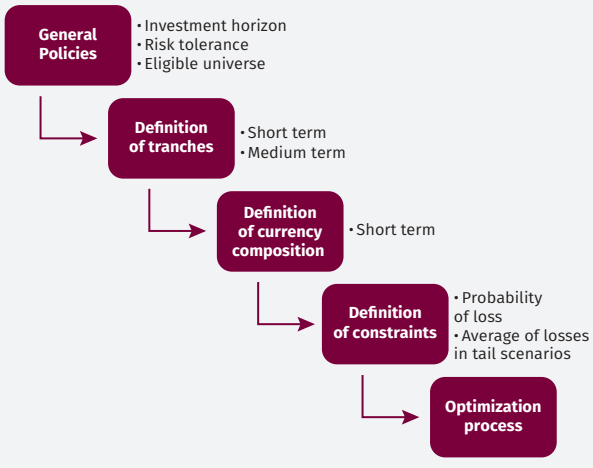
Box 2: Criteria for Defining the Eligible Asset Universe and its Maximum Participation in Strategic Asset Allocation

Diagram B2.1
Foreign Reserves Strategic Asset Selection Process



Source: *Banco de la República.*

One of the most relevant processes carried out by the International Investments Department (DII for the acronym in Spanish) is the strategic allocation of the foreign reserve assets. To conduct this process, it is necessary to consider the degree of risk aversion of the foreign reserves' administrator in relation to variables such as numeraire, the investment horizon, and the eligible asset universe (see Diagram B2.1). It is relevant to emphasize that general policies must be defined before conducting the strategic asset allocation, as the investment guidelines (in general) delimit and establish criteria for investing the reserves. These policies have been established based on market best practices and recommendations from multinational institutions, such as the International Monetary Fund (IMF) and the Bank for International Settlements (BIS), in line with international criteria. This box presents a framework that helps explain the process for defining the eligible asset universe for strategic asset allocation.

The methodology takes three aspects into consideration:

1. **Currency liquidity:** According to the BIS[1] triennial survey, minimum liquidity criteria is defined for various foreign exchange markets. Within the list of currencies, ranked from highest to lowest by total over-the-counter (OTC) transaction volumes, reserve currencies[2] with a turnover above the threshold defined as highly liquid by *Banco de la República*'s Foreign Reserves Committee are selected. Currencies meeting this criterion include: the U.S. dollar (USD), euro (EUR), Japanese yen (JPY), pound sterling (GBP), Chinese renminbi (CNY), Australian dollar (AUD), Canadian dollar (CAD), and Swiss franc (CHF).

2. **Positive interest rates:** The relevant interest rates of each currency must be positive, thus markets with negative rates are excluded. Currently, this guideline does not exclude any of the currencies that meet the criterion contained in the previous section.

3. **Government bond market liquidity:** for currencies that meet the first two criteria: The maximum position size that can be held is estimated so that the corresponding transactions can be carried out within a maximum of two days.

Generally, the methodology aims to ensure that exposure to each index can be liquidated within two days or less. In particular, the shortest-term index available for each currency[3] was selected, and its

1 Bank for International Settlements (BIS). *Triennial Central Bank Survey of foreign exchange and Over-the-counter derivatives markets in 2022: Preliminary Results*, December 2022, available at: https://www.bis.org/statistics/rpfx22.htm

2 *Banco de la República* reserve currencies include: Danish krone (DKK), Norwegian krone (NOK), Swedish krona (SEK), Australian dollar (AUD), Canadian dollar (CAD), U.S. dollar (USD), Hong Kong dollar (HKD), New Zealand dollar (NZD), Singapore dollar (SGD), euro (EUR), Swiss franc (CHF), pound sterling (GBP), Chinese renminbi (CNH/CNY), Japanese yen (JPY), and South Korean won (KRW).

3 The shortest-term index is used because, in a lower risk-taking scenario, it is generally possible to invest exclusively in this asset (when interest rates are low, the optimal solution lies at the shortest possible duration).

maximum share[4] was estimated. This value is used as the maximum share constraint for the remaining indices of each currency. Although liquidity indicators are available for some of the markets or indices used in strategic asset allocation, these do not cover all required assets, and in some cases, are not comparable. Additionally, the survey inquired about the methodologies used by counterparties to assess portfolio liquidity, finding that they likewise rely on similar periodic surveys to this end.

Table B2.1 presents information on the short-term indices and the maximum share under liquidity constraints. The first column indicates the currency; the second and third columns report the index used; the fourth column presents the modified duration; and the fifth column shows the maximum allowed share. Regarding the latter, it is essential to clarify that these are not the weights assigned to assets within reserve portfolios; instead, they constitute constraints imposed on the optimization exercise that prevent the asset's share from exceeding these limits.

Table B2.1
Short-Term Indices and their Maximum Share Under Liquidity Constraints

Currency	Description	Index	Duration	wmax
USD	U.S. government bonds, 0–1 years	G0QA	0.49	100,0%
CNY	Chinese government bonds, 1–5 years	GVCN	2.63	53,0%
JPY	Japanese government bonds, 0–1 years	G0YA	0.5	34,0%
EUR	German government bonds, 0–1 years	GADB	0.49	13,0%
AUD	Australian government bonds, 0–3 years	GJBT	1.37	10,0%
CAD	Canadian government bonds, 0–1 years	G0CA	0.43	8,0%
GBP	United Kingdom government bonds, 0–1 years	G0LA	0.52	7,0%

Source: ICE and *Banco de la República.*

Similarly, within the short end of the curve, the currency basket is imposed as a constraint, together with the outcome of applying the weights defined by the currency basket to the shortest-duration securities of each currency included in the basket.

4 $w^{\,proposed}_{\,maaxliq} = \min\left(\frac{MaxBond^{*} \# Bond^{*}2}{VM_{\,porfolio}}, 100\%\right)$