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IMPACT OF INFLATION ON PENSION PORTFOLIOS AND THE BRAZILIAN EXPERIENCE

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IOPS International Organisation of Pension Supervisors

	Plans	Benefits linked to inflation	CPI +	Wholesale price
Pillar 3	Pension Funds DB Plans	Benefits linked to inflation	IPCA/INPC	IGPM
	Pension Funds CD Plans	Benefits not linked to inflation	N.A.	
	Mixed Pension Funds CD –accumulation BD - retirement	Benefits linked to inflation after retirement	INPC/IPCA	
Pillar 1	First Pillar	Benefits are linked to Inflation (CPI/CPI+)	33% - from 1-5 minimum wage 67% - minimum wage	
Pillar 0	Social Assistance (Auxílio Brazil)	To be defined in 2023	Approximately 50% of minimum wage	

INFLATION AND INDEXATION – ORIGINS

- In response to this challenge, in the 1960s, there was the inception of monetary correction (or indexation), which involves the automatic adjustment of nominal values of assets and liabilities for changes in the price level, allowing for long-term operations, such as the Treasury Bond market, real estate, and property financing.
- The weakness of this mechanism was the inflation reinforcement, with the spread of formal and informal indexing, leading to an inertial type of inflation (1).
- Central to inertial inflation is that the readjustment of nominal contract values by 100% of the inflation over the previous period does not assure the targeted constancy of real value. Therefore, the rate of inflation and the length of the indexation period are the two crucial dimensions of contracts that may produce inertial inflation (2).

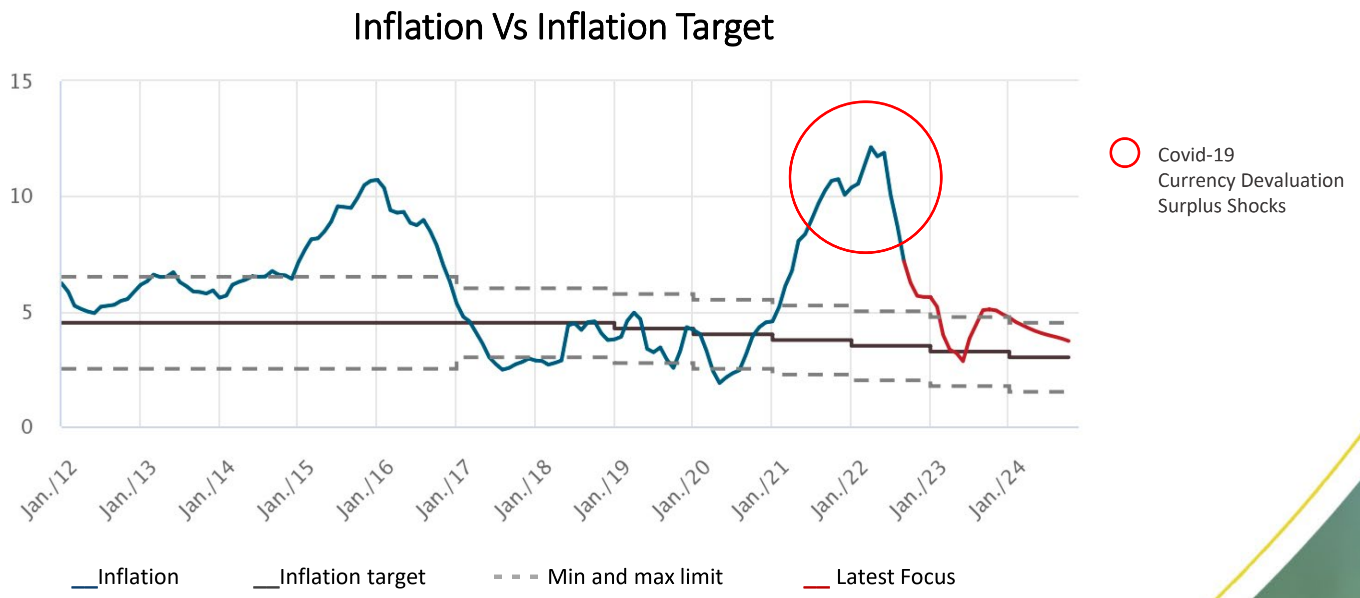
(1) Baer, W. (1987). The resurgence of inflation in Brazil, 1974–1986. *World Development*, *15*(8), 1007-1034. https://doi.org/10.1016/0305-750X(87)90169-0
(2) Arida, Persio; Resende, Andre Lara (1985) : Inertial inflation and monetary reform in Brazil, Texto para discussão, No. 85, Pontifícia Universidade Católica do Rio de Janeiro (PUC-Rio), Departamento de Economia, Rio de Janeiro.

THE REAL PLAN

Only in 1994, with the Real Plan, was there a substantial reduction in inflation rates in Brazil. As a result, in 1999, Brazil instituted the inflation targeting regime.

From 1996-2018 the CPI achieved 6.2% p.a.

Between 2021 and 2022, inflation soared due to COVID-19, currency devaluation, and surplus shocks.



