debt Service and Brazil's Dependence on Social Security Payments for Revenue Means that Further Interest Rate Cuts are More Likely

Brazil Total Credit to Private Non-Financial Sector as Percentage of GDP

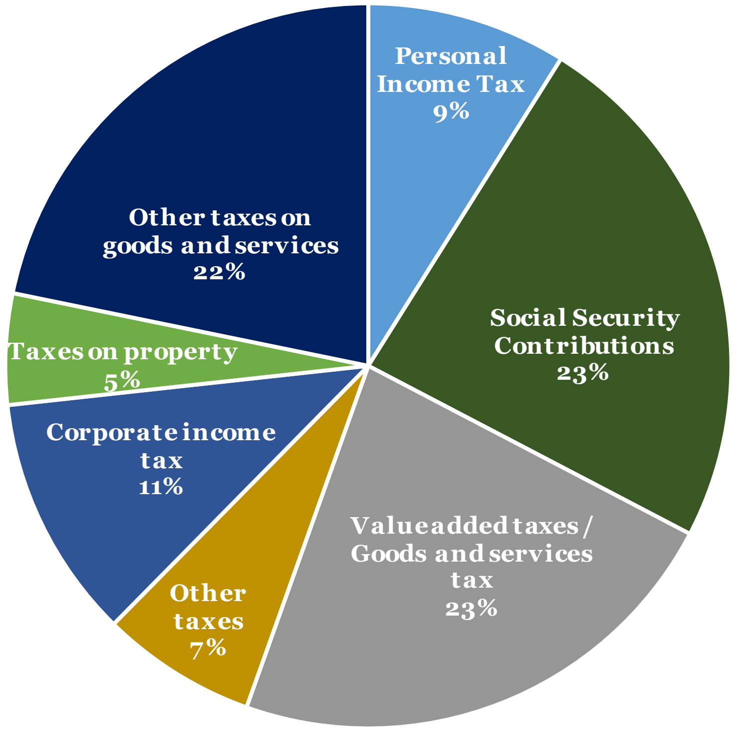


- **Debt Service Ratio Impact:** The surge in Brazil's Total Credit to Private Non-Financial Sector as a percentage of GDP, reaches 86.40% in 2023, which is well above the two-decade average of 60%. Thus, there is an urgency for the Central Bank to lower interest rates to stimulate household consumption and relieve financial stress.

- **High Social Security Rates:** Brazil's high social security tax rates (on labor income charged to employers and their employees), at 40%, are affected by the Debt Service Ratio. Lowering interest rates is crucial as it eases the financial strain on the primary beneficiaries of social security, enhancing their ability to pay these taxes.

- **Tax Revenue and Incentives:** Brazil's high tax-to-GDP ratio, at 33.5% (among the highest in the world), with 23% of tax revenue derived from social security, further incentivizes the reduction of interest rates. This is particularly compelling considering the more favorable inflation projections on the horizon, promoting economic stability and growth.

Brazil Tax Revenue Breakdown



6. Bond Sensitivity Analysis

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Key Points

Current Price:	$96.30
Target Price:	$107.57
Current YTM:	11.32%
Coupon Rate:	10.25%
Average 6-Month Real IR since 2007:	3.997%
Estimated Inflation by 2027:	3.25%-4.25%
Estimated Selic Rate (7/10/2027):	7%-9%
Average Difference between Selic Rate and 6-Month Brazilian Yield:	0.028%

