THE WORLD BANK
Treasury | RAMP

ESG and Sustainability Investing for Central Bank Reserve Managers

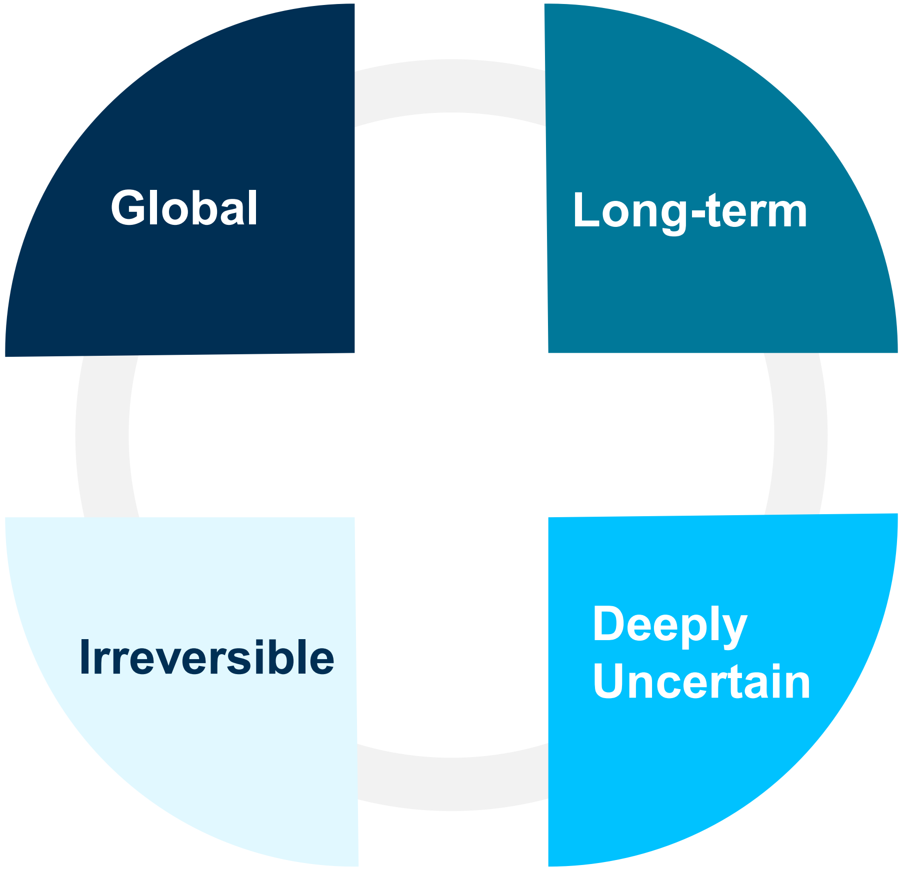
Reserve Management Conference 2026 - CBSL

September 10, 2026 • Colombo, Sri Lanka

Philip Dongsoo Hong, PhD, CFA
dhong1@worldbank.org
Senior Financial Officer
Reserve Advisory & Management Partnership (RAMP)

Extreme events increase climate risk

Nepal glacier collapse, Europe heat waves, Canada wildfires, floods in Africa and Asia…



A tonne of carbon-dioxide has the same warming effect wherever it is emitted – the externality has no border

Emissions today shape climate outcomes for centuries; today's decision-makers bear little of the cost

Some physical tipping points (ice sheets melting, permafrost thawing) cannot be undone on human timescales

