

# Risk Management of FX Reserves at National Bank of Georgia

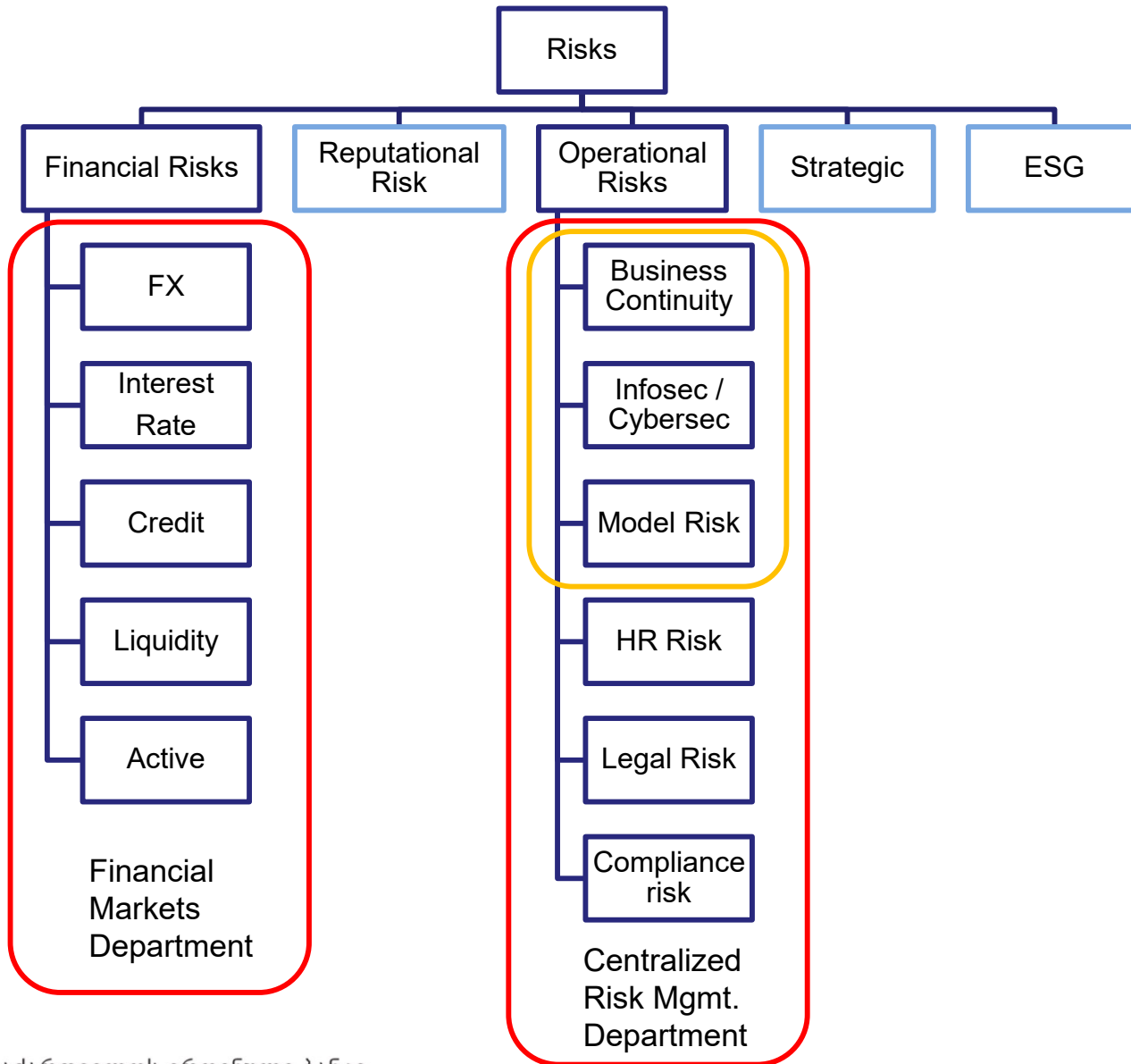
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# Risk Taxonomy of NBG



# Risk Management Governance

## ⊗ Principles Based Approach – Three Lines of Defense

- Front Office - First line of defense
- Middle office – Second line of defense
- Centralized Risk Management Department and Audit Department – Third line of defense

## ⊗ Risk Governance of FX reserves

- NBG's Board – Defines risk appetite, based on SAA results approves Benchmarks, FX composition, Tranches and Investment Guidelines
- Reserve Management Committee – Reviews periodic Risk and Performance reports, Approves SAA Proposal, New Issuers and Counterparties
- Financial Markets Department
  - Front Office – Passive and Active Portfolio Management
  - Middle Office – Risk and Compliance Management and Monitoring, Strategic Asset Allocation

