

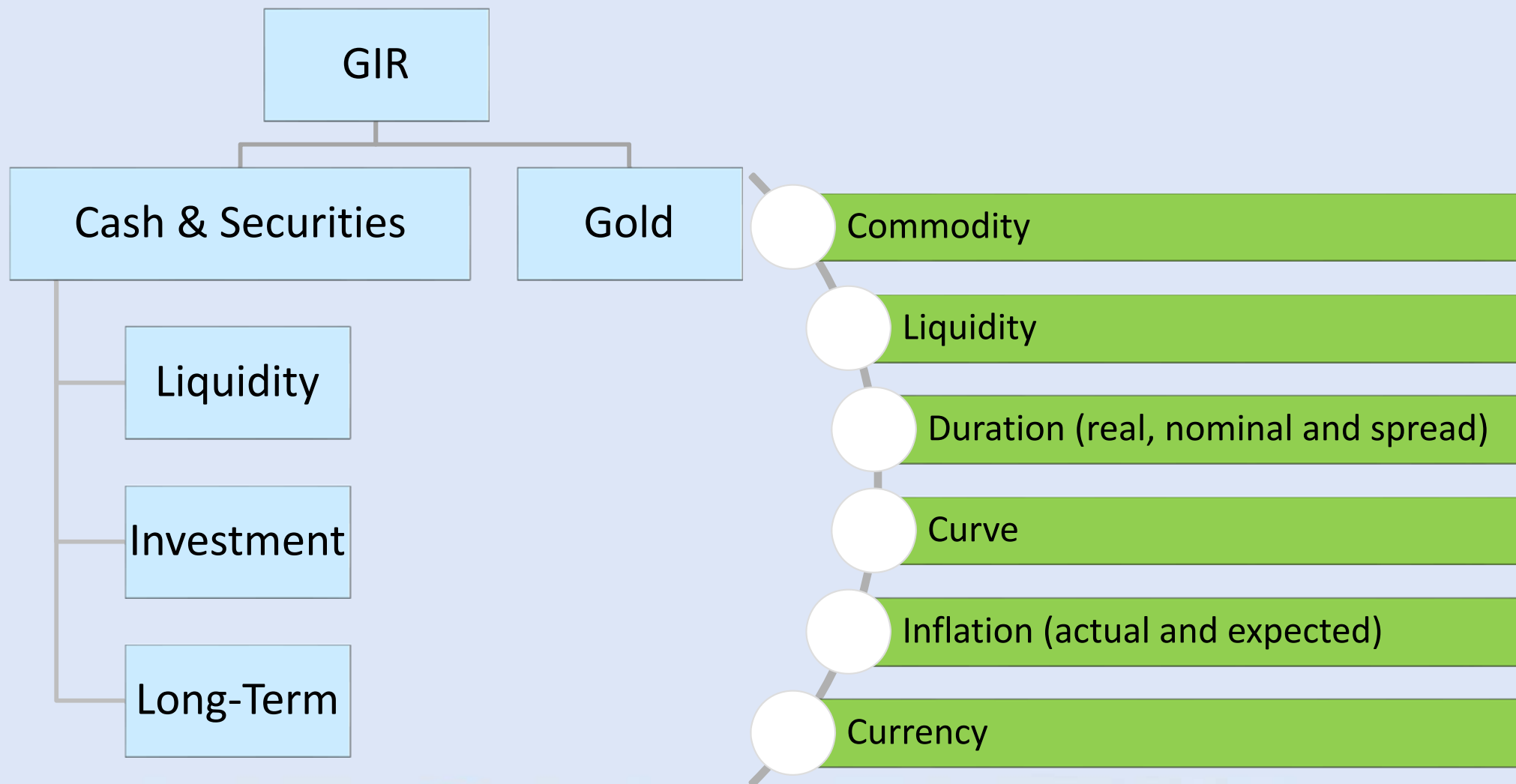
The Future of Reserve Management: An Emerging-Market Perspective

High-Level Reserve Management Conference
Mexico City, 31 March 2017



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BSP's Framework



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Our Challenges

Reaching the limits of benchmark-investing

- It can sometimes force you to do something that you may not be comfortable with (e.g., negative yields and extension of duration as a result), and
- Sometimes positive returns are not apparent in the short-term or as investment conditions change (e.g., as policy normalizes)

Asset-class based approach to asset allocation → Massive concentration to only a few risk factors



