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Rising US government debt: What to watch? Treasury auctions, rating agencies, and the term premium

Torsten Slok, Jyoti Agarwal, and Rajvi Shah
tslok@apollo.com

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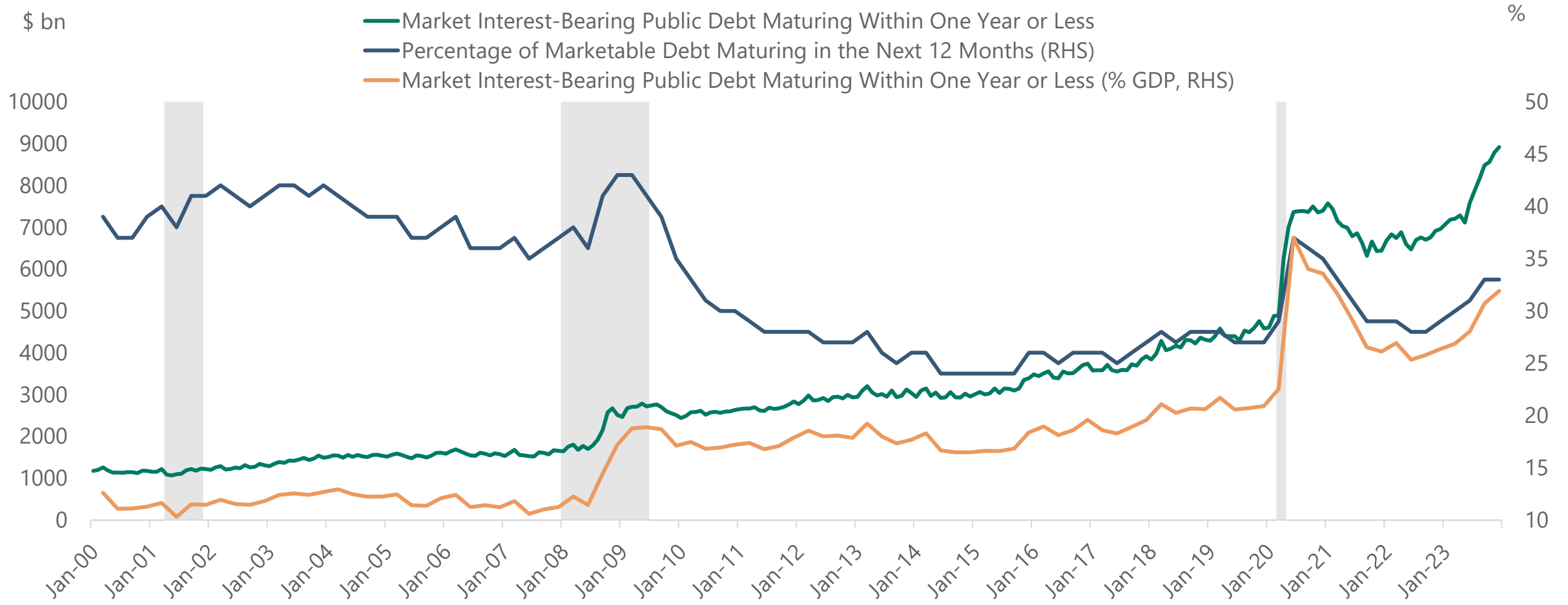
1. Deficit and debt
2. Who owns US government debt?
3. The maturity structure of US government debt outstanding
4. Debt servicing costs
5. Treasury auction metrics
6. What is the transmission channel to financial markets?

Government budget deficits and debt levels

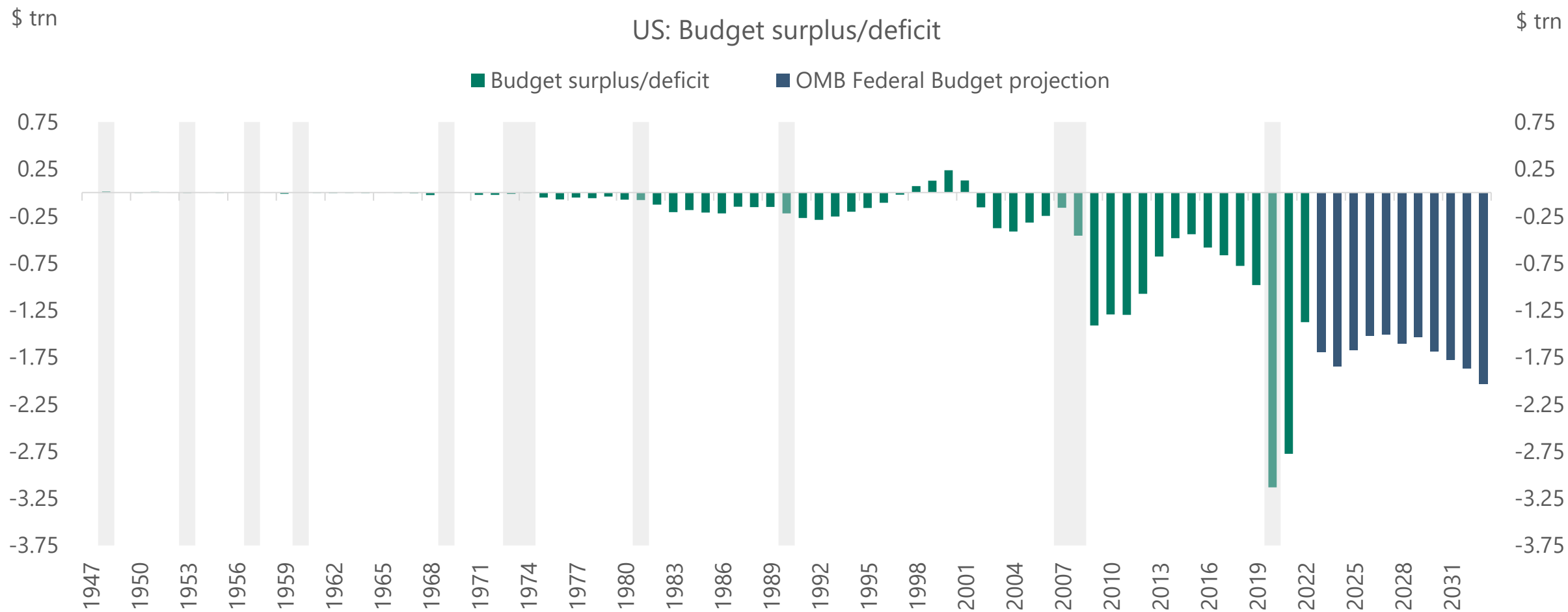
Under current policies, debt outstanding will growth to 200% of GDP



