



BANK FOR INTERNATIONAL SETTLEMENTS

High-level Reserve Management Conference, Mexico City

Emerging Markets' perspective on the future of reserve management

Joachim Coche

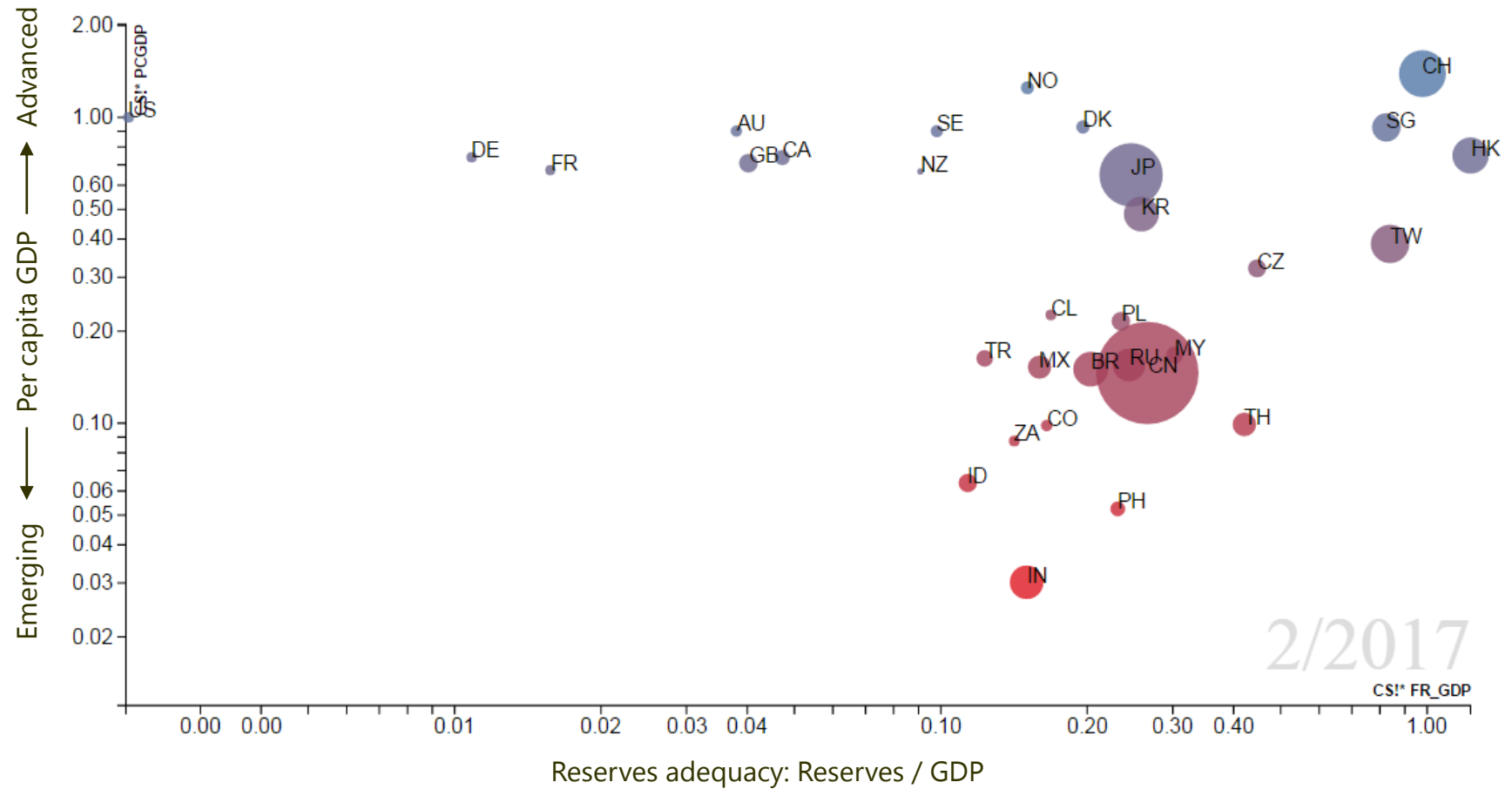
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31 March 2017



Reserves and GDP



2/2017

CSI* FR_GDP

Source: IMF, Bloomberg. Calculations and visualisation performed using the BIS Asset Management Asset Allocation Module (BAAM).

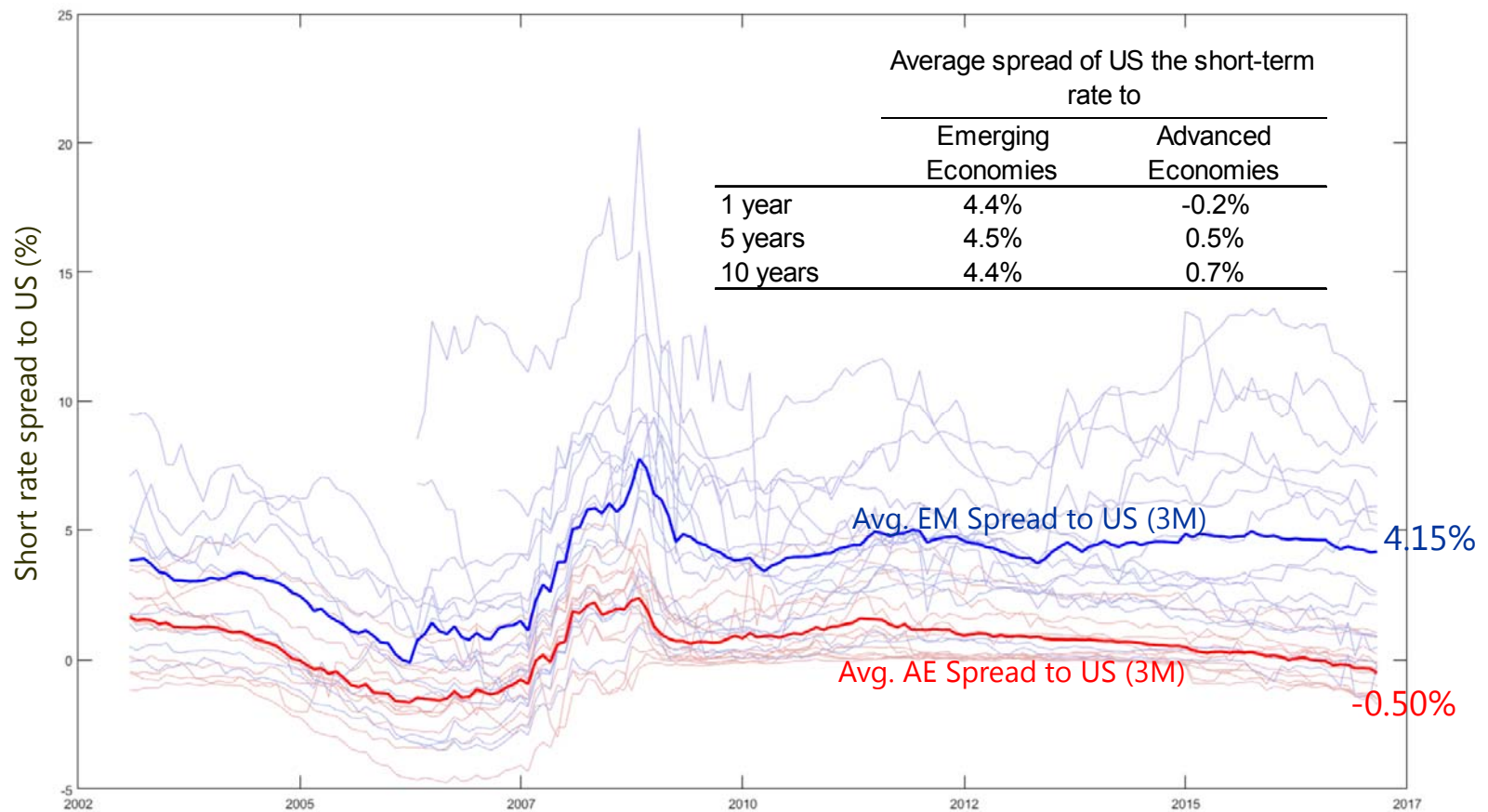


Outline

- Market environment: holding costs vs. currency returns
- BIS Survey on reserves management practices: emerging vs. advanced economies
- Currency Numeraire: Reserve currency vs. local currency perspective