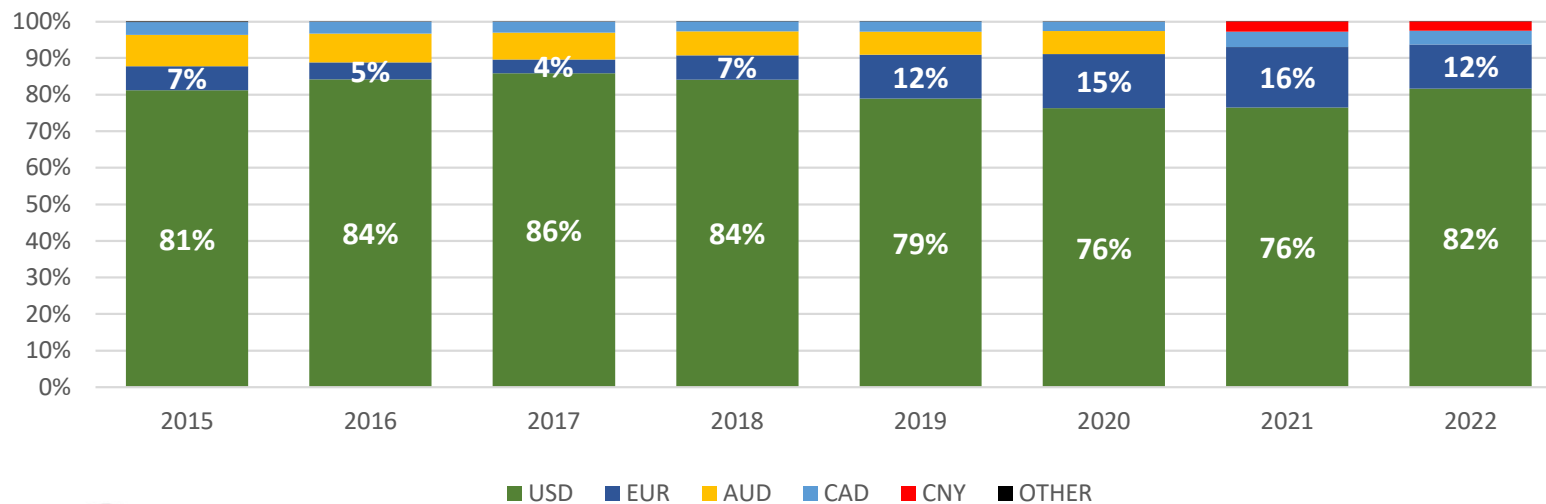


# FX Risk Management

## FX risk is mostly managed through Strategic Asset Allocation process

- Defines neutral FX currency composition with broad passive deviation limits approved by the Reserve Management Committee and the board
- Limited ALM approach due to small size of reserves
- Analyzing FX Liability composition of NBG, Government and Economy
- FX rebalancing is seldom – long term shifts in IR or global developments
- Most recent rebalancing – adding limited exposure to CNY via BISIP.CNY

## NBG Currency Composition



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# Interest Rate Risk Management

- ④ IR risk is managed mostly through Strategic Asset Allocation framework conducted annually
- ④ Defined IR risk appetite
  - -0,5% annual CVaR over 1Y horizon 95%(LIQ), 99% (INV) cl.
- ④ Risk/Return modeling using quantitative tools
  - SAA Workbench provided through WB RAMP
  - SAA Tool develop in-house with WB assistance
- ④ Strategic Benchmarks approved by the board
- ④ Quarterly SAA reports to monitor impact of market volatility
- ④ Active management of portfolio duration
  - Defined duration deviation limits vs benchmarks
  - Ex-ante tracking error limits
  - Active use of futures/options for duration hedging



# Credit Risk Management

- ⊗ Monitoring credit risk of FX reserves via Credit VaR metric based on CreditMetrics methodology
- ⊗ Initial review / approval monitoring of issuers and counterparties
- ⊗ Limiting credit exposure
  - Limits exposure to bonds below AA- rating
  - Max concertation in a single issuer - 5% of FX reserves
  - Spread Duration and TE deviation limits vs benchmarks
- ⊗ Verifying credit ratings using in-house methodology:
  - Relies on metrics like Total Assets, ROA, NPL/Loans, Tier 1 Cap, etc.
  - Qualitative metrics like Competition, Management, Economy, etc
  - Adjustment of estimated credit ratings through expert opinion
- ⊗ Monitoring of credit ratings and market data
  - Live alerts for Credit Rating changes
  - Live alerts of significant changes in stock prices, spreads, CDS, Bloomberg DRSK score



# Liquidity Risk Management

- ⊗ Division of FX reserves into tranches
  - Working capital tranche – 1 month of cash outflows (Cash, MM, Bills, Short term Treasury notes, FixBIS)
  - Liquidity Tranche – size defined by projects 12 month outflows (Exposure to less liquid instruments up to 25%)
  - Investment Tranche – size defined (Exposure to less liquid instruments up to 50%)
- ⊗ Limit investments into less liquid instruments:
  - Minimum issue size requirement - \$500M
  - Max concertation in a single issue - 5% of an issue
- ⊗ Proactive forecast of liquidity needs and accumulation of cash in Working capital tranche when market turbulence is expected
- ⊗ Swap/Repo facilities in place in the case of liquidity crisis
- ⊗ Bloomberg Liquidity Score – not reliable during liquidity crisis



# Thank you!



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