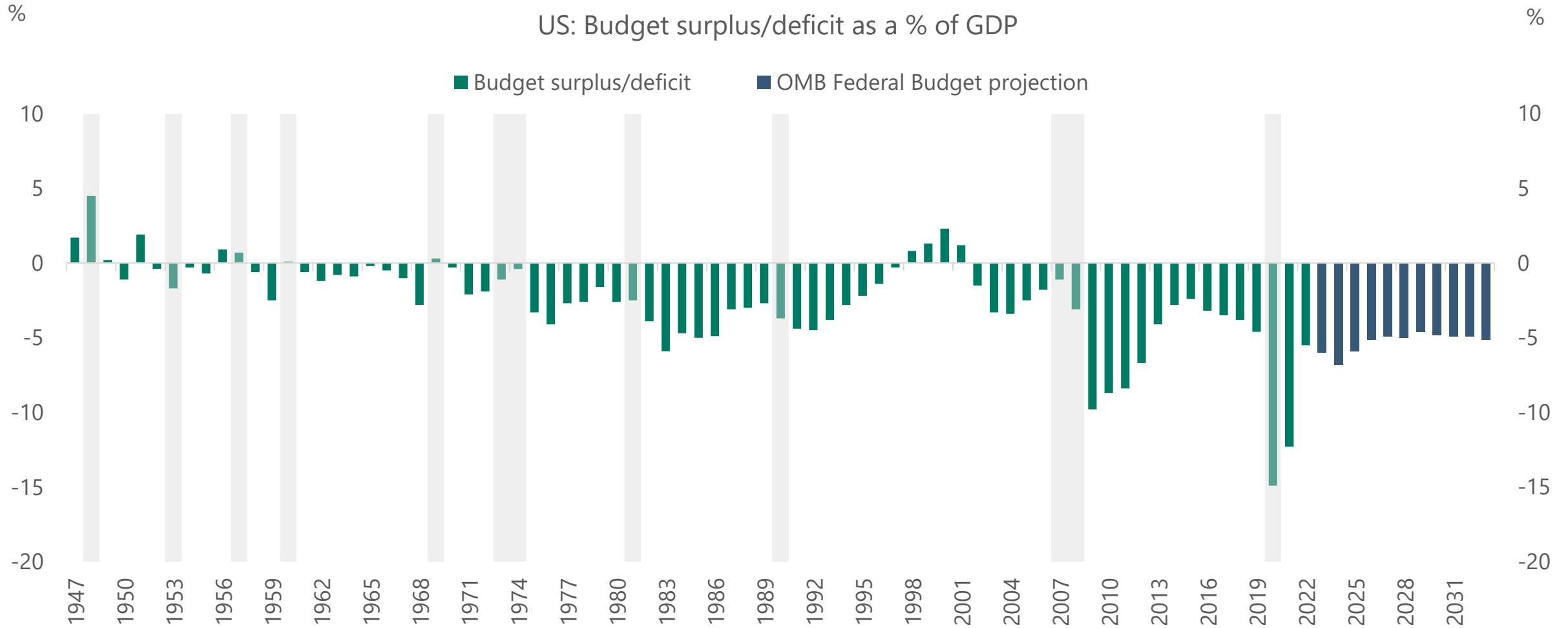
A record-high \$8.9trn of government debt will mature over the next year



Trillion-dollar deficits as far as the eye can see

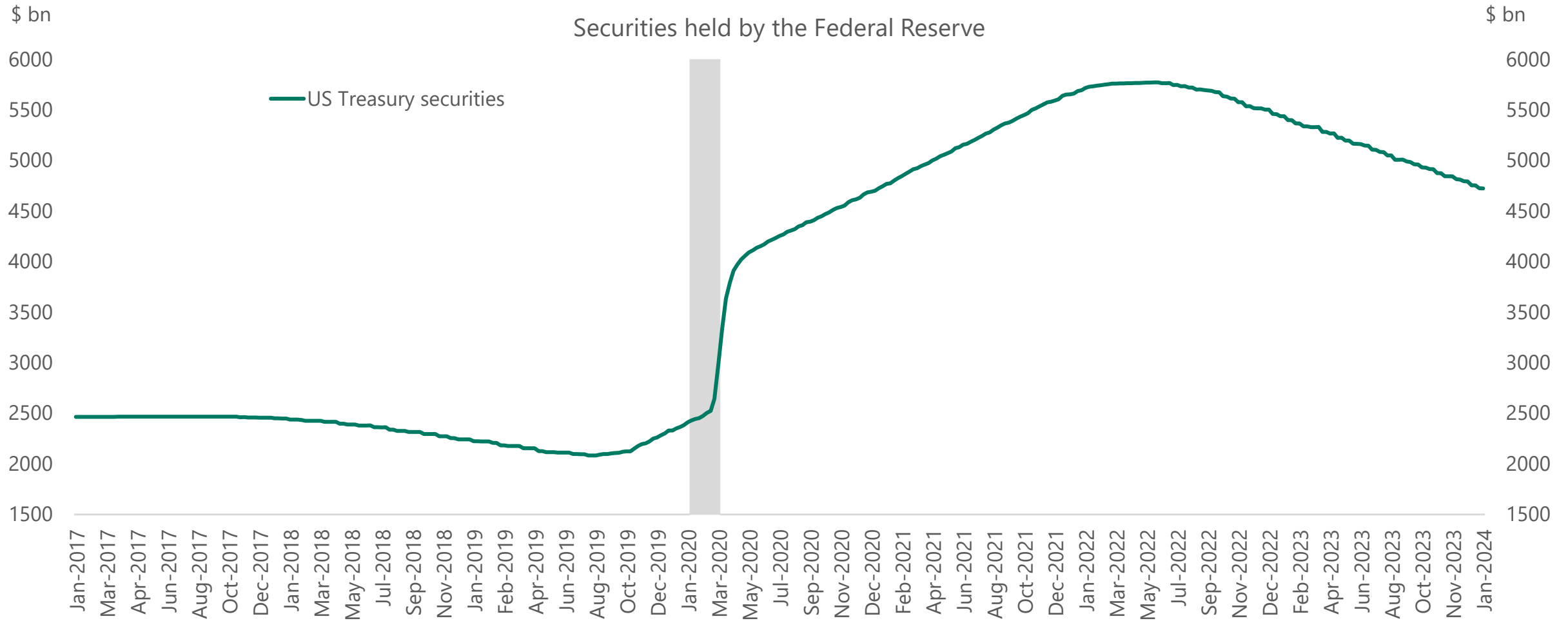


OMB forecasts 5% budget deficit every year for the next 10 years



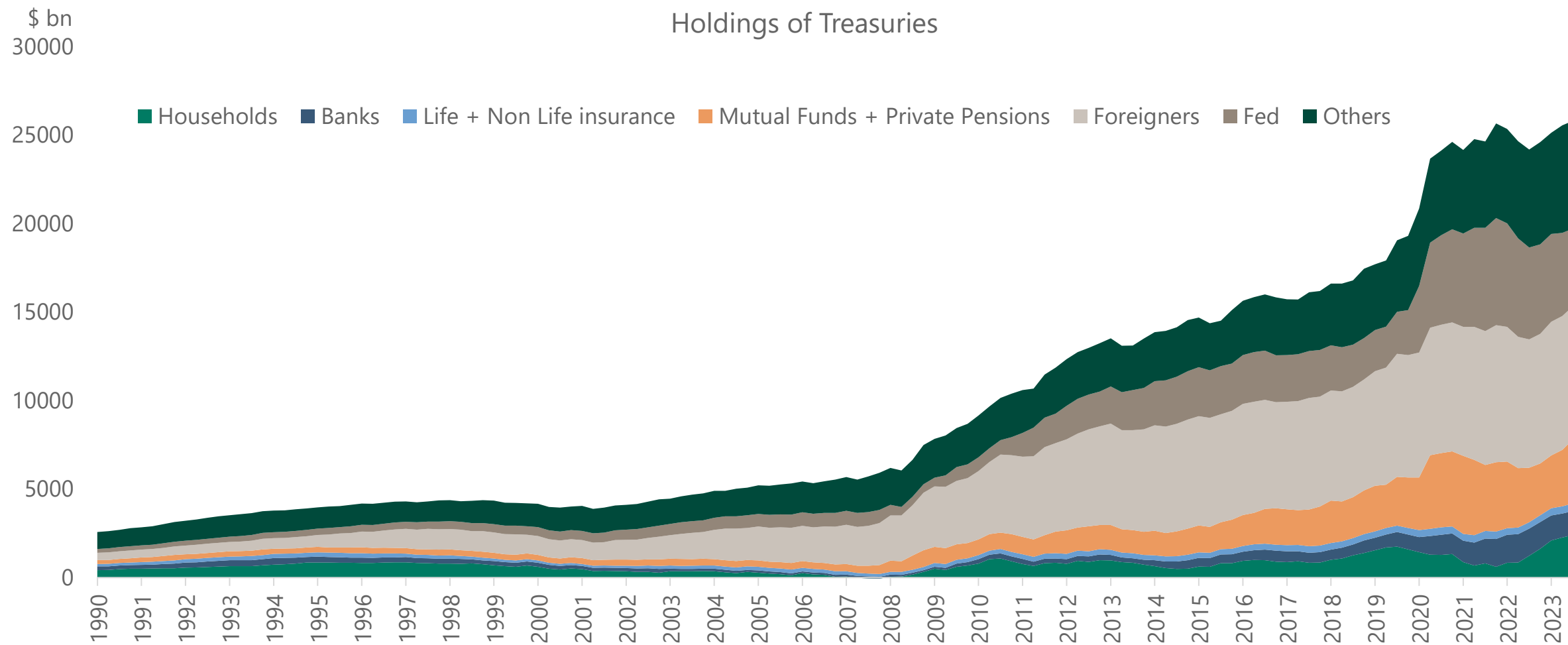
Source: OMB, Haver Analytics, Apollo Chief Economist