Fonte: www.bcb.gov.br - Inflation targets

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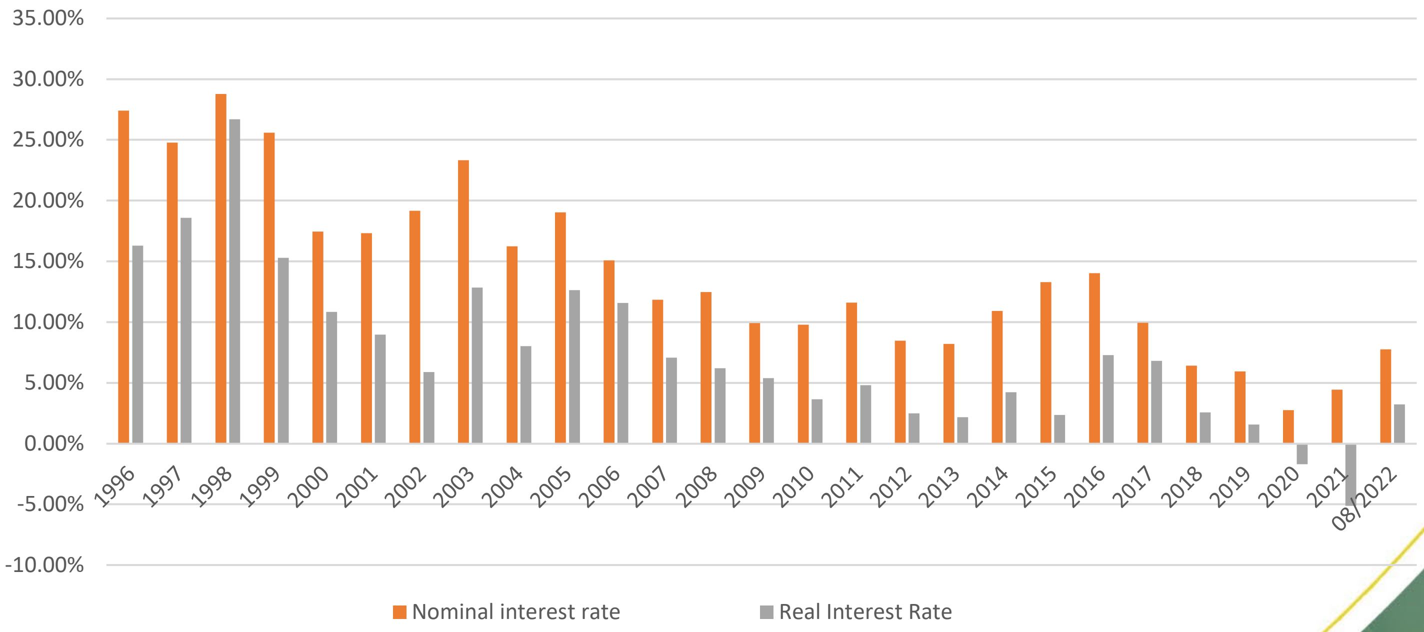
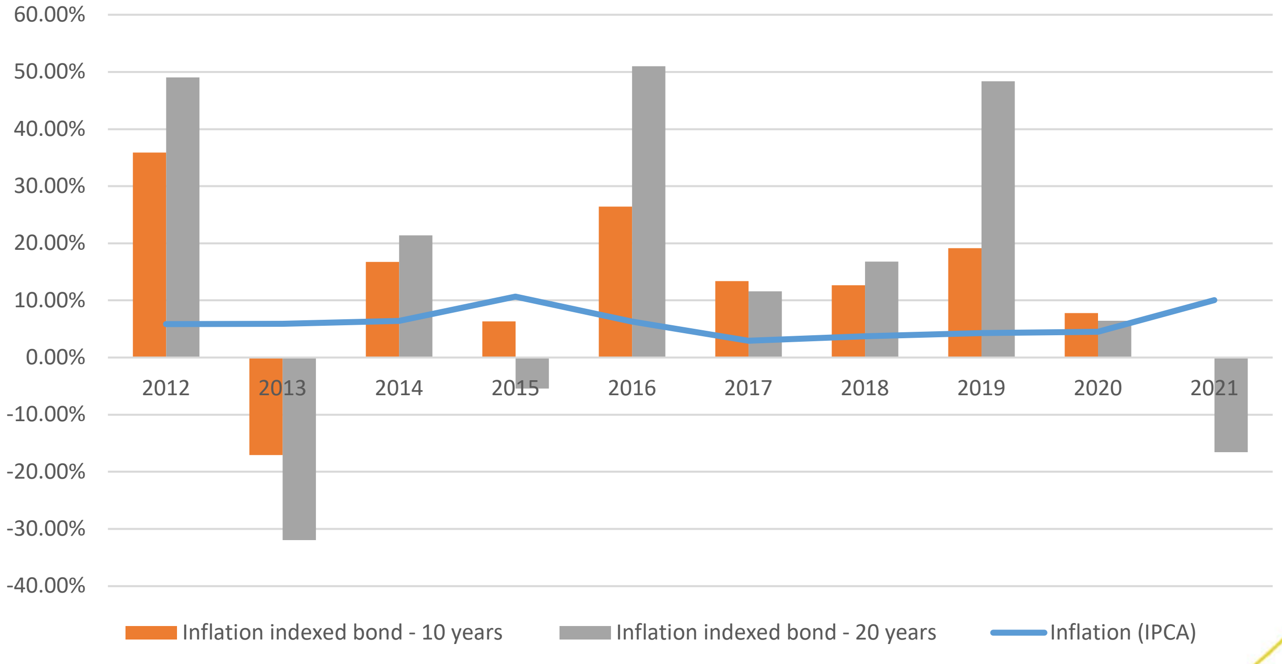
SELIC - NOMINAL VS REAL INTEREST RATE

Selic rate: Is **the basic interest rate of the Brazilian economy** and is defined by the Monetary Policy Committee (Copom), the team responsible for conducting the Brazilian Monetary Policy in force. The committee meets every 42 days to set the rate, which is valid until the next meeting.