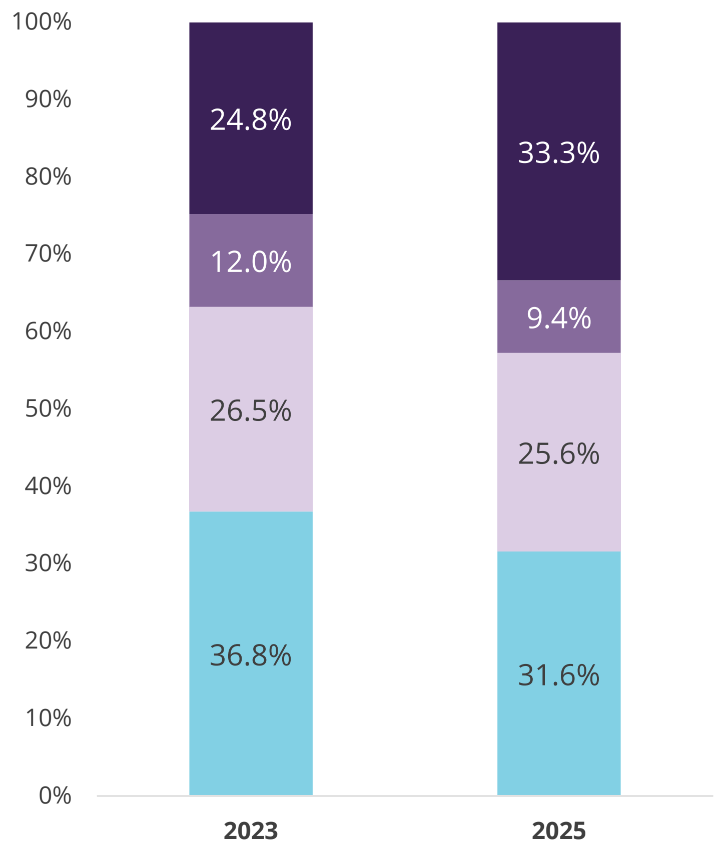
Climate sensitivity, tipping points, and adaptation costs cannot be