More Treasury supply from QT: Fed is selling \$60bn every month



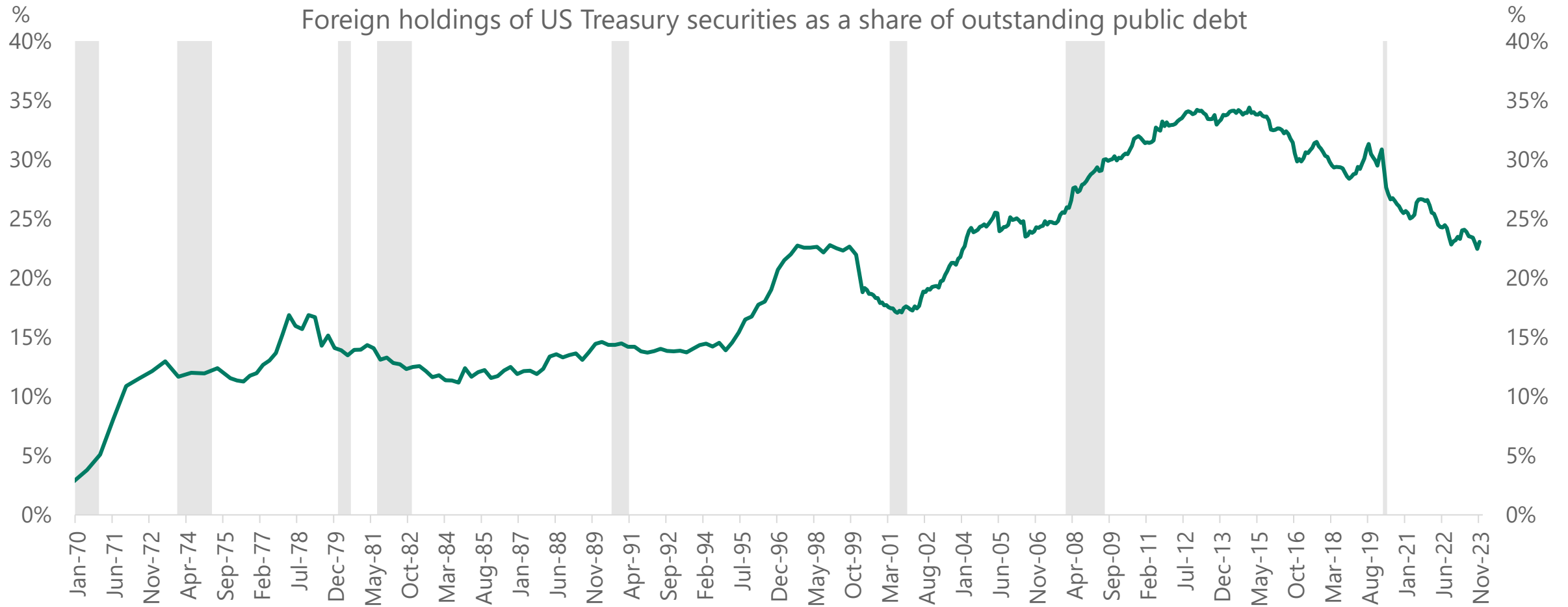
Who owns US government debt?

Who owns the \$25trn in Treasuries outstanding?



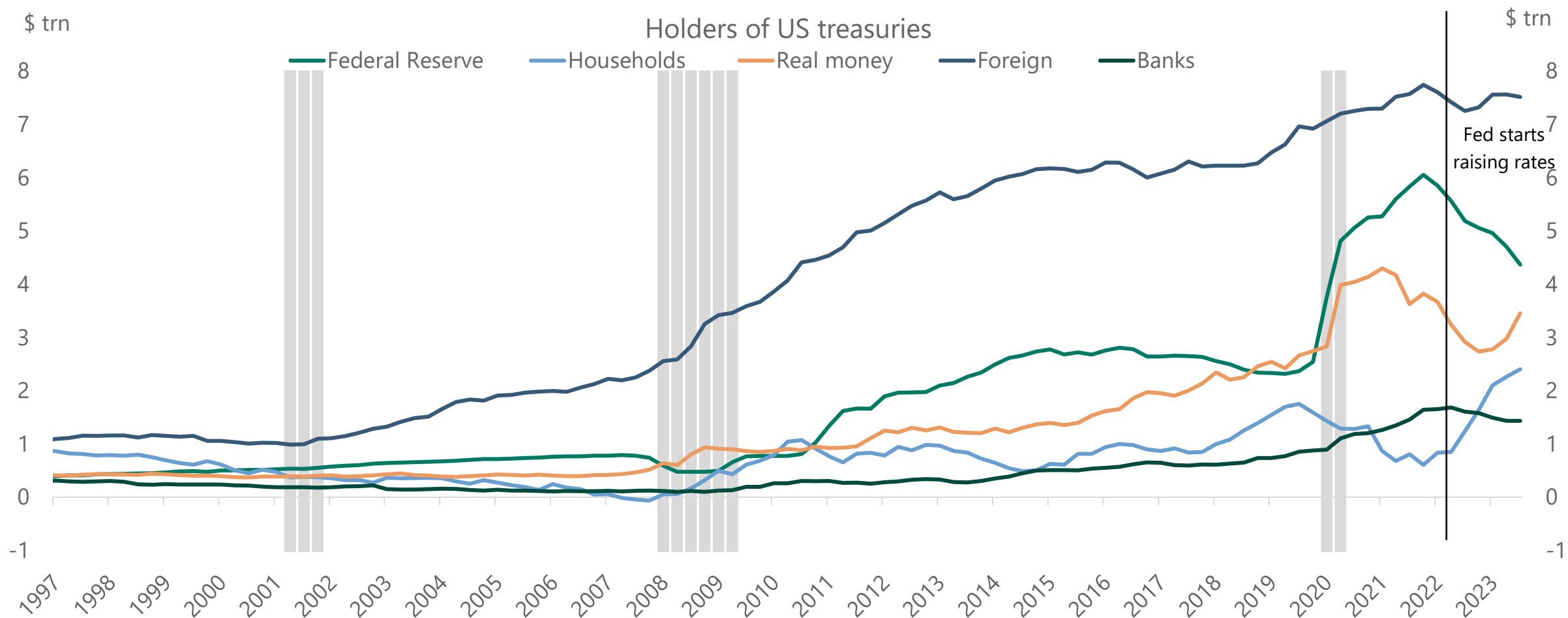
Source: FFUNDS, Haver, Apollo Chief Economist