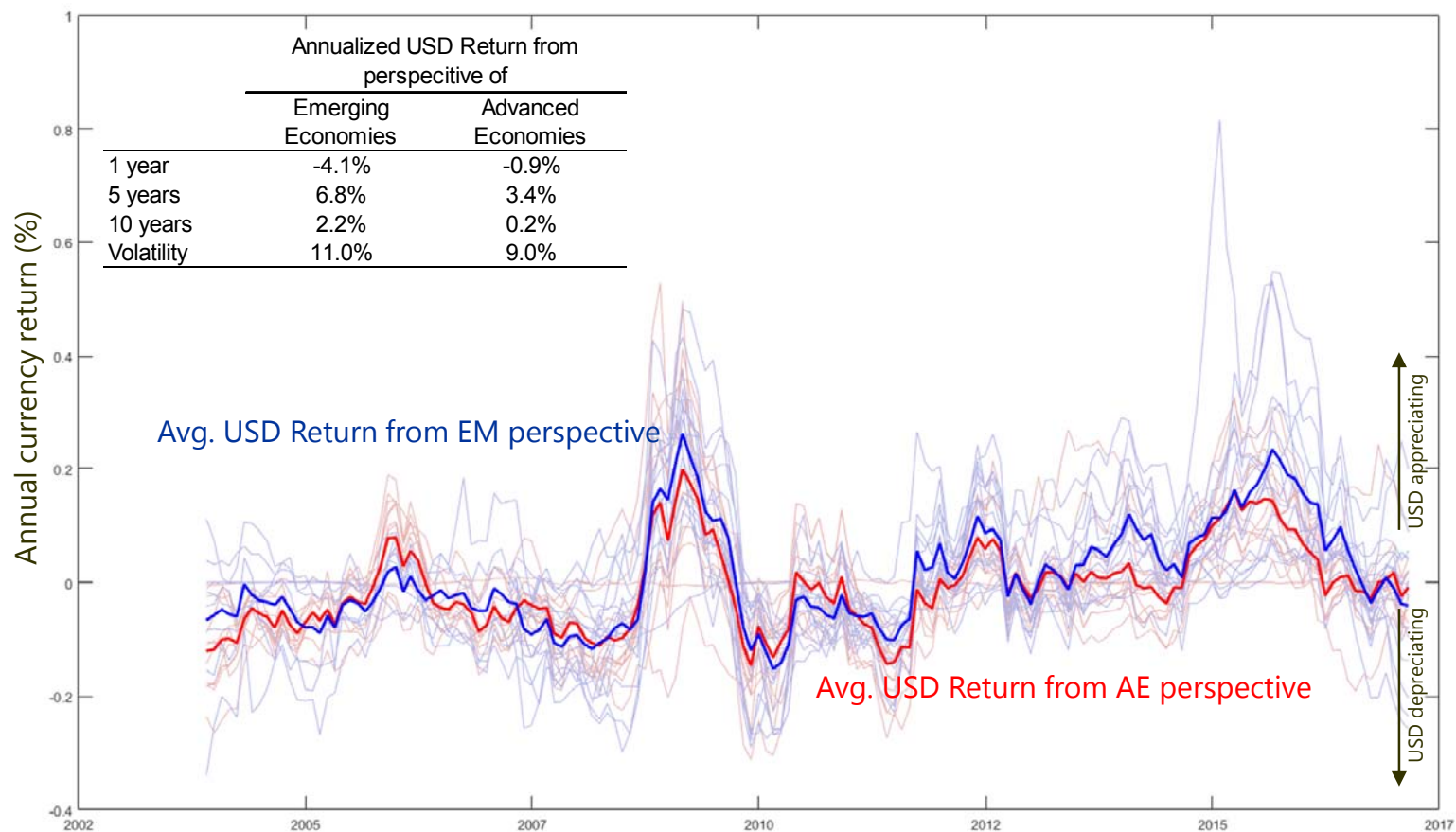
Holding costs



Notes: Sovereign curve spreads at 3 months maturity of the US and averages across 16 emerging economies (BR, CL, CN, CO, CZ, ID, IN, MX, MY, PH, PL, RU, TH, TR, TW, ZA) and 13 advanced economies (euro area (AAA) GB, JP, AU, CA, CH, DK, HK, IL, KR, NO, SE, SG). Sources: Bloomberg, BAAM.



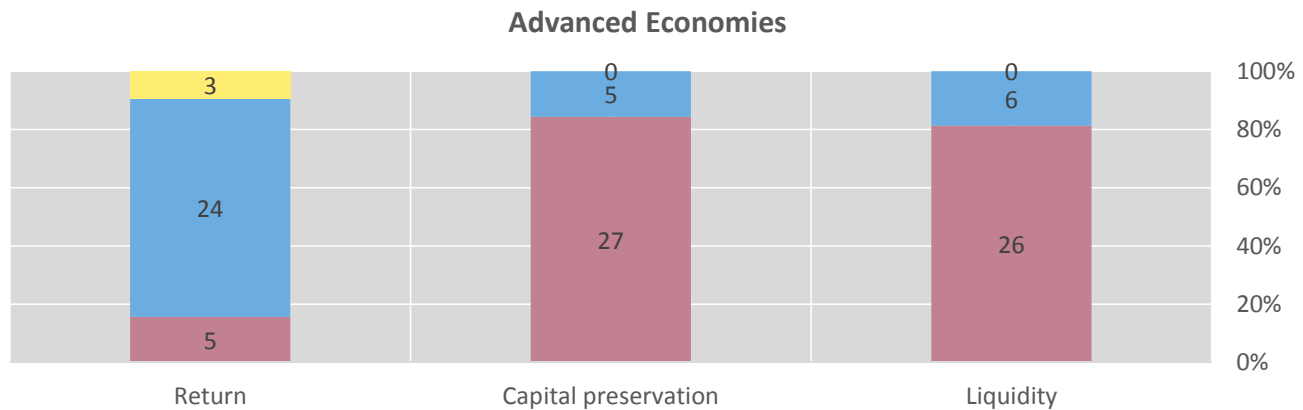
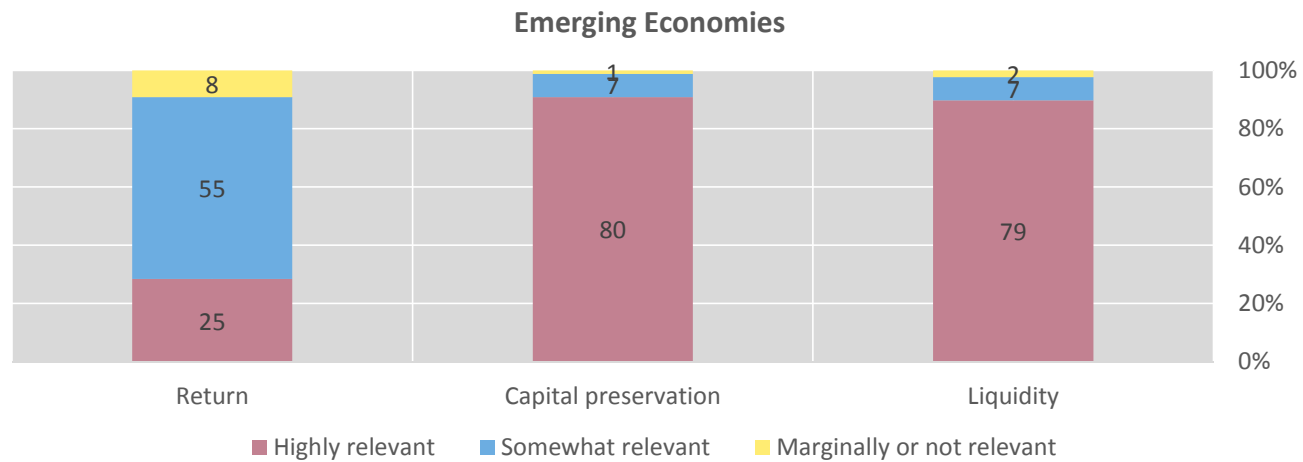
Currency returns