forecast with precision

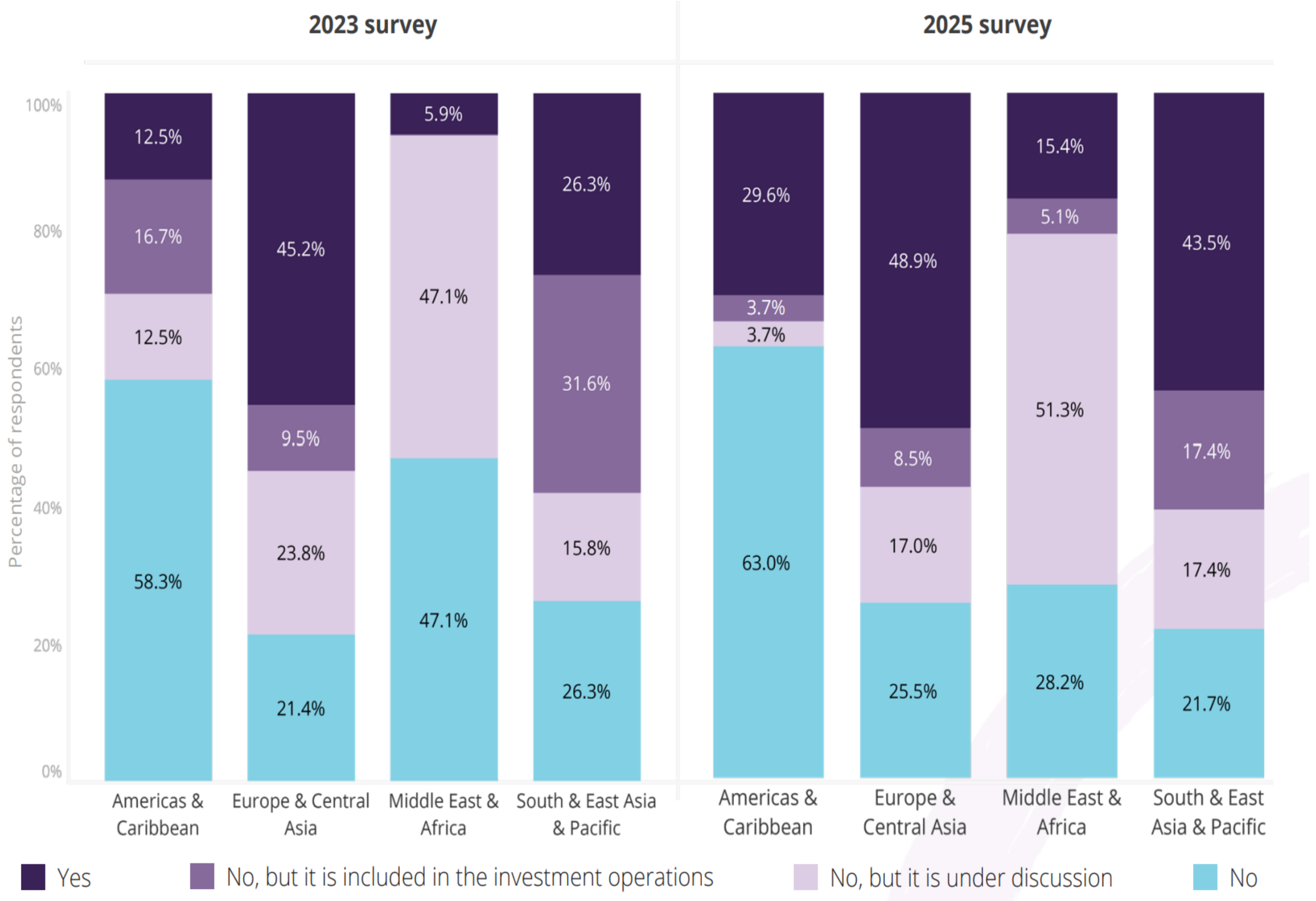
Central banks’ portfolios in their balance sheets