Trend decline in foreign ownership of US government bonds since 2015



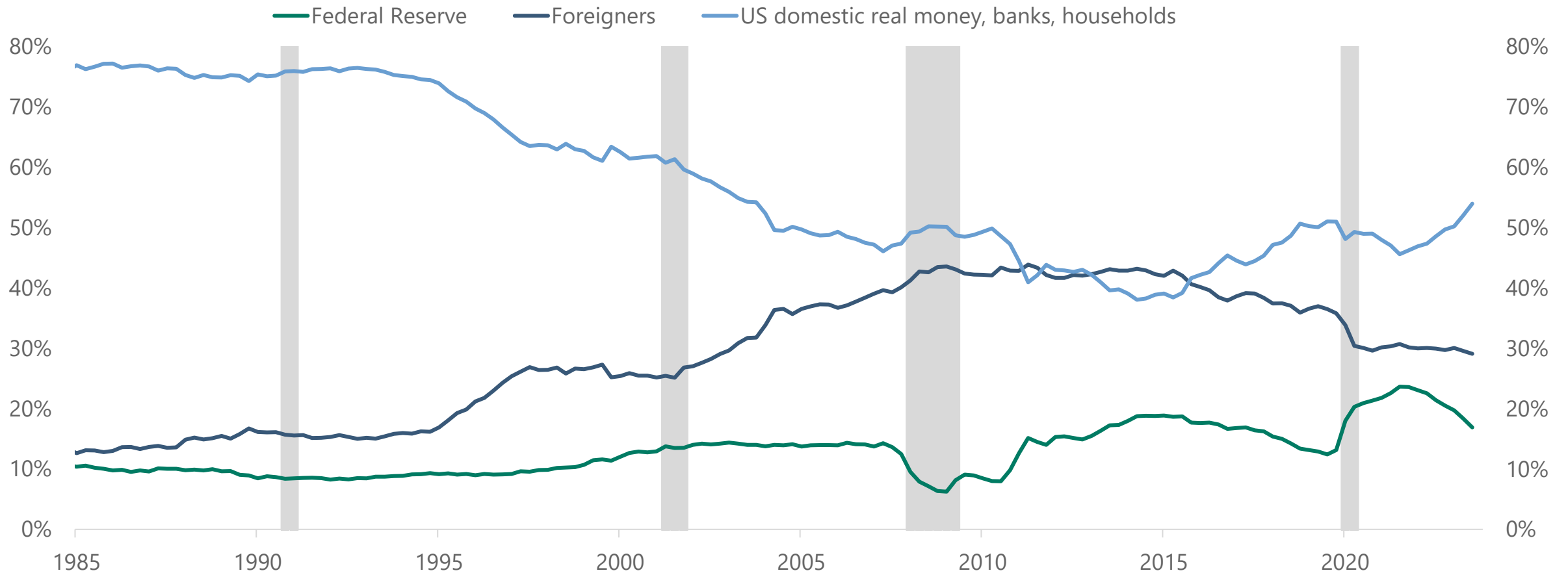
Source: Treasury, Haver Analytics, Apollo Chief Economist

US households and real money buying Treasuries. Fed and foreigners selling Treasuries