Notes: Overlapping annual returns are calculated as simple averages across 16 emerging economies (BRL, CLP, CNY, COP, CZK, IDR, INR, MXN, MYR, PHP, PLN, RUB, THB, TRY, TWD, ZAR) and 13 advanced economies (EUR, GBP, JPY, AUD, CAD, CHF, DKK, HKD, ILS, KRW, NOK, SEK, SGD). Sources: Bloomberg, BAAM.



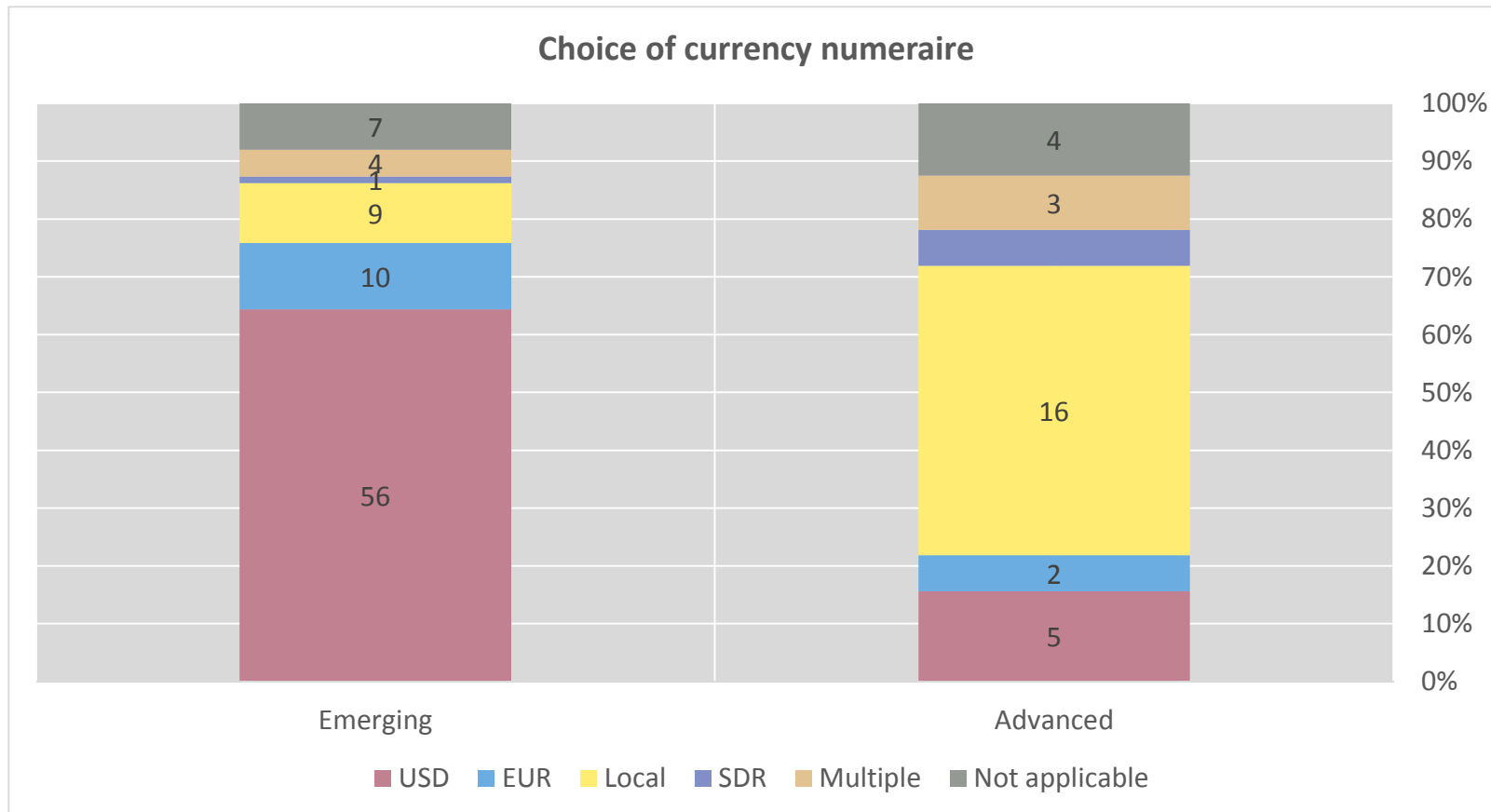
BIS Survey: Investment objectives



Source: BIS Central Bank Survey 2016 which includes responses from 120 central banks to questionnaires sent out in April 2016. For the purpose of this presentation, 88 central banks were classified as of emerging economies and 32 as of advanced economies.