INFLATION INDEXED BONDS VS INFLATION (CPI)

The main domestic bonds on the market are those issued through public offerings, carried out regularly by the National Treasury. Currently, the bonds offered in the domestic auctions are LTN (Letras do Tesouro Nacional), and NTN-B (Notas do Tesouro Nacional – Série B).



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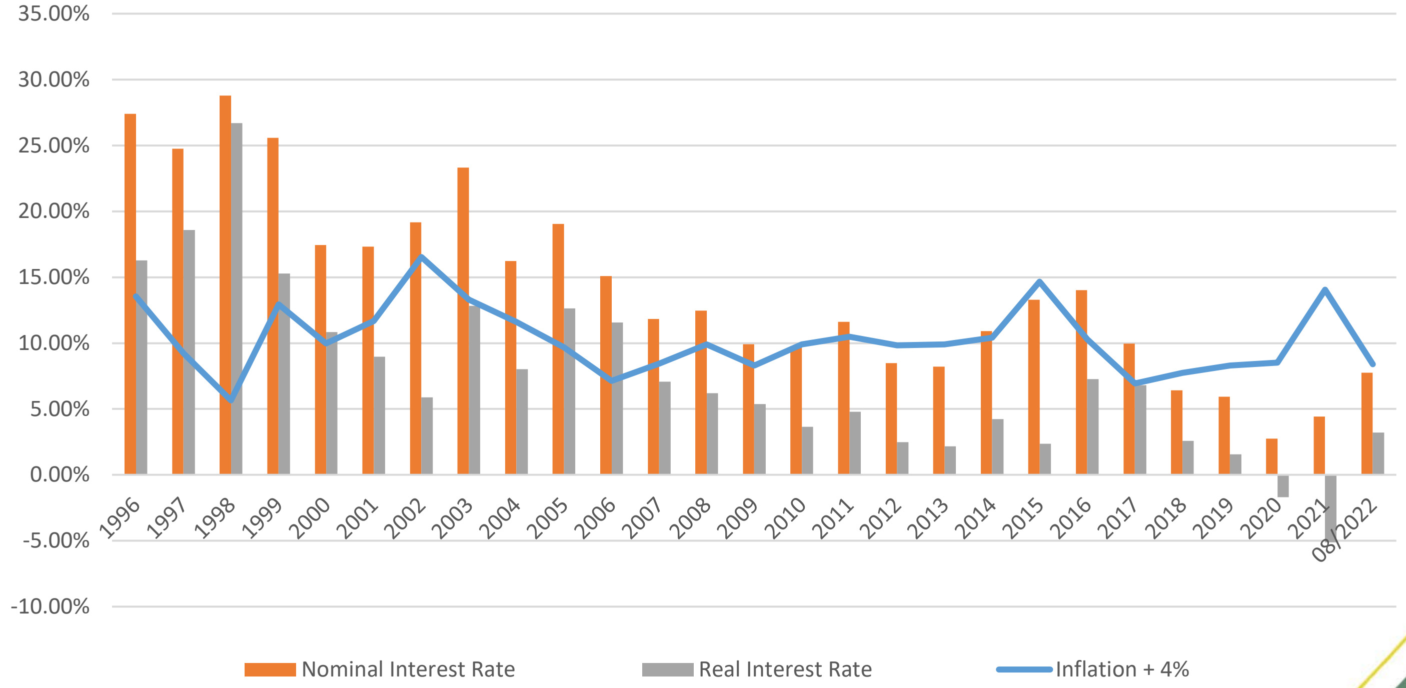
NOMINAL, REAL INTEREST RATE, AND ACTUARIAL TARGET