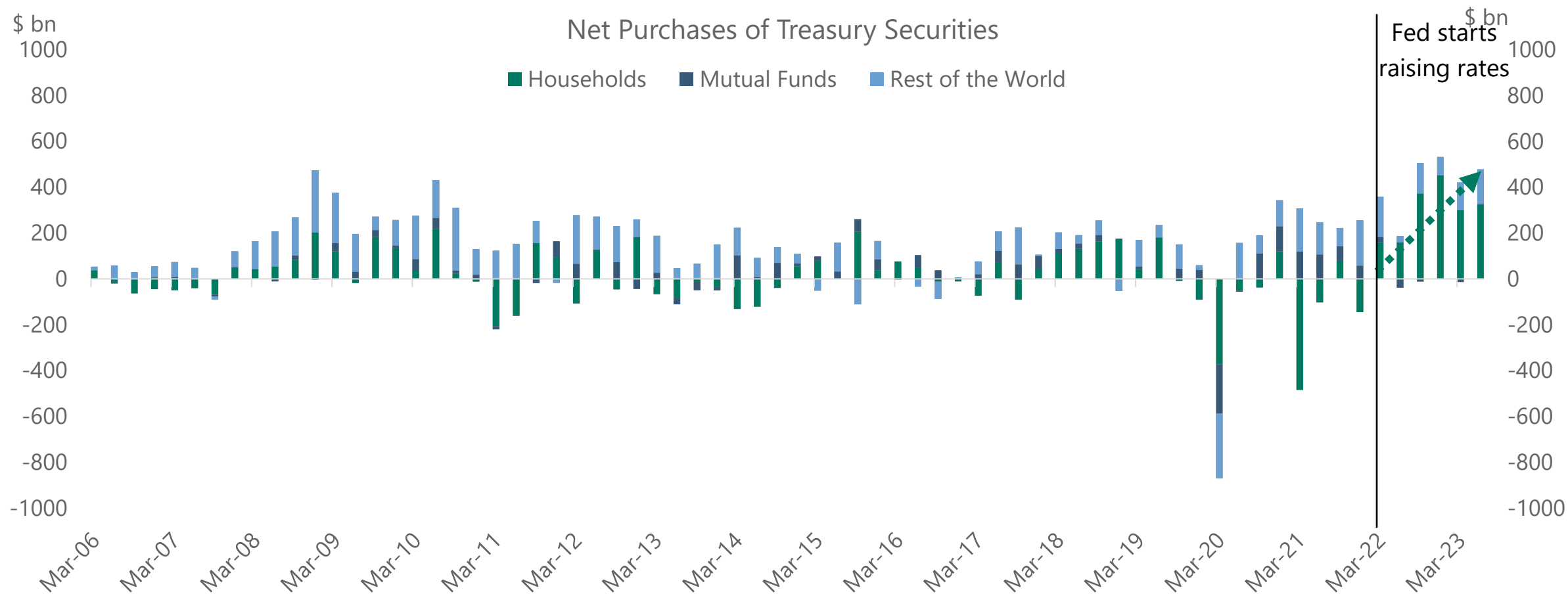


Fed selling Treasuries (doing QT). Domestic investors buying Treasuries

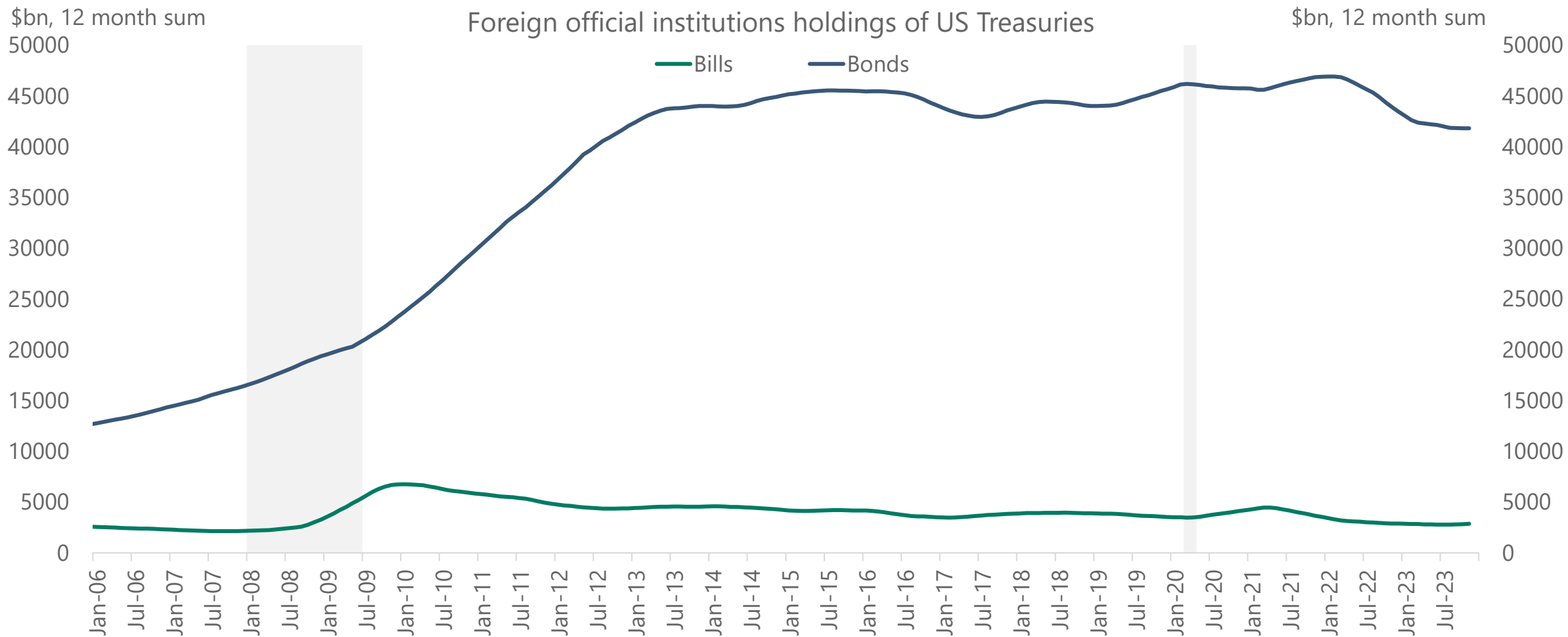
Holdings of Treasuries (% Treasury Debt Outstanding)



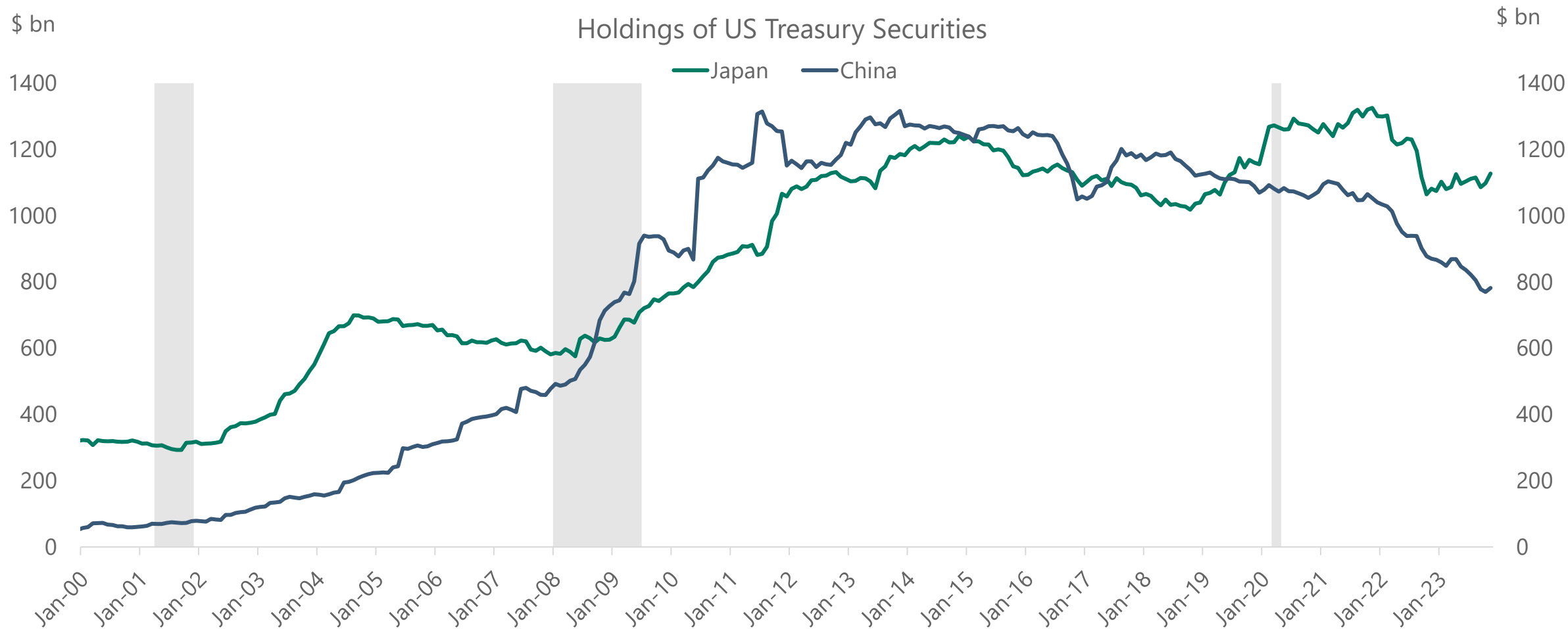
As the Fed has been raising rates, US households have been big buyers of US Treasuries