Portfolio	Held For	Sustainable Responsible Investment/ESG/Sustainability considerations
Policy portfolios	FX intervention, asset purchase programmes, monetary policy, regulatory policy goals — the largest share of central bank assets	**Often thought of as “out of scope” but ESG Integration as we have defined it, should also apply here**
FX investment	The share of FX reserves not held for monetary policy, earmarked for financial return generation	**High leeway — less bound by the policy objective**
Own funds	Generating returns within a risk tolerance; often the most diversified mix (equities, corporate bonds, sometimes private debt)	**Highest leeway — most suited to SRI adoption**
Pension	A long-term retirement savings pool with a longer investment horizon, diverse asset classes and geographies	**Well suited — provided it aligns with beneficiaries' interests**

Source: NGFS, “Sustainable and responsible investment in central banks' portfolio management – Practices and recommendations” (May 2024)

Significant increase in sustainability adoption

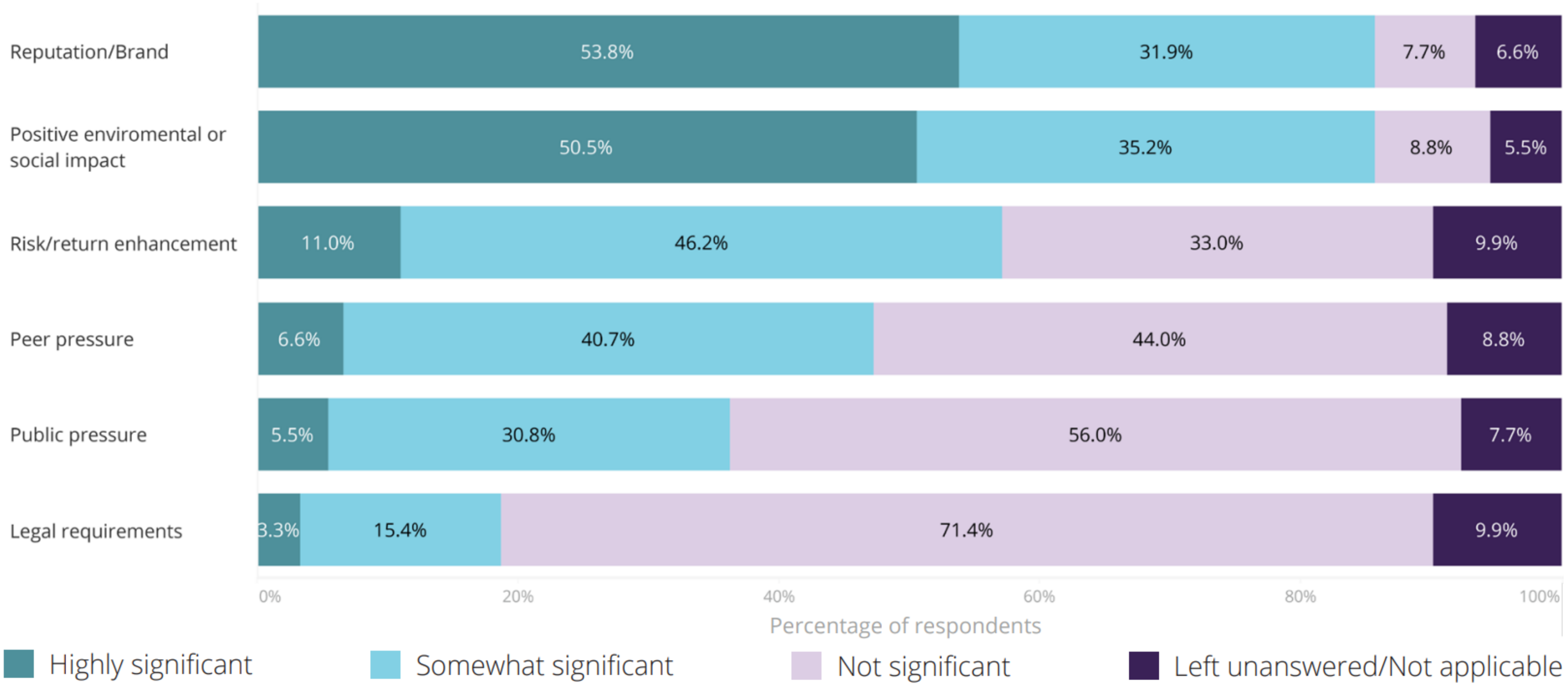




N: 119 (2023), 136 (2025).
Source: 2025 RAMP Survey on the Reserve Management Practices of Central Banks.