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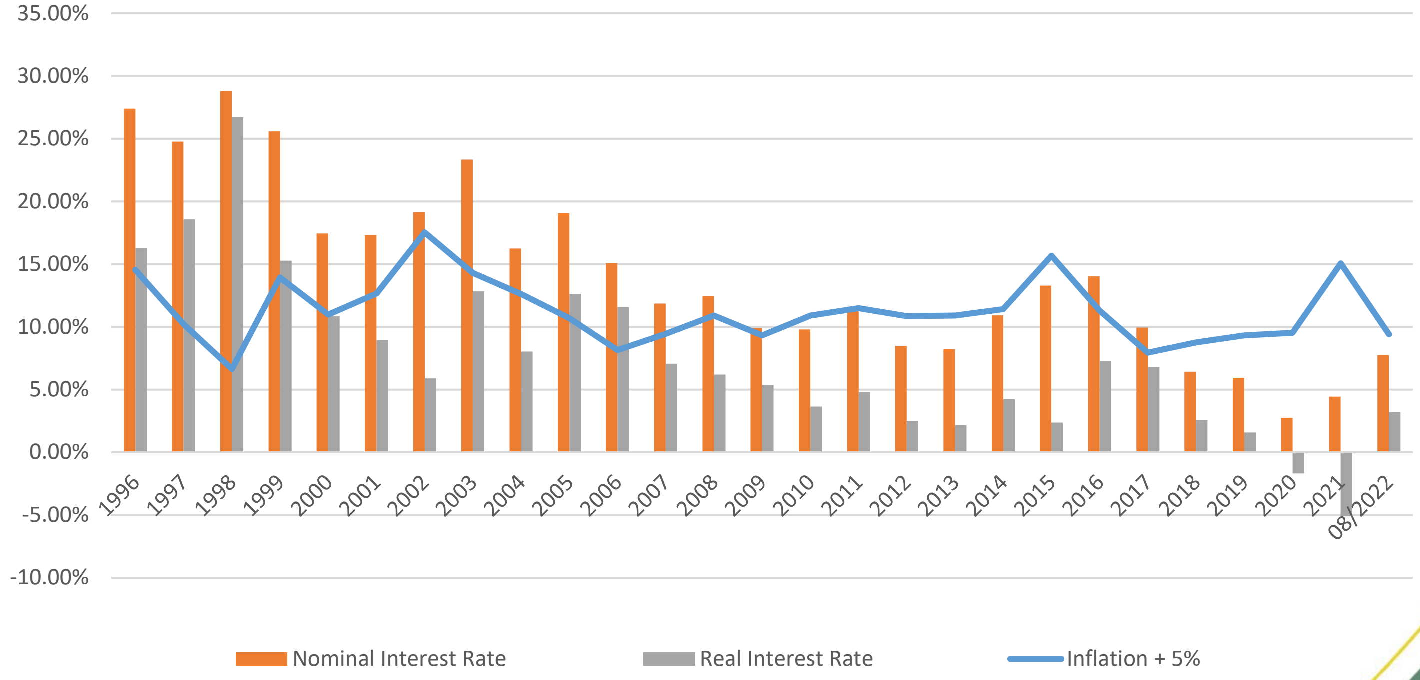

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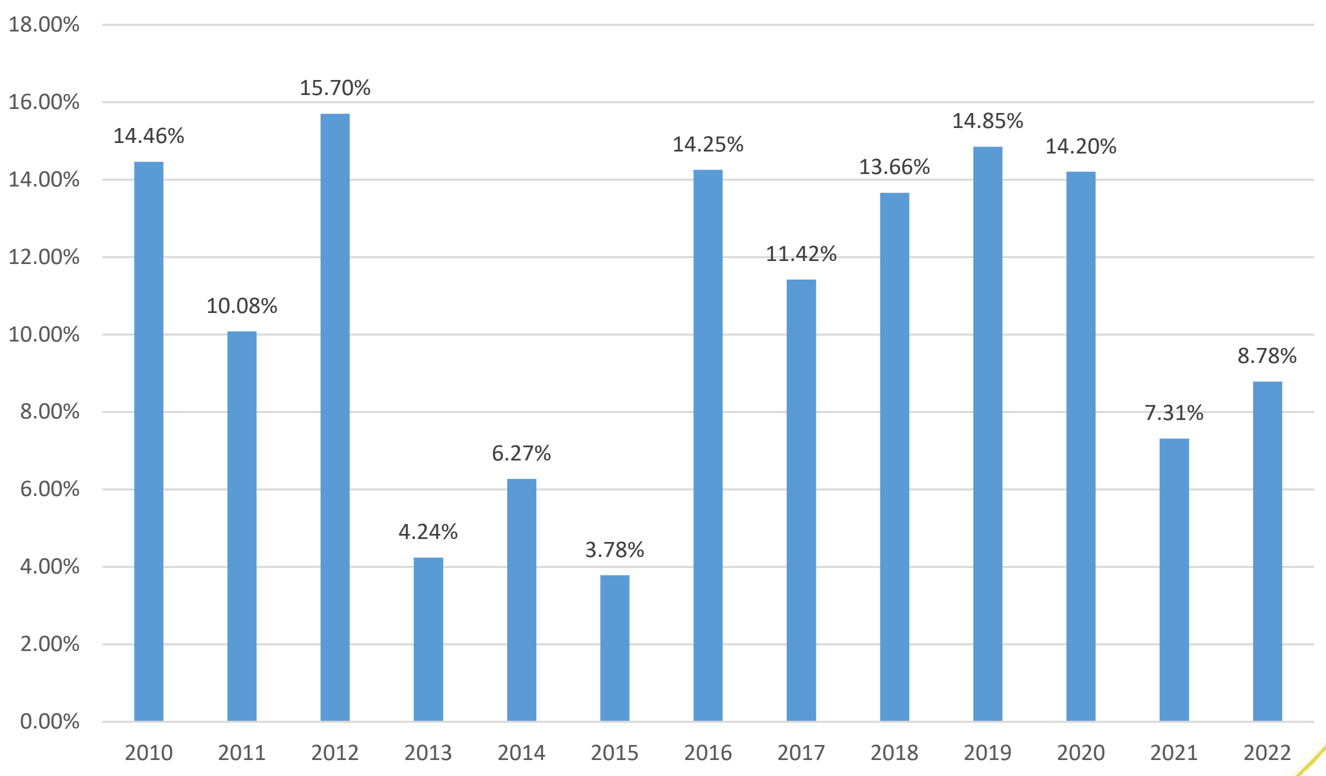
THE PORTFOLIO OF BRAZILIAN PENSION FUNDS

The value of federal government bonds available on the Brazilian market is R$5804 billion, 11% of which is held by pension funds.