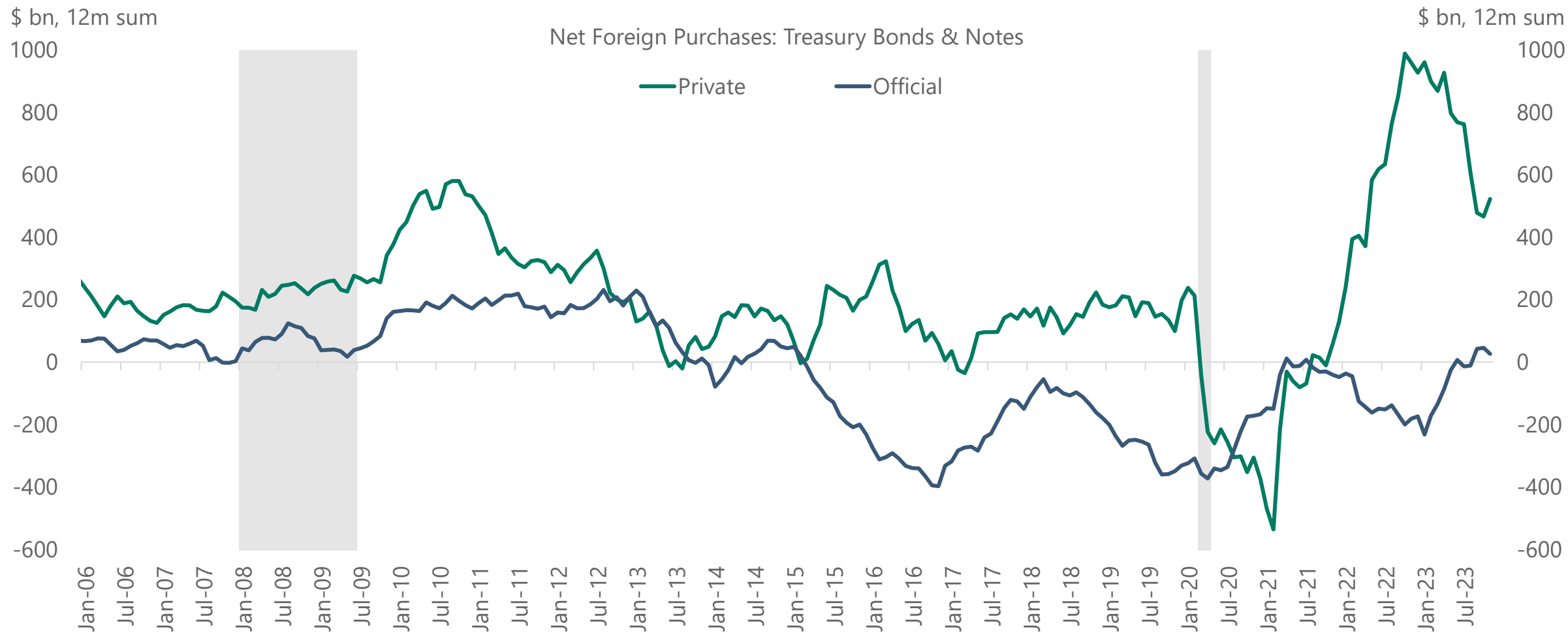
Foreign official holdings of US bonds is declining



Japanese and Chinese holdings of Treasury securities

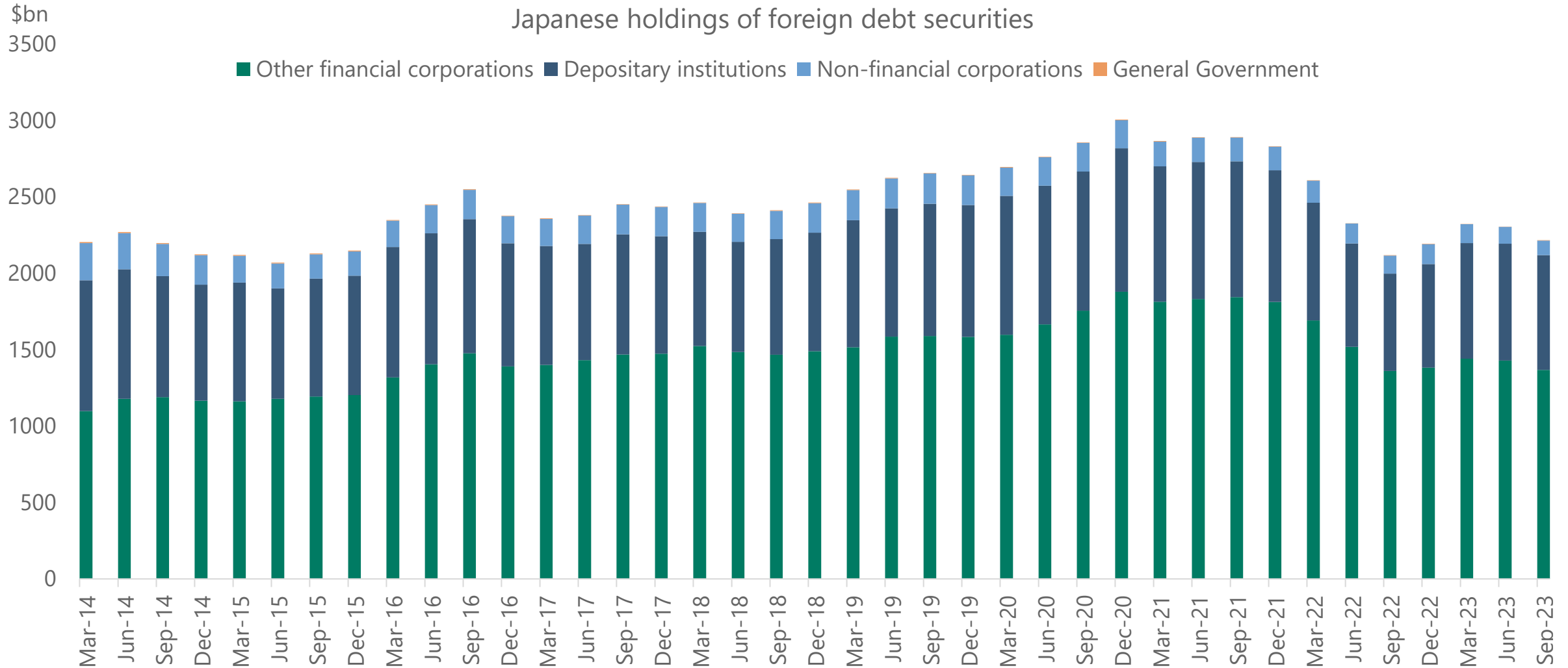


Foreign purchases of Treasuries comes from the private sector



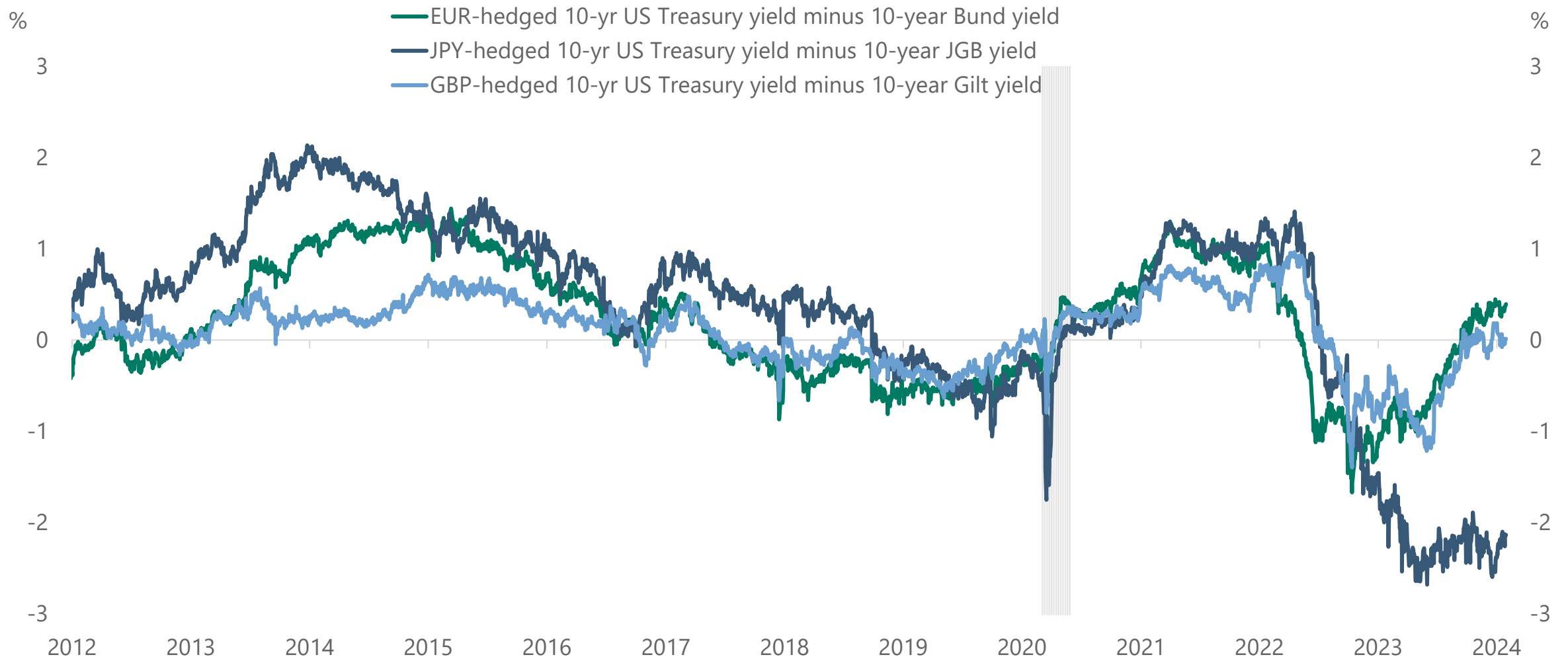
Source: Treasury, Haver Analytics, Apollo Chief Economist