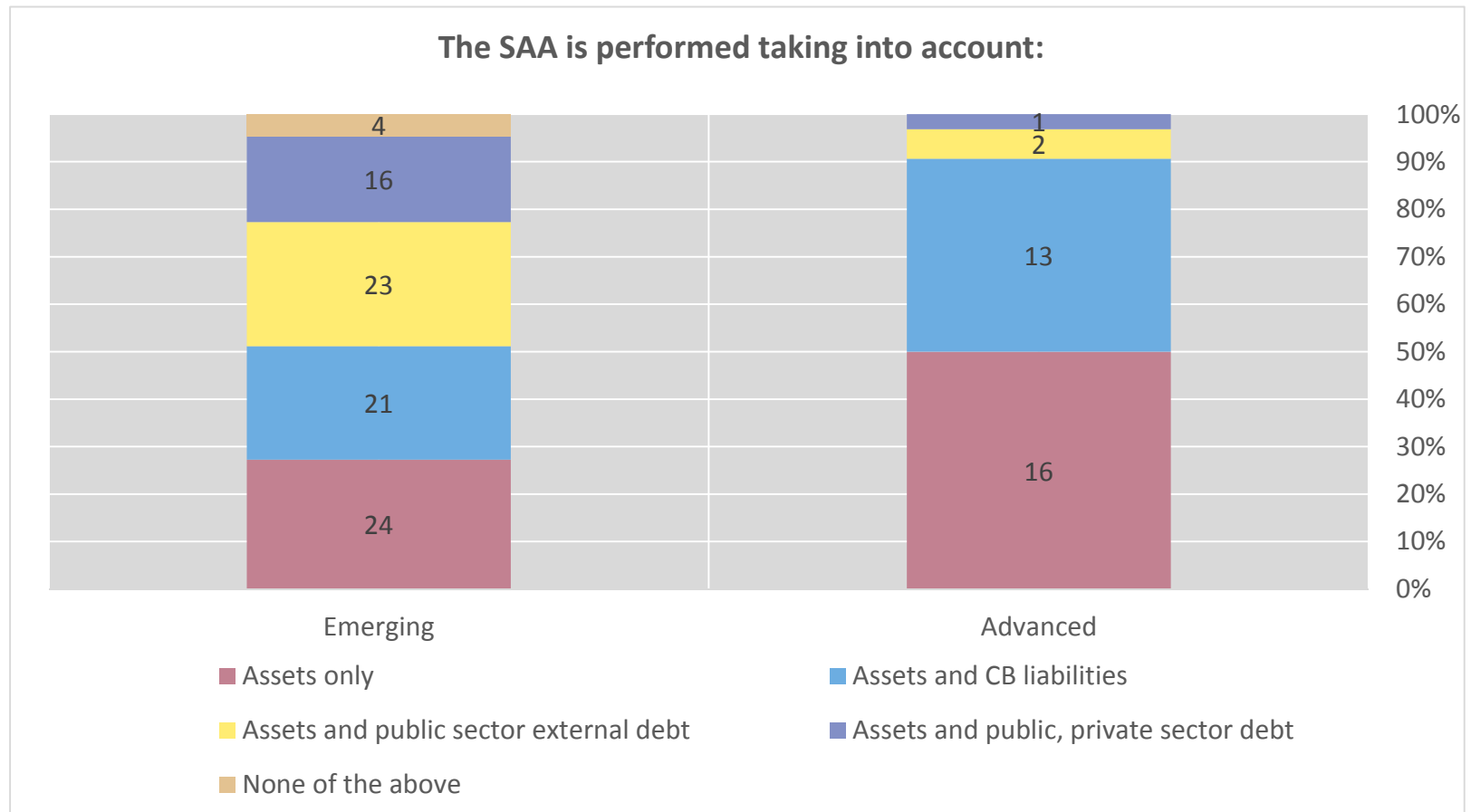
BIS Survey: Numeraire Assumption



Source: BIS Central Bank Survey 2016.



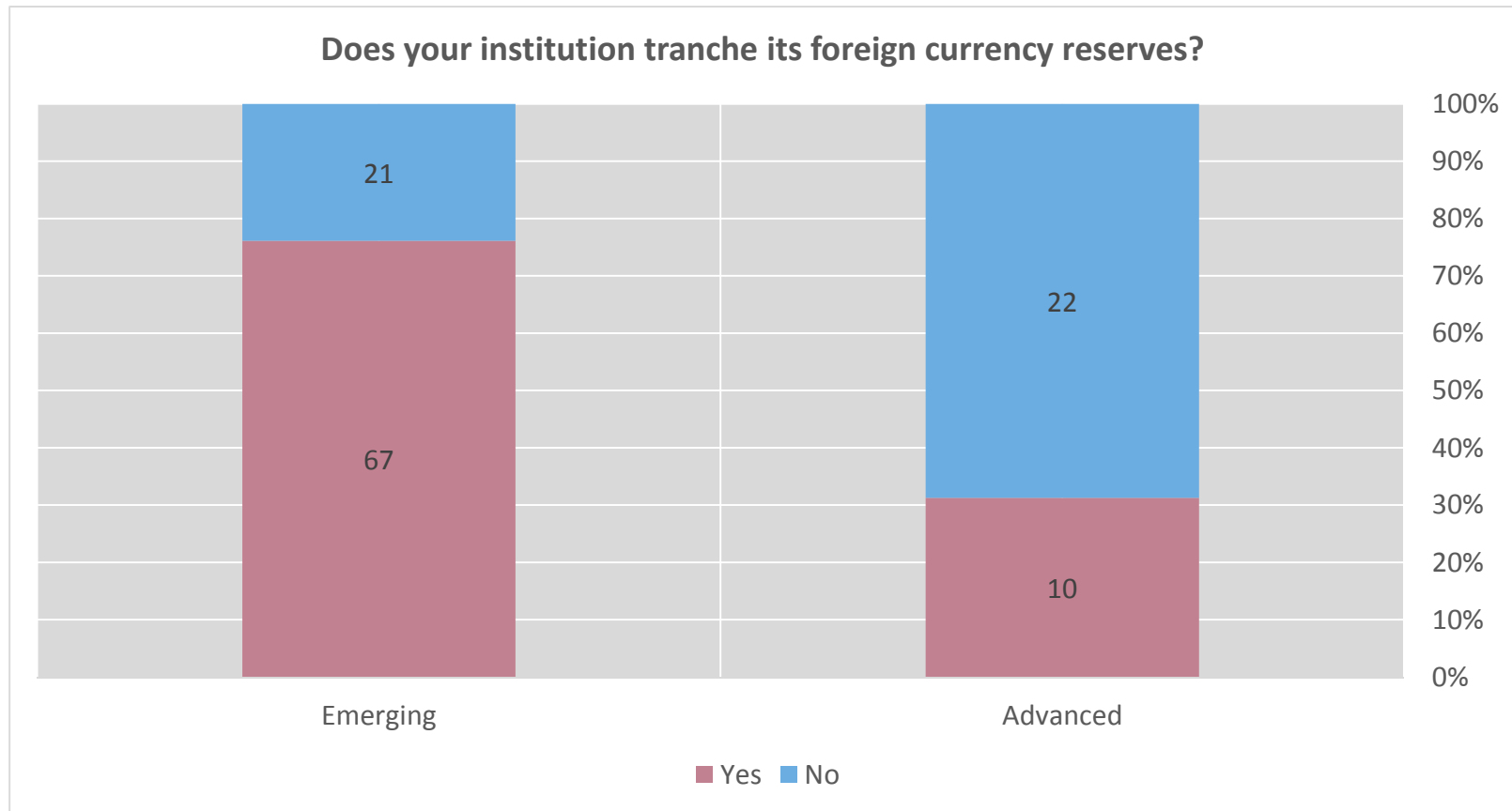
BIS Survey: SAA Process and Framework



Source: BIS Central Bank Survey 2016.



BIS Survey: Tranching

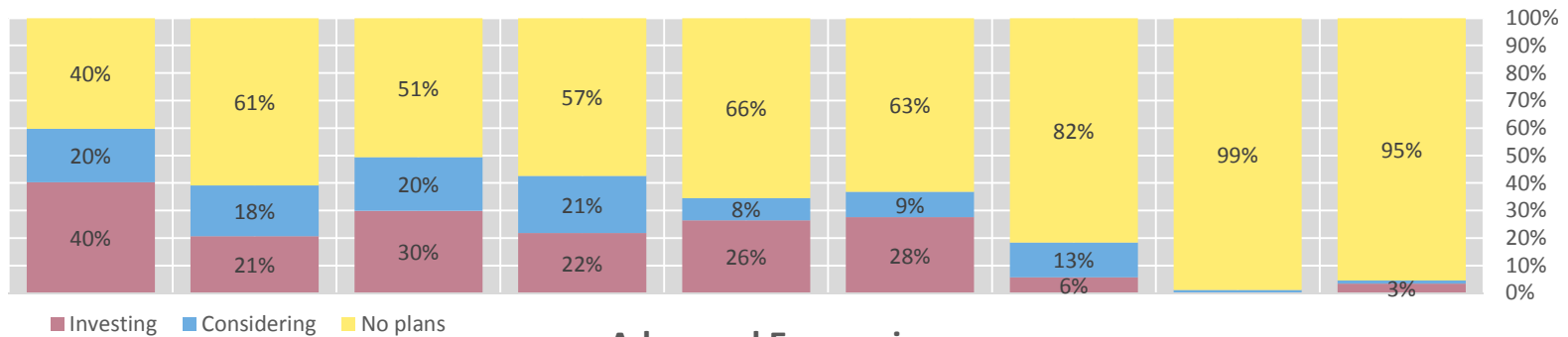


Source: BIS Central Bank Survey 2016.