A large fund's average expense (to total assets) is under 0.3% per year, plus asset management costs. Salaries and benefits grow at the same pace as inflation, with no real increases in the last three years.

Nevertheless, DB Funds do have liabilities linked to inflation (CPI, and Wholesale Price Index). The most significant risk comes from the increase in longevity and the cost of contracting some insurance/hedge for this purpose.

NOMINAL RETURNS – DB PLANS



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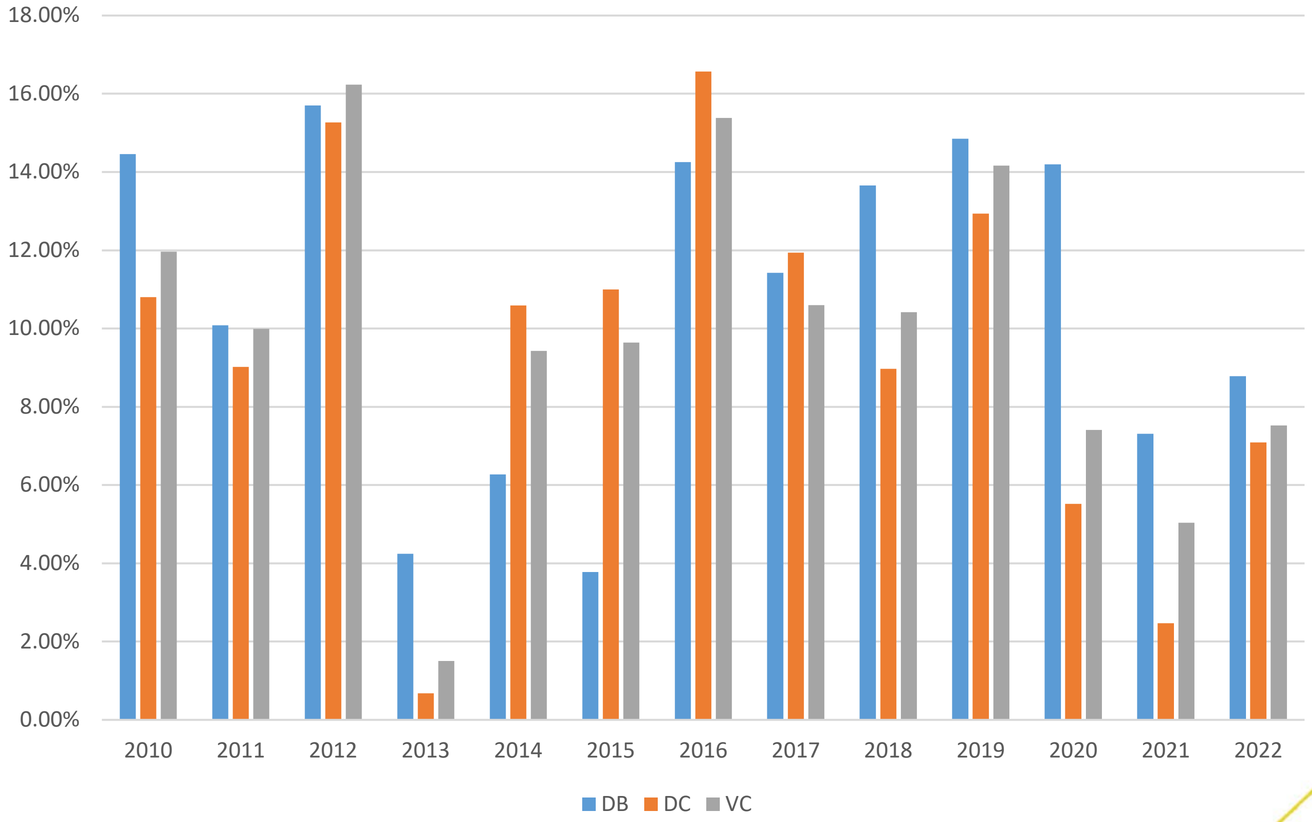
NOMINAL RETURNS BY TYPE OF PLAN