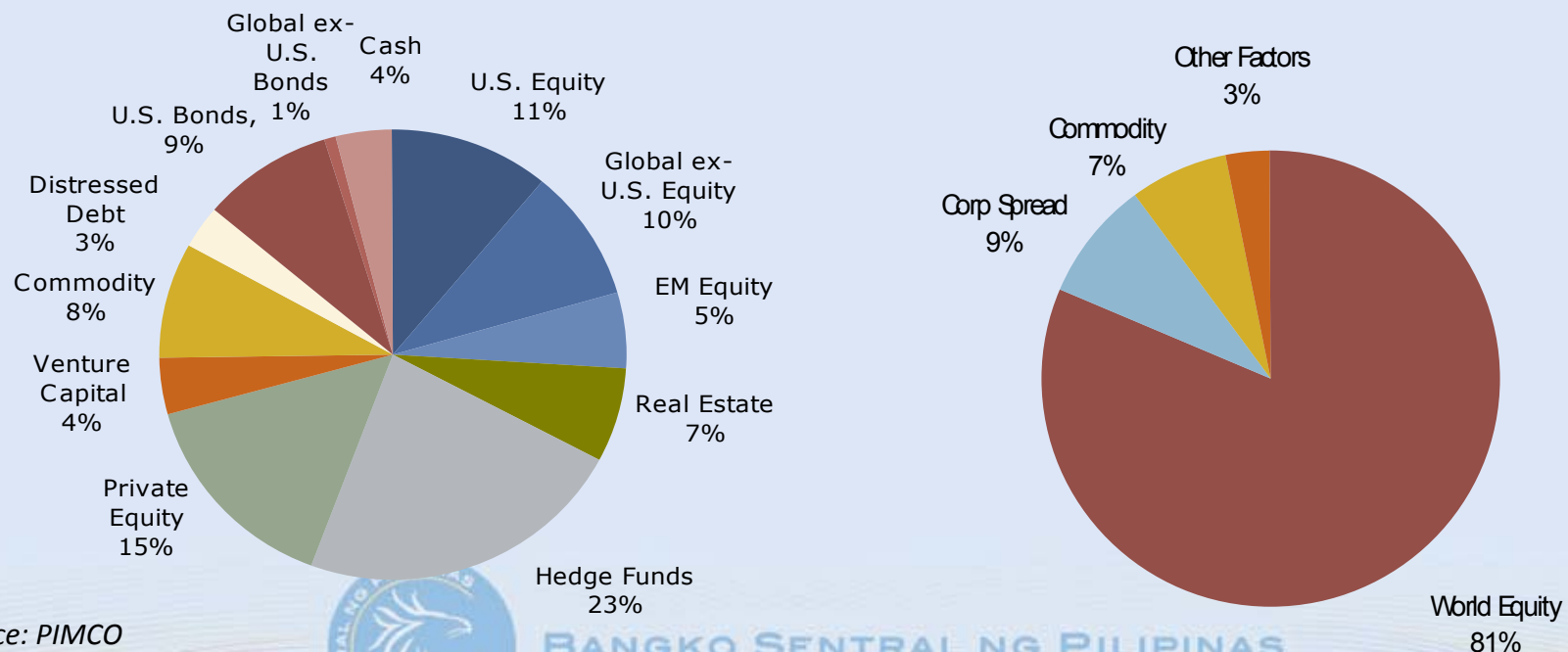
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Future Reserve Management Trends

Addressing the benchmark problem: total/absolute returns

- May continue to be a trend given the current environment of very low yields...but until when?

Asset allocation approach: Asset-class or risk-factor-based?



* Source: PIMCO

Asset-Class-Based

Risk-Factor-Based

Future Reserve Management Trends

Reviewing the numeraire

- Consider the tranche and its objective, and determine the numeraire for each tranche

The future of reserve management will be determined by the environment within which the reserve manager operates



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Central Banks - Profile and Constraints*

	Intense Public Scrutiny	Ownership Structure	Good Neighbor & Other Constraints	Little Control Over Portfolio Size	Size & Market Position	Institutional Culture
Unique constraints	<p>Portfolio losses attract public attention; impact credibility & independence</p> <p>Opportunity costs can be debated publicly, especially in countries with large development agendas</p>	<p>Annual revenue sharing with gov't can impede development of a capital buffer</p> <p>Limits incentive to sell (e.g. gold)</p> <p>Accounting treatment may drive behavior (e.g. realize losses but not gains)</p>	<p>Not ok to target other countries' currencies</p> <p>Buying certain assets (e.g. inflation protection) may send unintended signals</p> <p>Credit risk difficult to manage; withdrawal can exacerbate problems</p>	<p>Portfolio size & flows depend on policy regime & exogenous factors</p>	<p>Large portfolio size can create market dislocation</p> <p>Often limited to most liquid asset classes</p> <p>Reserves accumulation can be inflationary</p> <p>Sterilization may introduce negative carry</p>	<p>Incentive structures are asymmetric for individuals and the institution</p> <p>Budget / resources often limited. Hard to retain experienced staff</p>
Conservative investors	<p>Preservation of capital more important than achieving high returns</p> <p>Acceptable loss horizons very short</p> <p>Seek relative vs. absolute returns</p>	<p>Tendency to manage risk at asset level not portfolio level</p> <p>Risk often mitigated by delisting rather than diversifying</p> <p>However, risk approach continues to become more sophisticated</p>	<p>Settlement delays, fails & operational problems attract high level of attention</p> <p>Tendency to outsource middle / back office functions</p>	<p>Liquidity buffers needed to support implementation of monetary & exchange rate policy</p> <p>Investment horizon typically short (1-3 years)</p>	<p>Gradual and sequential expansion to new asset classes</p>	<p>Long decision making process</p> <p>Little upside to making change</p> <p>Procurement rules require RFP process, transparency</p>
	Safety Over Return	Risk Avoidance	Operational Risk is Critical	Liquidity is Paramount	Tiered Approach	Long Time Frame

* Source: JPMorgan New Trends in Reserve Management (August 2016)