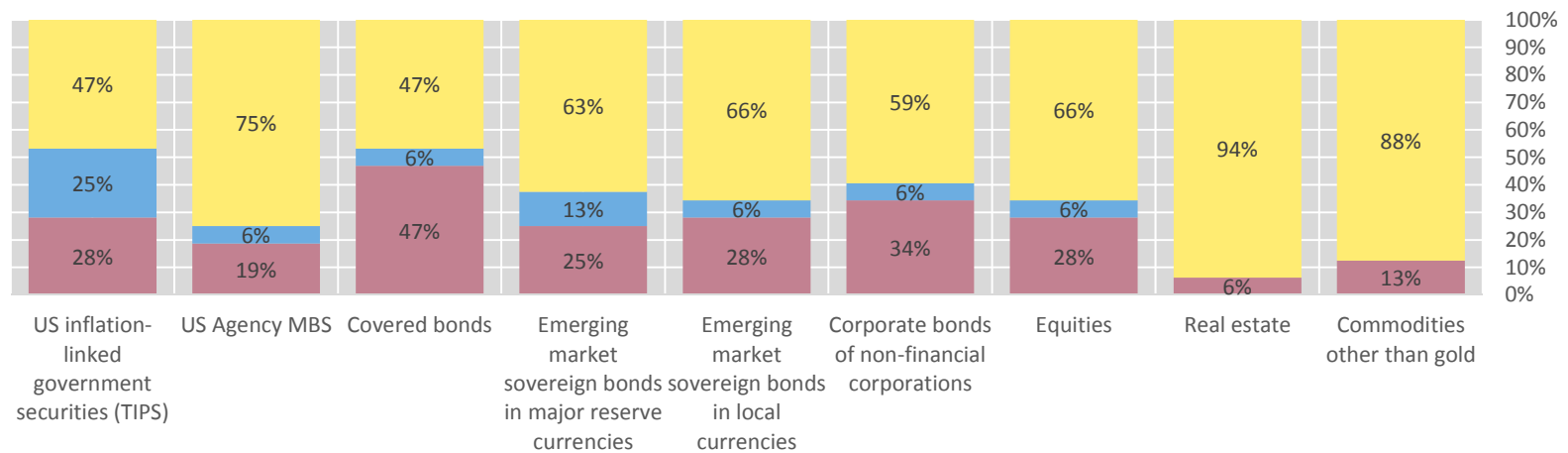


BIS Survey: Asset allocation

Emerging Economies



Advanced Economies

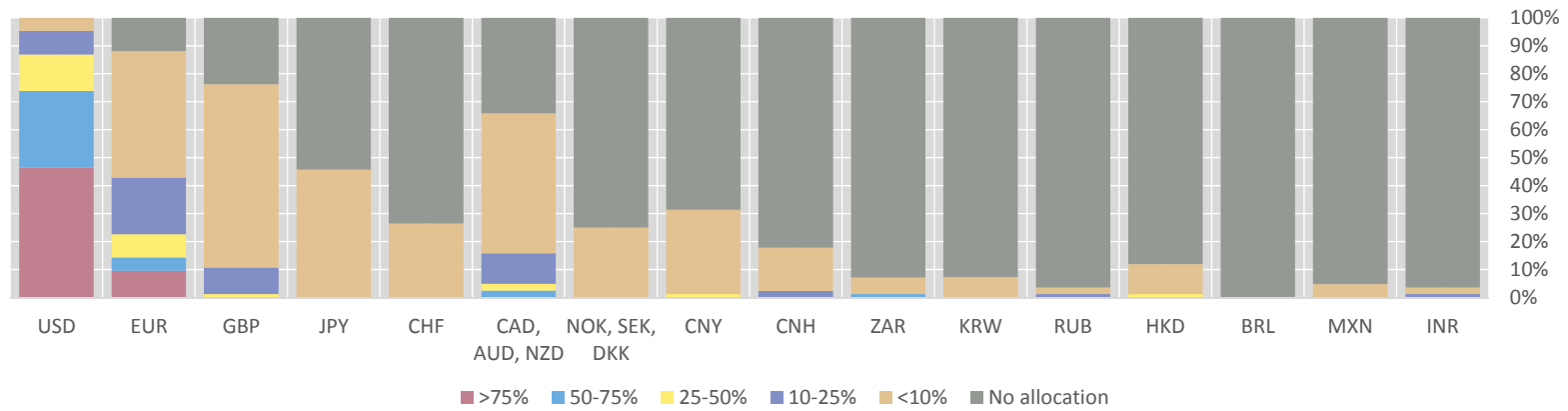


Source: BIS Central Bank Survey 2016.

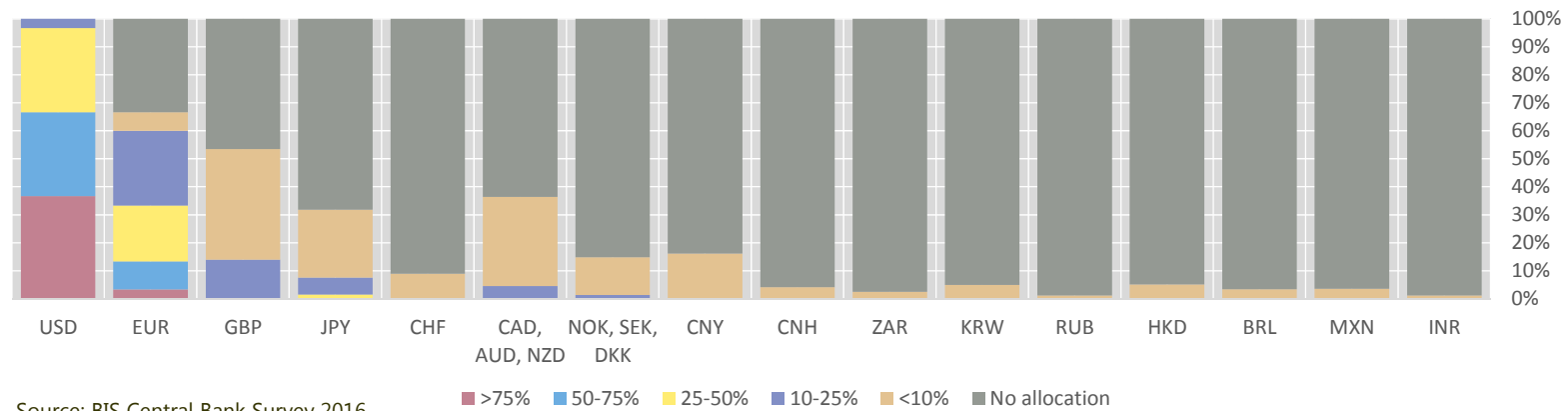


BIS Survey: Currency distribution

Emerging Economies



Advanced Economies



Source: BIS Central Bank Survey 2016.