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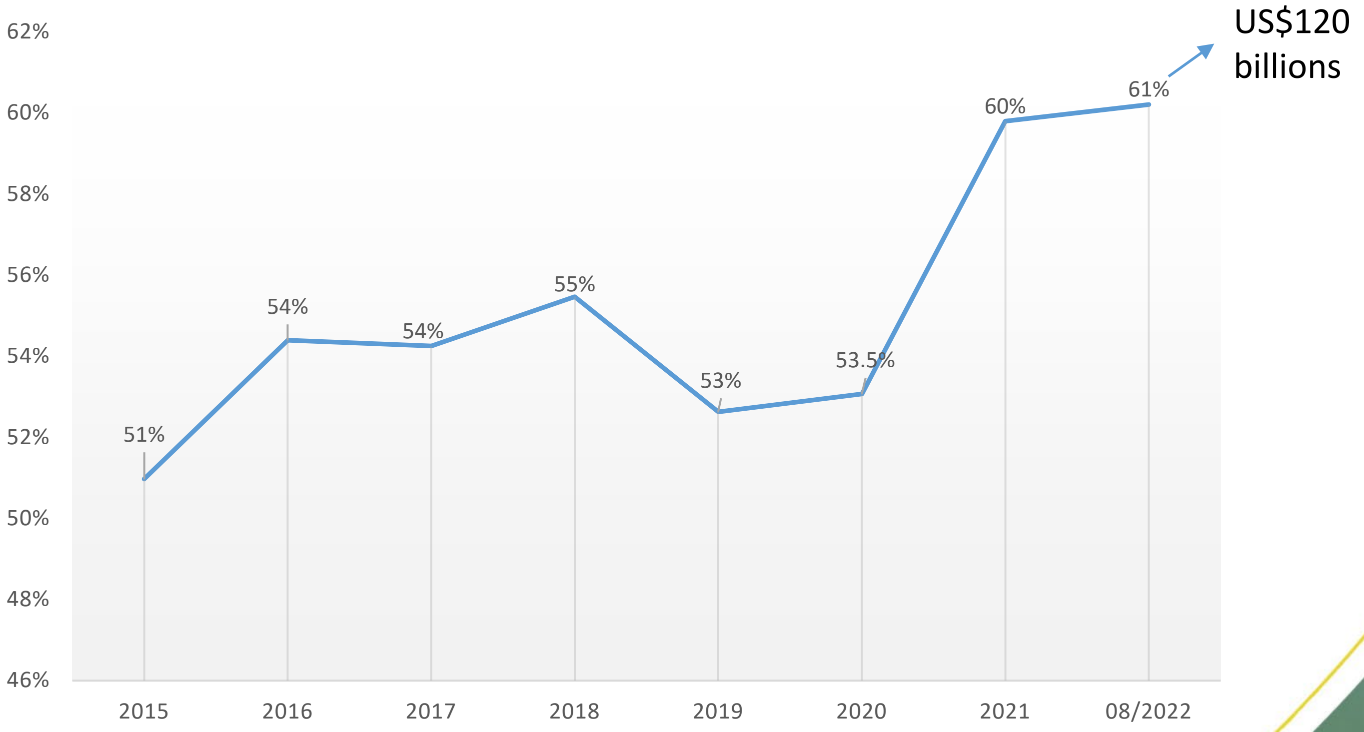
TREASURY LONG-TERM BONDS IN PENSION FUNDS' PORTFOLIO