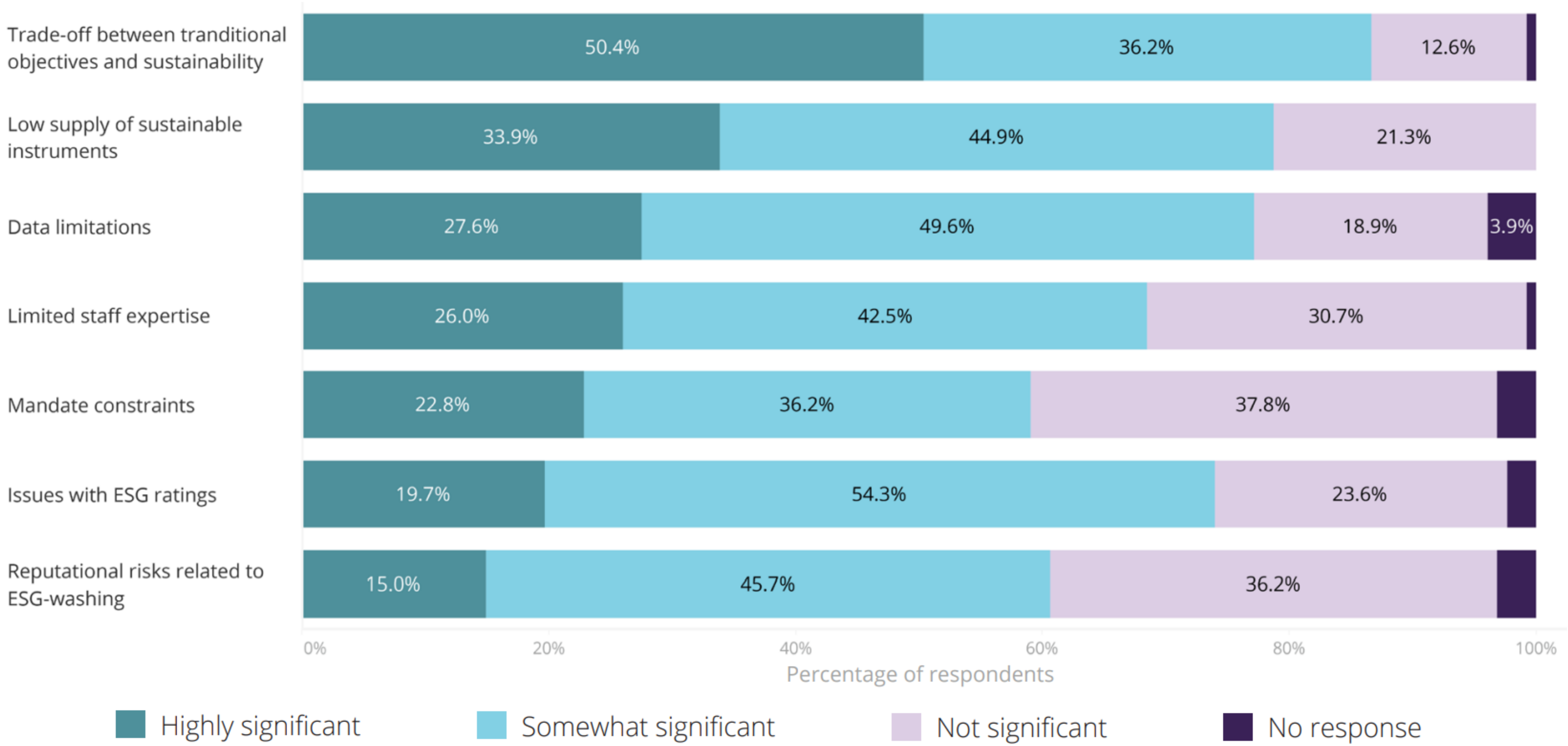
THE WORLD BANK
Treasury | RAMP

Motivation behind incorporating ESG



N: 91
Source: 2025 RAMP Survey on the Reserve Management Practices of Central Banks.

Challenges reserve managers face



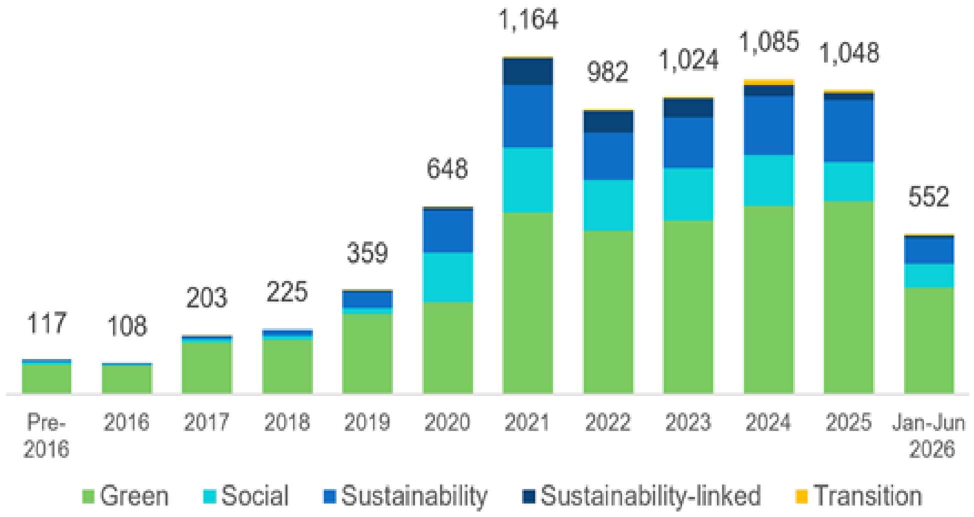
N: 127
Source: 2025 RAMP Survey on the Reserve Management Practices of Central Banks.