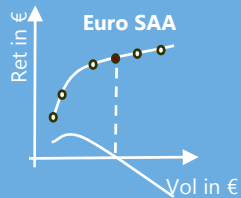
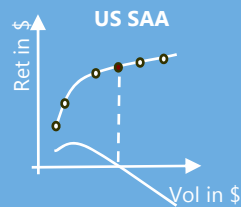
SAA Framework and Currency Numeraire



SAA Framework and currency numeraire

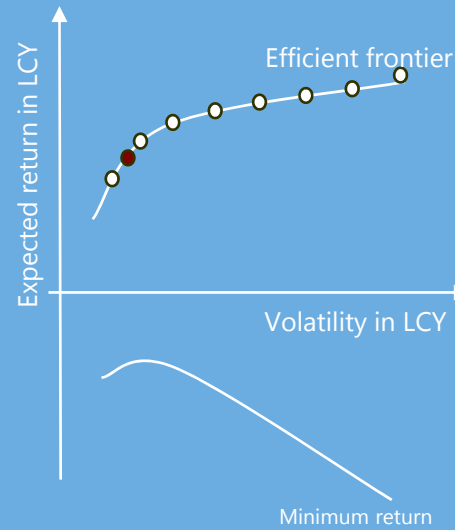
Reserve currency perspective

Optimization of individual portfolios in reserve currency



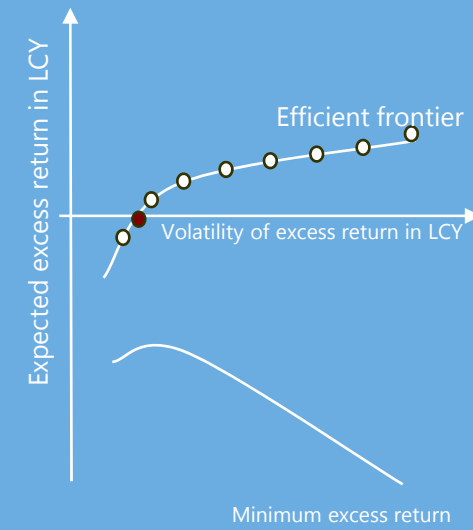
Local currency perspective

Joint Optimization of all currency portfolios



Asset and liability perspective

SAA determined in the context of the balance sheet

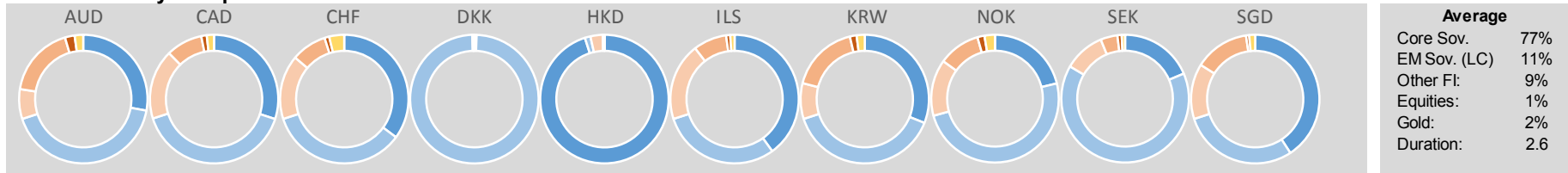


Minimum Risk Allocations

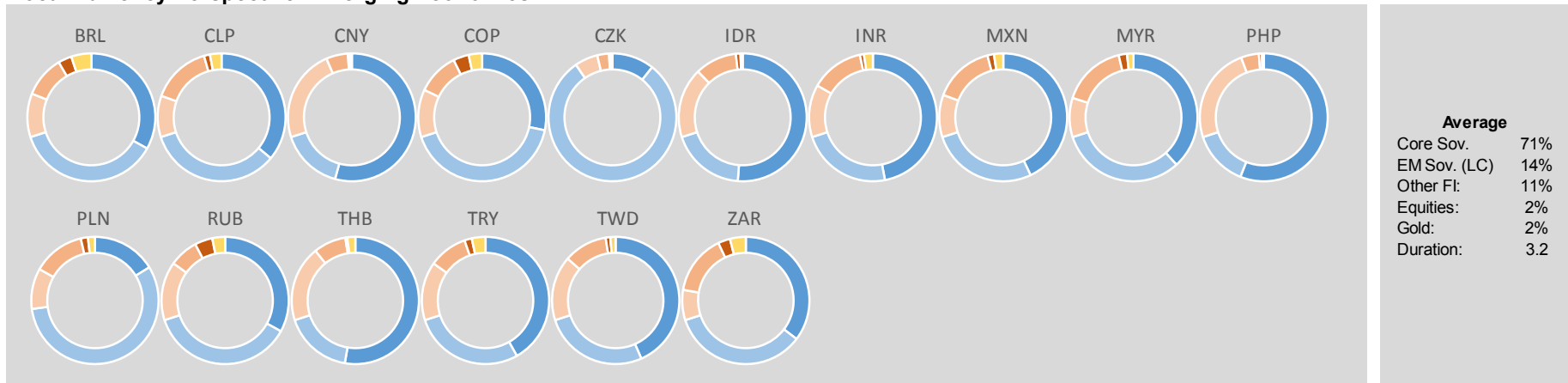
Reserve Currency Perspective



Local Currency Perspective: Advanced Economies



Local Currency Perspective: Emerging Economies

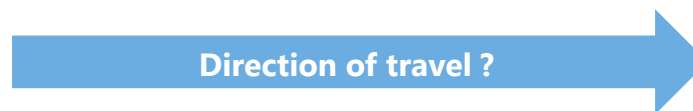


Notes: Minimum volatility portfolios based on 5-year return projections and Bayesian optimization. Calculations are performed using the BIS Asset Management Asset Allocation Module (BAAM).



Reserve currency vs. local currency perspective

	Reserve Currency	Local Currency
Currency Risks	Currency risk is of special nature and dealt with differently from other risk factors	Treated as one risk factor alongside other market and credit risks. Diversification effects are recognized.
Holding Costs	Different approaches ranging from ignored to firm target returns	Integral part of the analysis as holding costs enter currency return expectations
Risk-tolerance	Capital preservation is a popular risk tolerance specification	Specification based on assessment of the capacity and willingness to accept financial risks
Minimum Risk Allocations	Low duration; concentration on core governments	Higher duration; broader diversification
Focus	Policy functions	Balance sheet considerations