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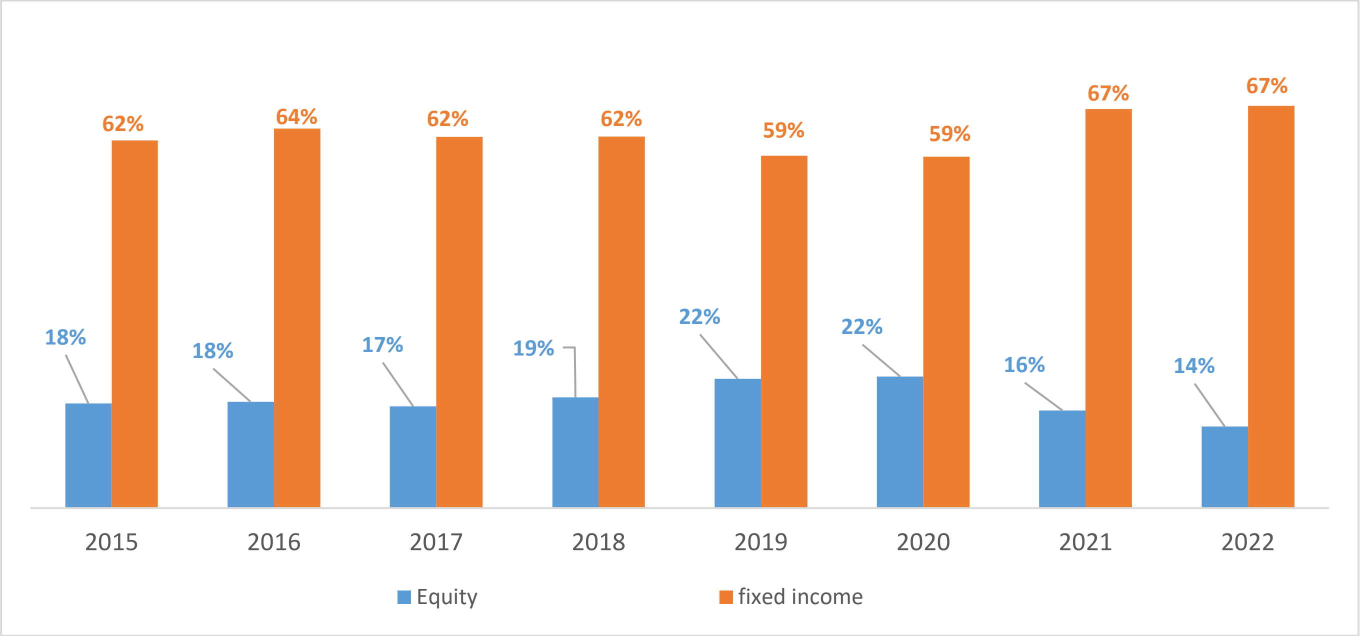
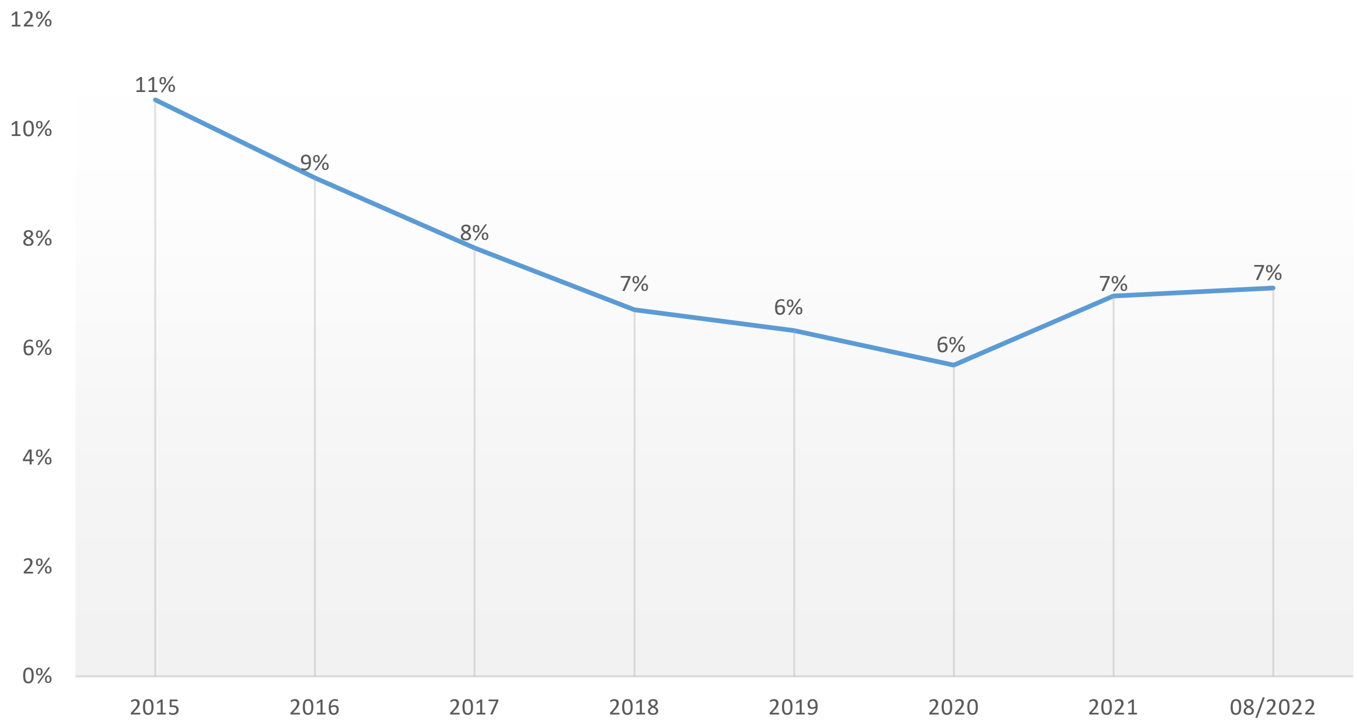
EQUITY AND FIXED INCOME ALLOCATION



Conservative allocation in Brazil means investing mainly in fixed income, as bonds (treasury or private debt) indexed to inflation guarantee the payment of actuarial rates.

PRIVATE FIXED INCOME



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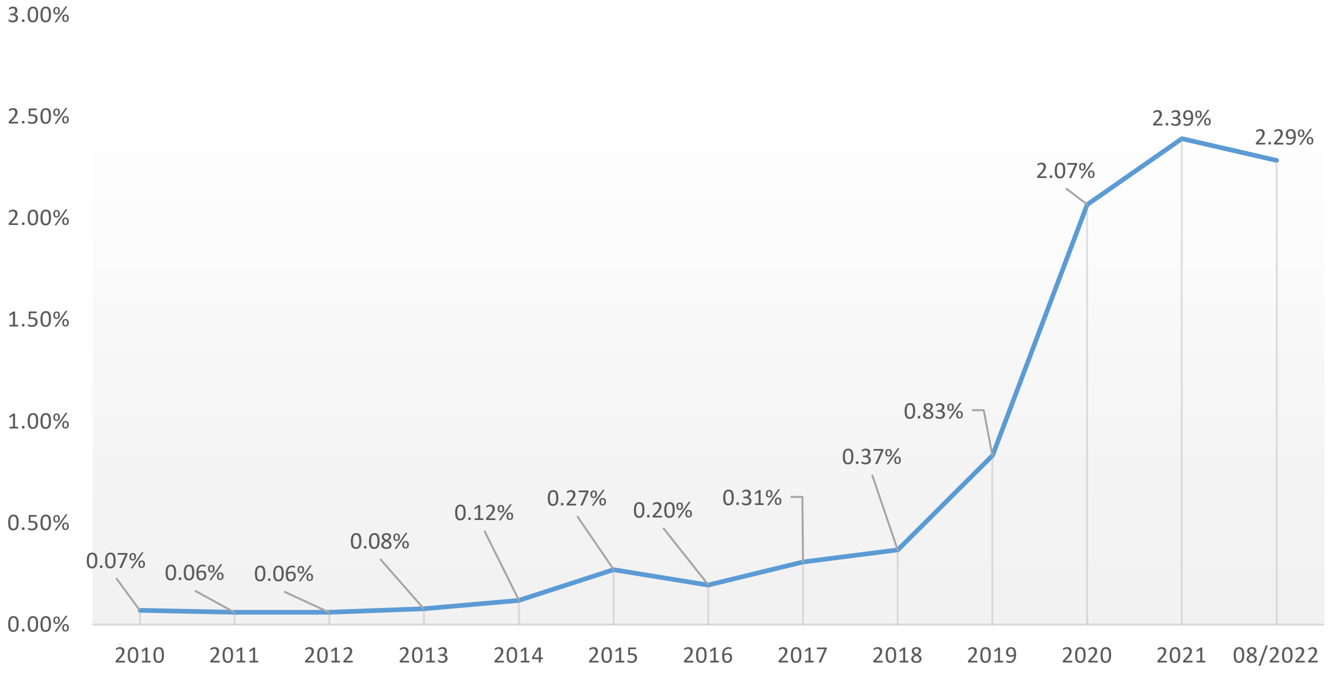
OVERSEAS ASSET ALLOCATION