THE WORLD BANK
Treasury | RAMP

Green, Social & Sustainable bonds market size

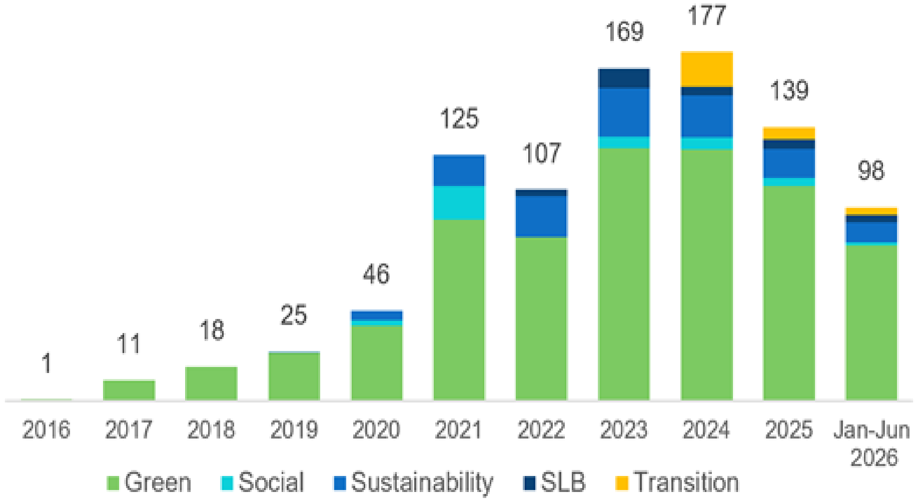
- Continue to grow in relative importance
- Close to U$0.9 trillion of sustainable debt issued in 2025 and U$552 billion for the first half of 2026.
- The decrease from 2021 is mainly due to a reduction in demand for bonds in a rising rate environment.