Summary

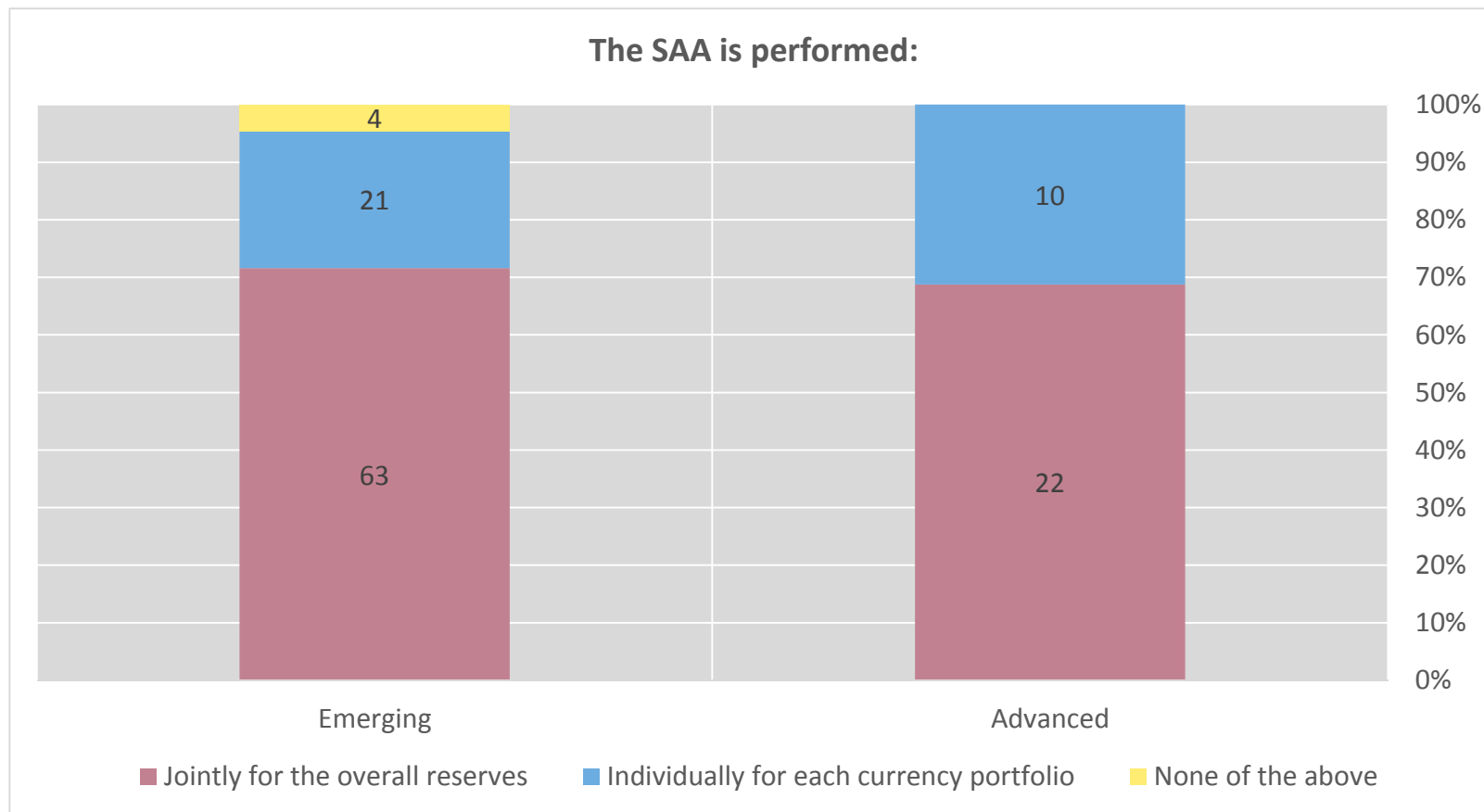
- While the absolute levels of reserves are very different, EMs show fairly **homogenous reserves adequacy**.
- EMs continue to face **significant holding costs**.
- The BIS survey shows for EMs' a somewhat **greater emphasis on return** and **different numeraire assumptions** (USD dominating for EMs vs. local currency perspective for AEs)
- Despite greater return emphasis, the EMs' **asset allocations are not very different**. In fact EMs hold less equities and corporate bonds.
- **Numeraire assumption is a crucial parameter** for asset allocation: Local currency perspective points to higher exposures to non-traditional assets and higher duration.



ANNEX



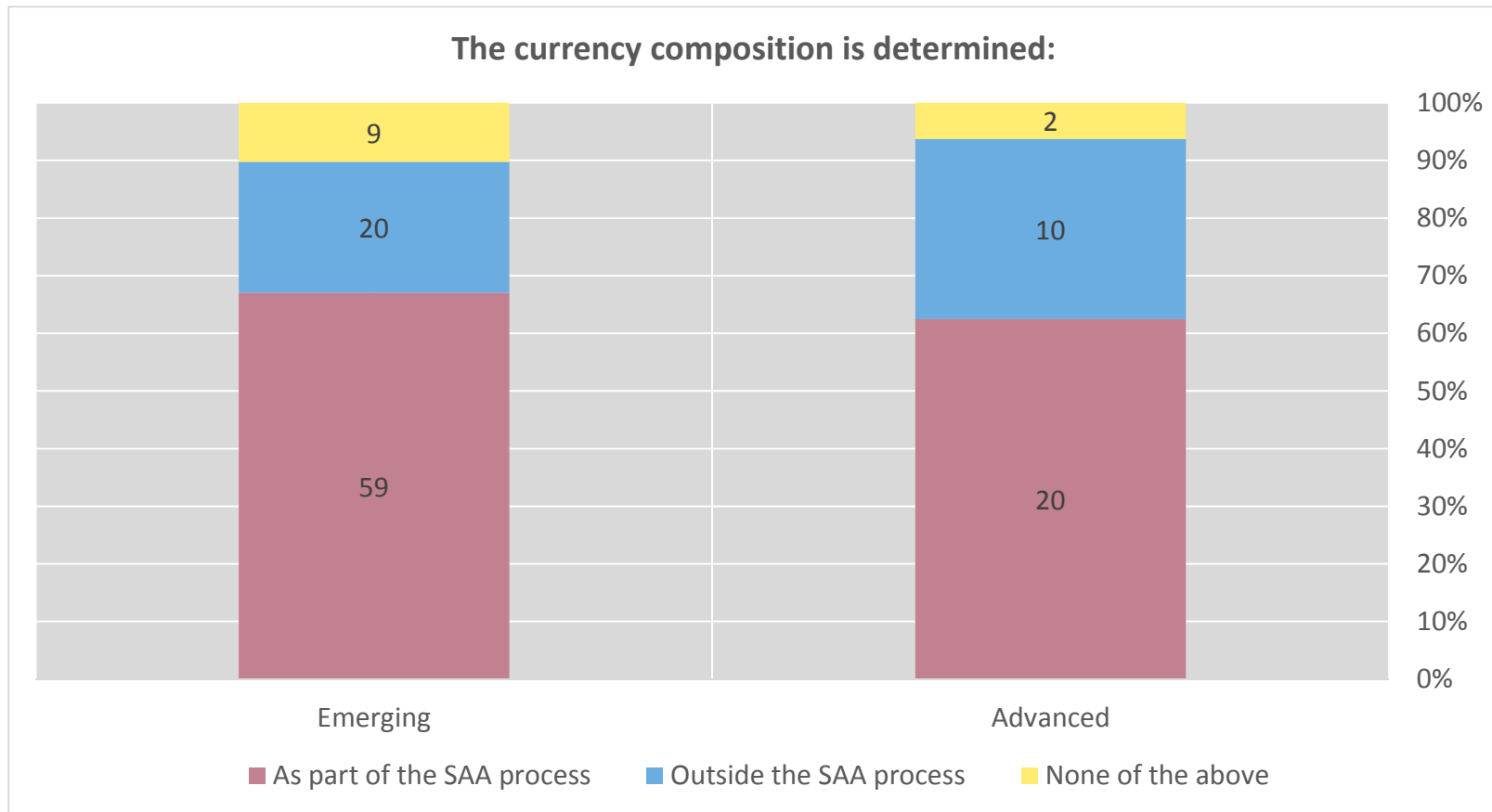
BIS Survey: SAA Process and Framework



Source: BIS Central Bank Survey 2016.