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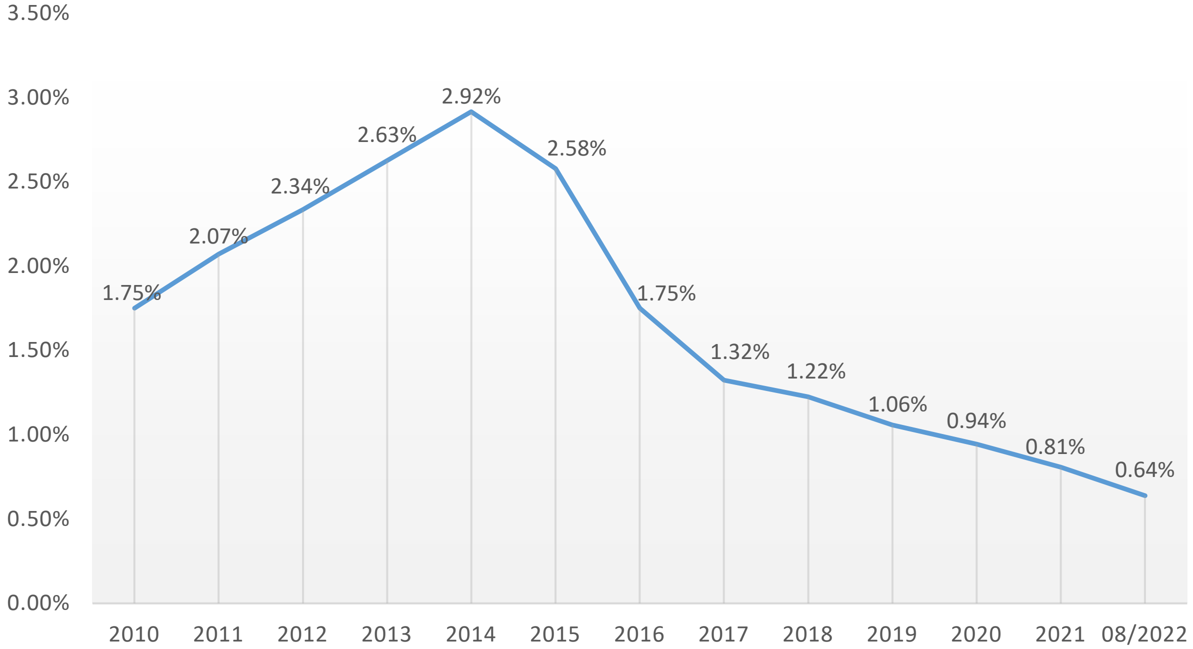
PRIVATE EQUITY ALLOCATION



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SOME PROS AND CONS OF THE DEPENDENCE ON INFLATION-LINKED BONDS

Advantages	Disadvantages
Captive market Lengthen maturity	Expenditure of the financing of the public debt
Reduces dependence on foreign investors	Low international diversification of domestic investors
Long-term market for Bonds, Real Estate, and Corporate Debt	Inertia effect
Security to markets	Reduces the participation of equity investors in infrastructure

A PIECE OF INTERNATIONAL EXPERIENCES

Country	Inception year	Market size (USD billions)	Ratio of inflation-linked to nominal debt (%)	Inflation index	Available maturities (years)
Canada	1991	39	10	Not Seasonally Adjusted Consumer Price Index	18 - 30
France	1998	254	15	Eurozone Harmonised Index of Consumer Prices, excluding tobacco	5 - 25
Sweden	1994	21	34	Consumer Price Index	5 - 20
United Kingdom	1981	596	39	Retail Price Index	5 - 30
United States	1997	1,507	12	Not Seasonally Adjusted Consumer Price Index for Urban Consumers	5 - 30
Brazil	1964	316	30	Consumer Price Index	5 - 40

THANK YOU.

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