Global labeled sustainable bond annual issuance, USD bn



Source: World Bank based on Environmental Finance Data

Sovereign labeled sustainable bond annual issuance, USD bn



Source: World Bank based on Environmental Finance Data

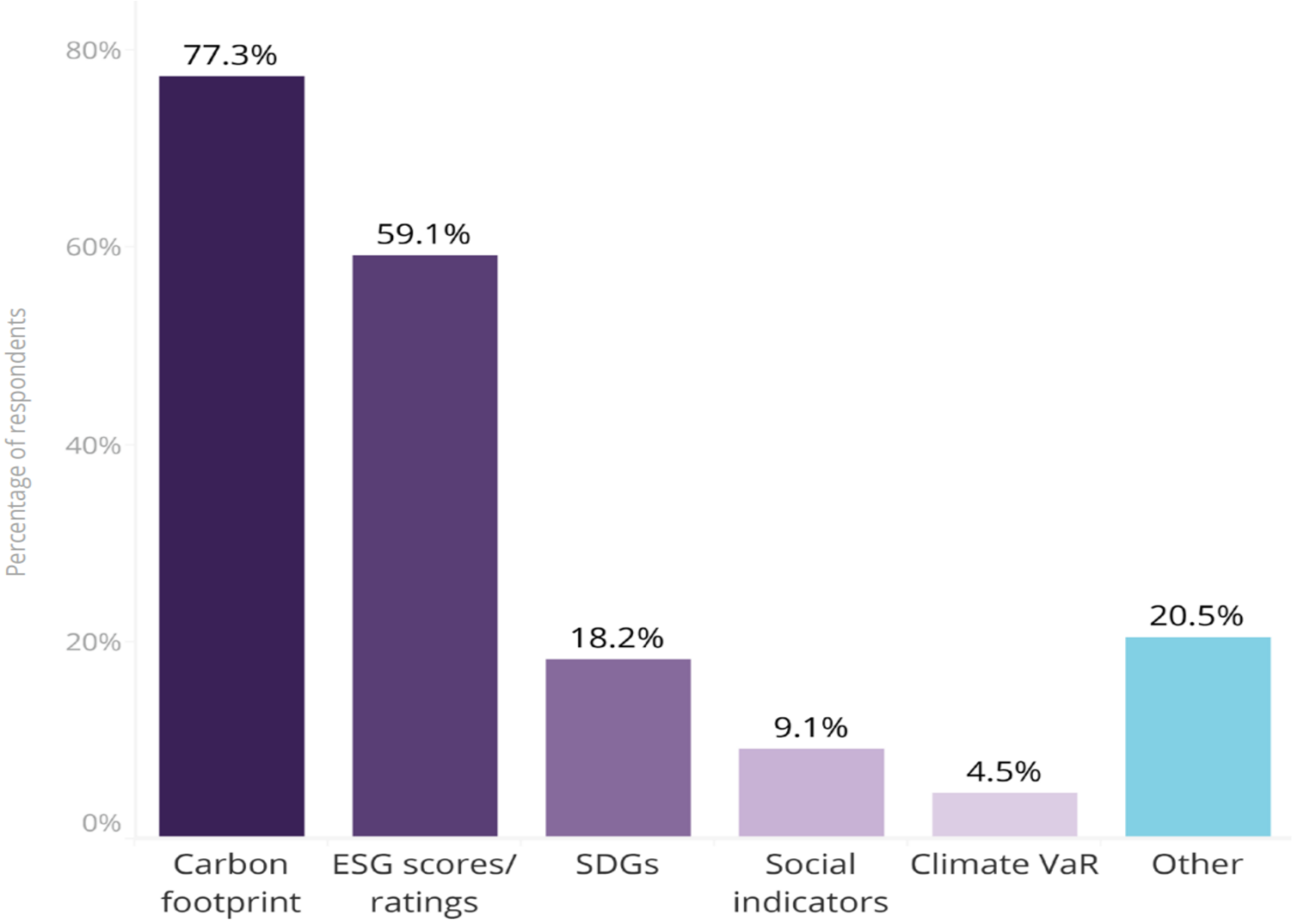
THE WORLD BANK
Treasury | RAMP

ESG strategies used among reserve managers

Sustainability approach	Government/ SSA bonds	Corporate bonds	High-yield bonds	Equity	Total
Thematic investing, including labeled bonds	66%	41%	3%	3%	67%
Negative/exclusionary screening	31%	43%	3%	26%	59%
ESG integration	31%	28%	3%	17%	43%
Impact investing different from green, social, or sustainability bonds	19%	14%	2%	2%	22%
Positive/best-in-class screening	14%	14%	2%	14%	22%
Active ownership and engagement	7%	7%	2%	10%	17%

N: 58
Source: 2025 RAMP Survey on the Reserve Management Practices of Central Banks.

ESG metrics used



N: 44
Source: 2025 RAMP Survey on the Reserve Management Practices of Central Banks.

THE WORLD BANK
Treasury | RAMP

WBG Treasury : ESG integration and impact investing

ESG Integration	ESG Screening ESG Tilting Norms-based Investing	Impact Investing

The explicit and systematic inclusion of ESG factors in investment analysis and investment decisions

“ *In line with TREAM’s commitment and beliefs, integration of ESG considerations throughout the investment process is an integral component of the overall approach to investment management.*

TREAM believes that ESG Integration enables better informed decision making which may help identify and manage risks and opportunities, supporting the investment objectives of the portfolios TREAM manages for its investment management clients. ”