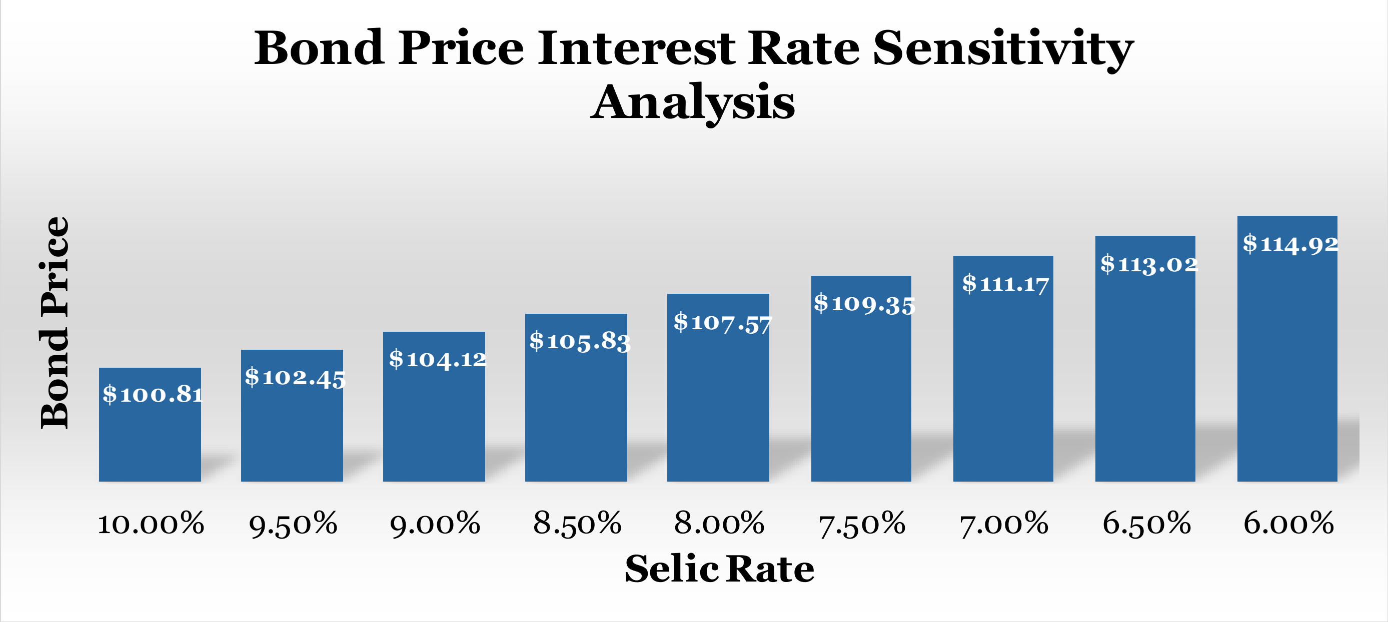
Scenarios

Worst Case:
- Supply shock pushes inflation above 4.25%
- Central bank maintains rates above 9%

Base Case:
- Inflation varies between 3.25% and 4.25%
- Selic rate reaches 8% by 2027

Best Case:
- Inflation returns to a normalized level of 3.25%
- Selic rate falls below 7% to spurt growth

Potential Profit/Loss Summary



Selic Rate	10.00%	9.50%	9.00%	8.50%	8.00%	7.50%	7.00%	6.50%	6.00%
Total ROI by 7/1/2027	43.95%	45.59%	47.26%	48.96%	50.70%	52.47%	54.28%	56.13%	58.02%
IRR for 4 Years	9.54%	9.85%	10.16%	10.48%	10.80%	11.12%	11.45%	11.78%	12.12%

7. Risks and Mitigants

Risk Factor 1

Rising/Stability of Interest Rates

- Interest rates could rise or remain elevated as 12-month CPI has continued to rise.
- However, core inflation has fallen since 2022 which follows COPOM's rationale to cut rates and maintain this pace of monetary easing.
- President Lula has stated that Brazil's inflation targets are too rigid and unrealistic for a country like Brazil that needs stimulus.
- The President of the BCB will be appointed by President Lula and will sit as a voting member on COPOM.
- So, even if inflation does rise, it might not lead to rising or stagnant interest rates as the incoming board is willing to raise the inflation target.

Risk Factor 2

Rising US Bond Yields:

- Elevated US Bond Yields diminish the global risk appetite to stimulate the Brazilian economy and will lead to capital outflows in risk assets.
- Less liquid local bonds in Brazil will receive less funding as domestic and foreign direct investments will look to US first.
- The Brazilian Real ($BRL) relative to the US Dollar ($USD) has underperformed and could impact Brazil's credit rating as its debt rises.
- Sustained high-interest rates could depreciate BRL/USD, thereby eroding returns from our long bond position due to currency conversion impacts.
- This risk could be mitigated with a short position in BRL/USD.

Risk Factor 3

Brazil's Resilient Labor Market

- A resilient labor market may temper aggressive interest rate cuts, reflecting economic confidence.
- The unemployment rate is at a 5-year low of 7.9% as of July 2023.
- Consistent employment rates can boost consumer spending and confidence, reinforcing Brazil's economic resilience amidst global uncertainties.
- However, the BCB is currently projecting unemployment to rise slightly to 9.50% in 2024, reducing to 9.00% in 2025.
- This along with other forecasts suggests that cooling off is expected in the next 2-4 years, requiring monetary assistance.

Appendix

A. Bond Sensitivity Analysis

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Selic Rate	14.00%	13.50%	13.00%	12.50%	12.00%	11.50%	11.00%	10.50%	10.00%	9.50%	9.00%	8.50%	8.00%	7.50%	7.00%	6.50%	6.00%	5.50%	5.00%
Potential Price	$88.80	$90.20	$91.63	$93.08	$94.57	$96.08	$97.62	$99.20	$100.81	$102.45	$104.12	$105.83	$107.57	$109.35	$111.17	$113.02	$114.92	$116.85	$118.82
Total Return on Investment by 7/1/2027	34.79%	36.24%	37.72%	39.23%	40.78%	42.35%	43.95%	45.59%	47.26%	48.96%	50.70%	52.47%	54.28%	56.13%	58.02%	59.94%	61.91%	63.91%	65.96%
IRR for 4 Years	7.75%	8.04%	8.33%	8.63%	8.93%	9.23%	9.54%	9.85%	10.16%	10.48%	10.80%	11.12%	11.45%	11.78%	12.12%	12.46%	12.80%	13.15%	13.50%

A. Latin America Household Debt Comparison

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