Japan: Insurance and pension own most of the foreign debt securities



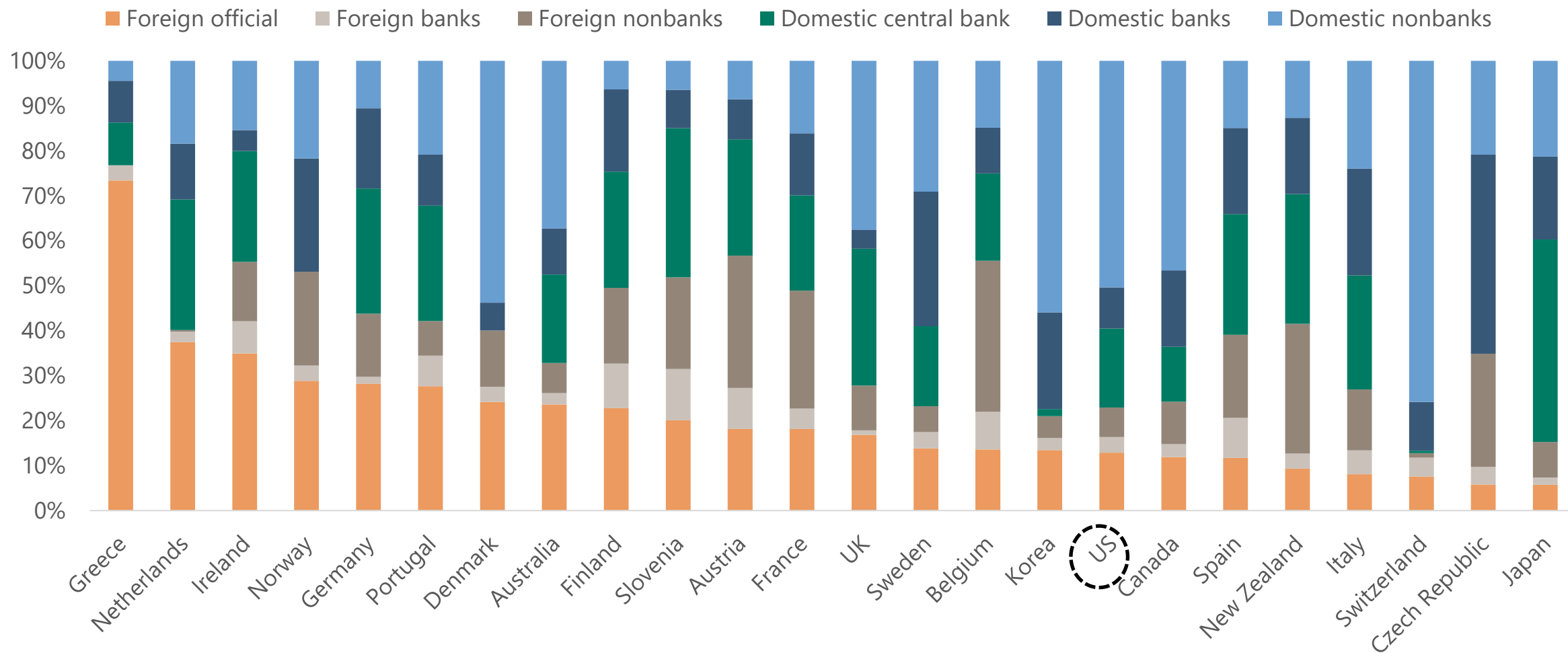
Source: Ministry of Finance Japan, Bloomberg, Apollo Chief Economist

Hedging costs are high for Japanese investors buying US Treasuries



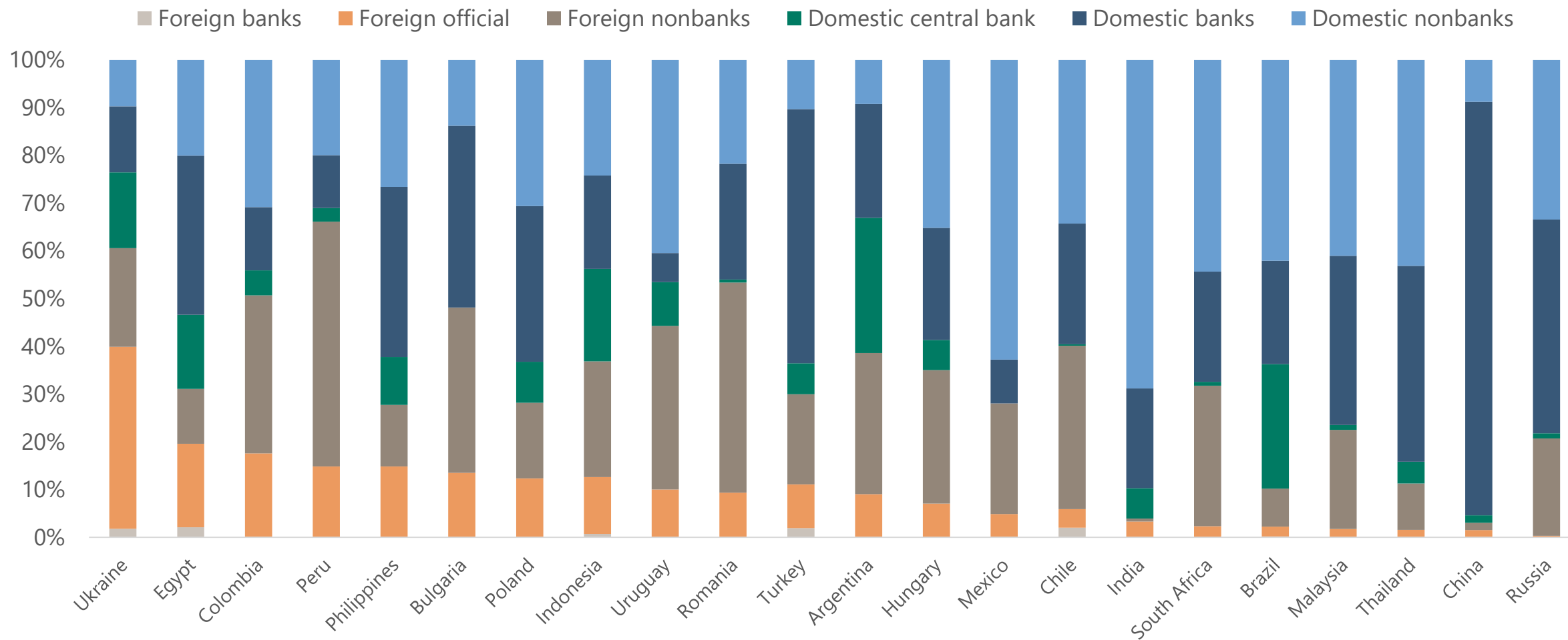
Source: Bloomberg, Apollo Chief Economist. Note: Hedged Treasury yield is calculated as $\left(\frac{(-3 \text{ month forward}/10000)/\text{exchange rate} + 1\right)^{4-1} \times 100 + 10 \text{ year US Treasury yield}$.