Strategic asset allocation and climate risk

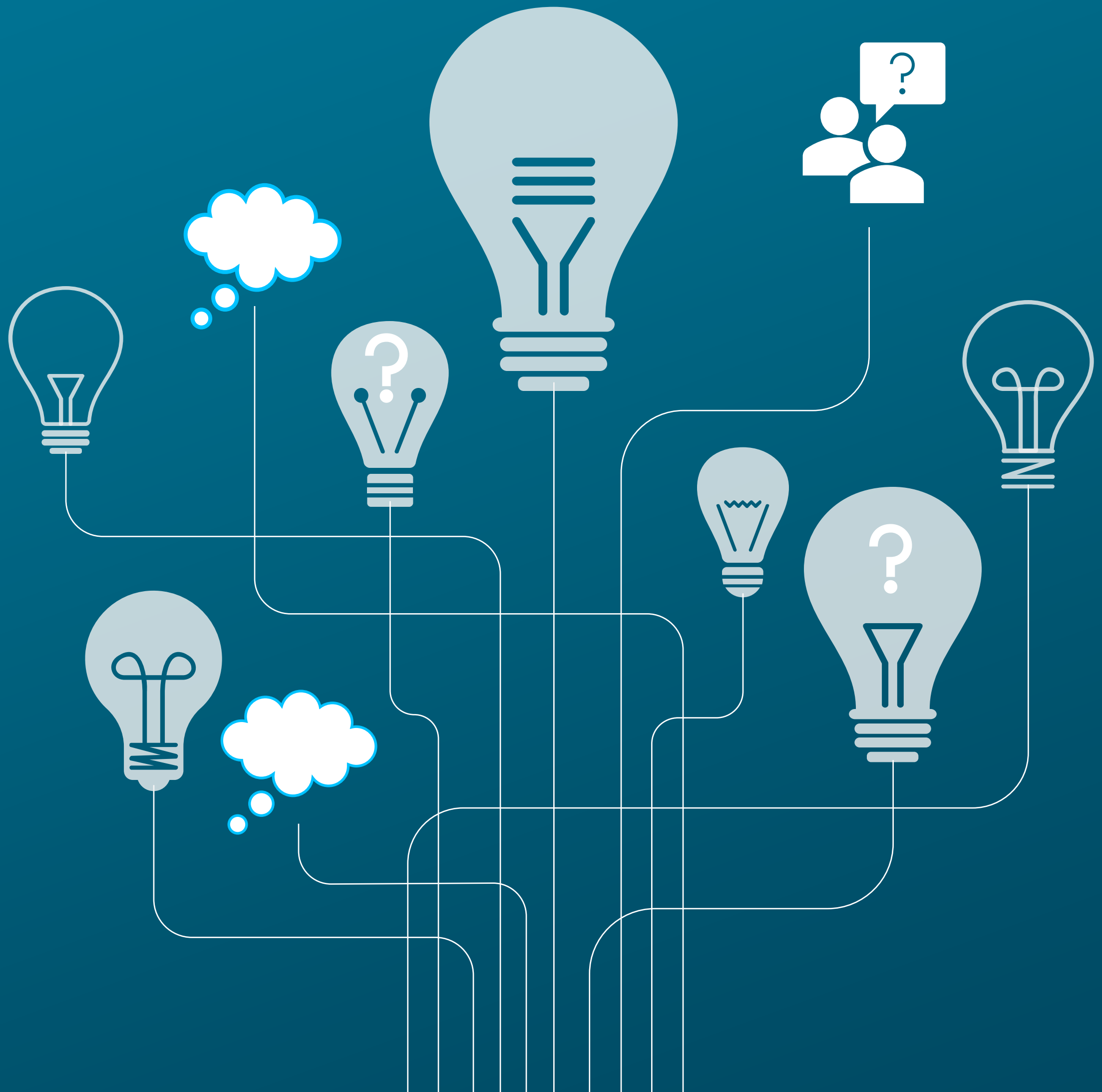
- **Risk-based approach: climate risks – physical and transition risks – can impact the asset allocation**
- Integrating ESG factors in the asset allocation is a challenge, especially for investors with short- to medium-term investment horizons

Macroeconomic model with Climate Risks → Asset pricing model with Climate Risks → Capital market assumptions

- Modern portfolio theory can be extended to build “**ESG optimal portfolios**”. It allows to exhibit a tradeoff between risk, return and ESG scores. However, it faces the same issues as standard models, especially related to calibration and robustness of the model.

- Our Risk team has developed **climate risk models incorporating NGFS scenarios**. Overall, the transition to low-carbon economies is expected to **increase default risk for some counterparties** and **higher mark-to-market volatility for securities held in the investment portfolios.**

Comments & Questions



Disclaimer

This presentation and associated comments by speakers should be treated confidentially and not shared or disclosed to any parties outside your institution. Any interpretations, conclusions, views, or opinions expressed are those solely of the authors and speakers and do not represent those of the World Bank or its Board of Directors. The information provided herein and associated comments from speakers are not intended and should not be interpreted as constituting investment advice. The World Bank does not take responsibility for the accuracy of any data included or referenced in this presentation.

Rights and Permissions

The material in this presentation is copyrighted. Copying and/or transmitting portions or all of this work to any party outside of your institution without permission may be a violation of applicable law.

©2026 The International Bank for Reconstruction and Development The World Bank 1818 H Street NW Washington DC 20433

For permission to photocopy or reprint any part of this work, please contact E-mail: rampevents@worldbank.org, Reserve Advisory and Management Partnership (RAMP), World Bank Treasury.

THE WORLD BANK
Treasury | RAMP