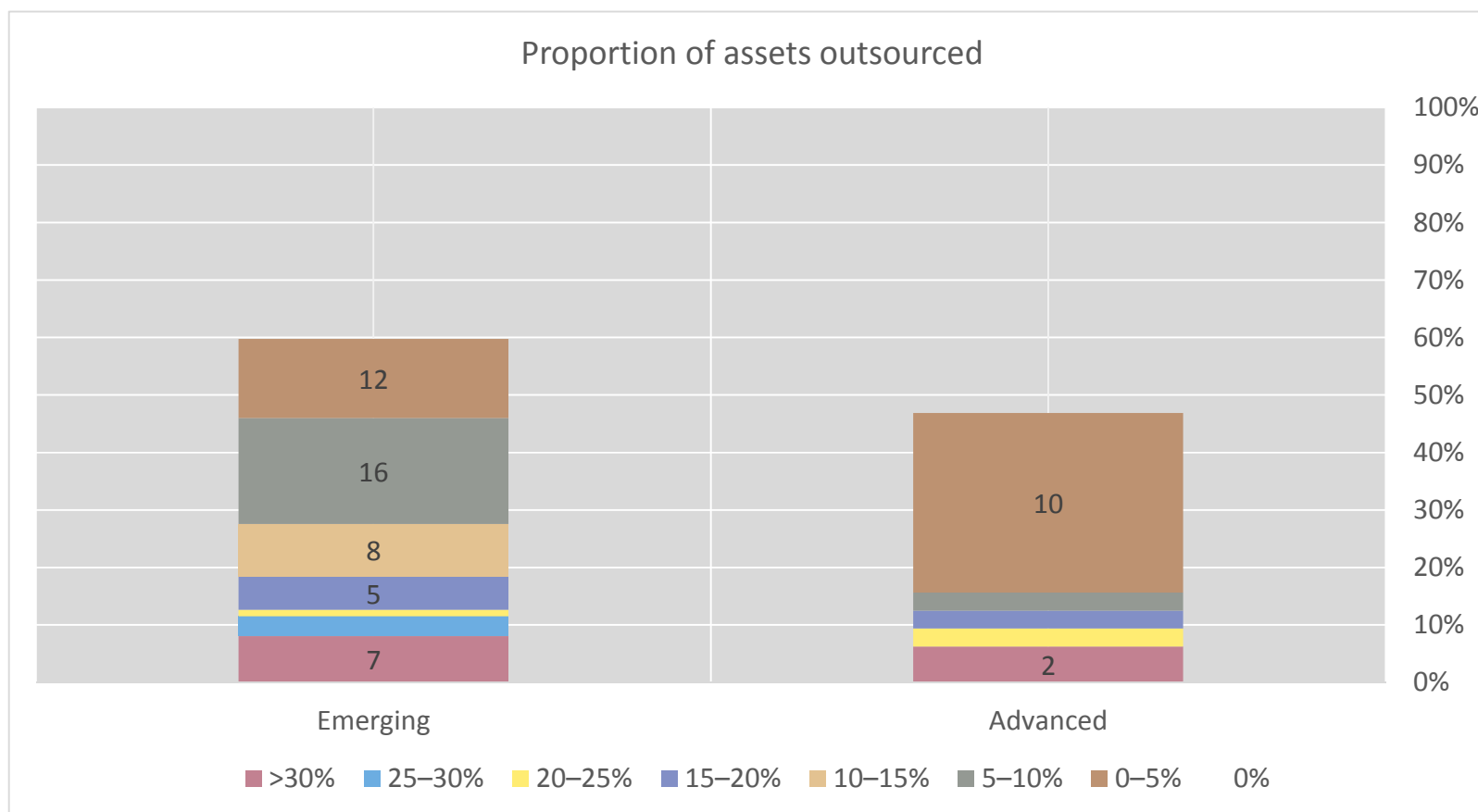
BIS Survey: SAA Process and Framework



Source: BIS Central Bank Survey 2016.



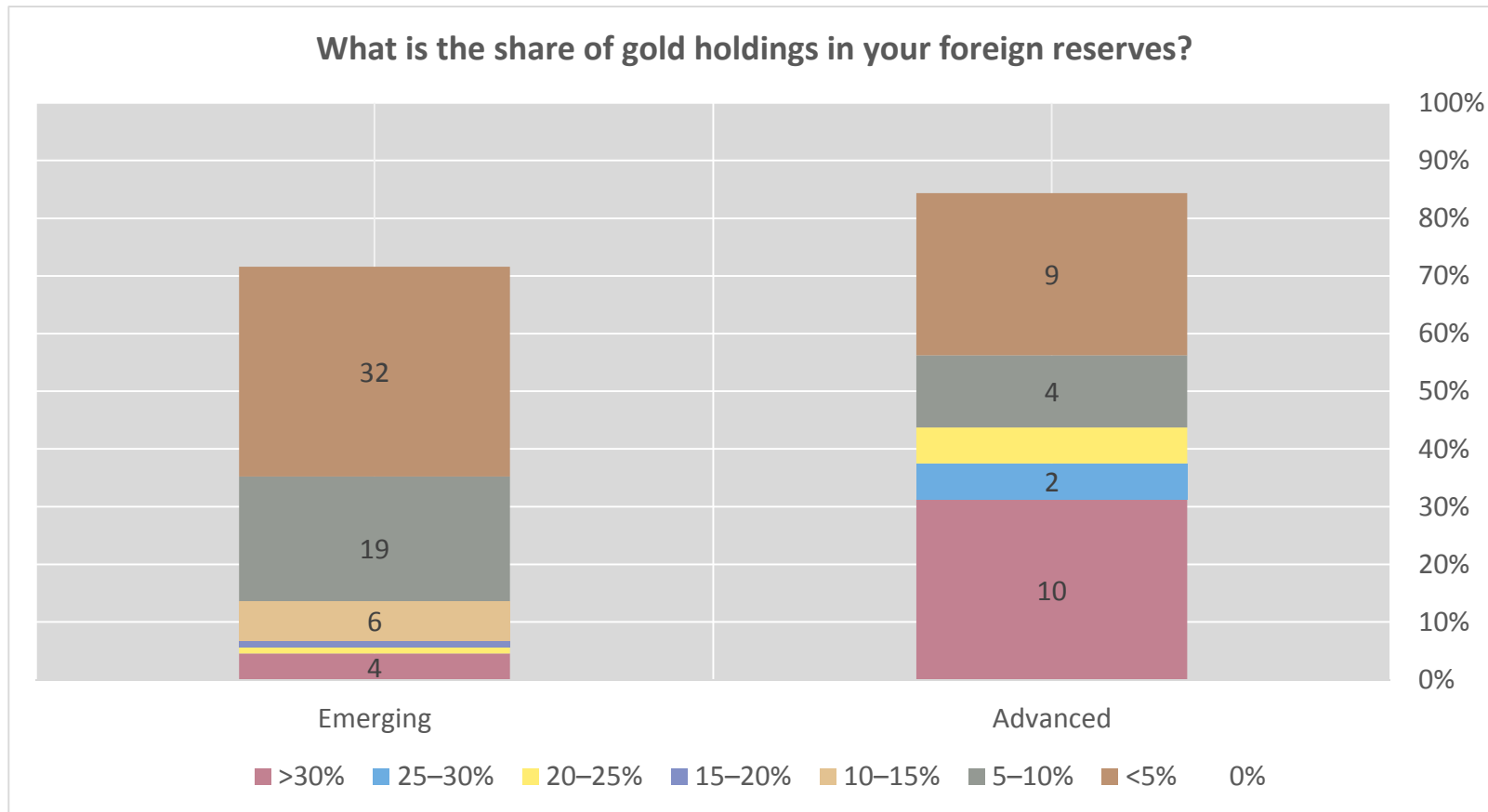
BIS Survey: External fund management



Source: BIS Central Bank Survey 2016.



BIS Survey: Gold



Source: BIS Central Bank Survey 2016.



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