Who owns different countries' government debt?



Source: The IMF, Apollo Chief Economist. Note: Data as of Q2 2023

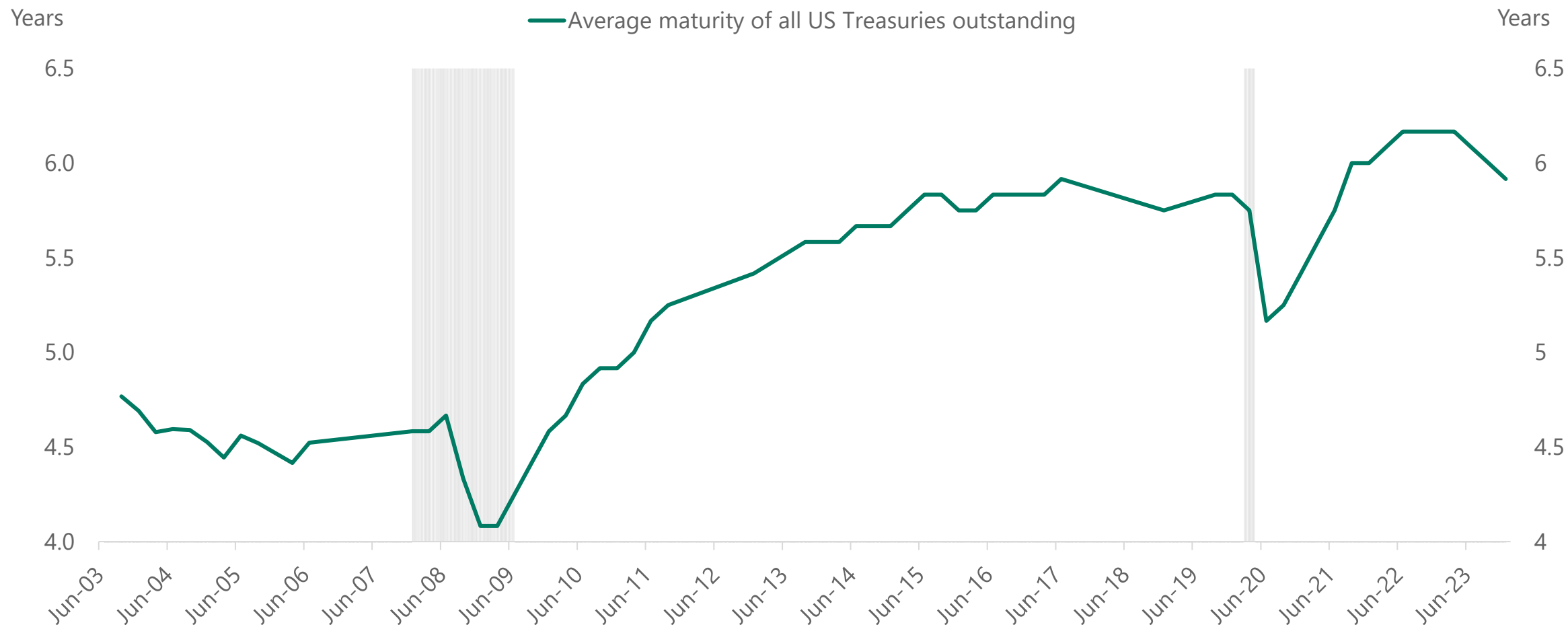
EM: Who owns different countries' government debt?



Source: The IMF, Apollo Chief Economist. Note: Data as of Q2 2023

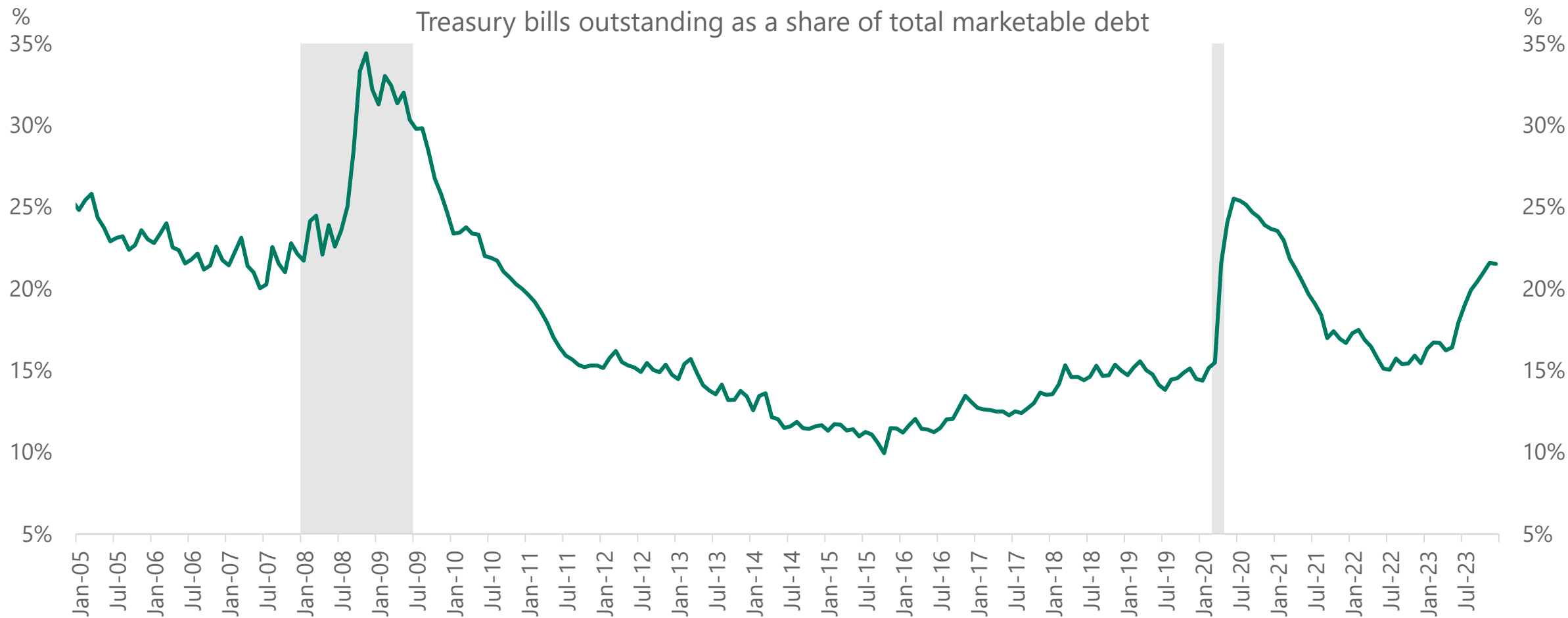
The maturity structure of US government debt

Weighted average maturity of debt outstanding: less than 6 years

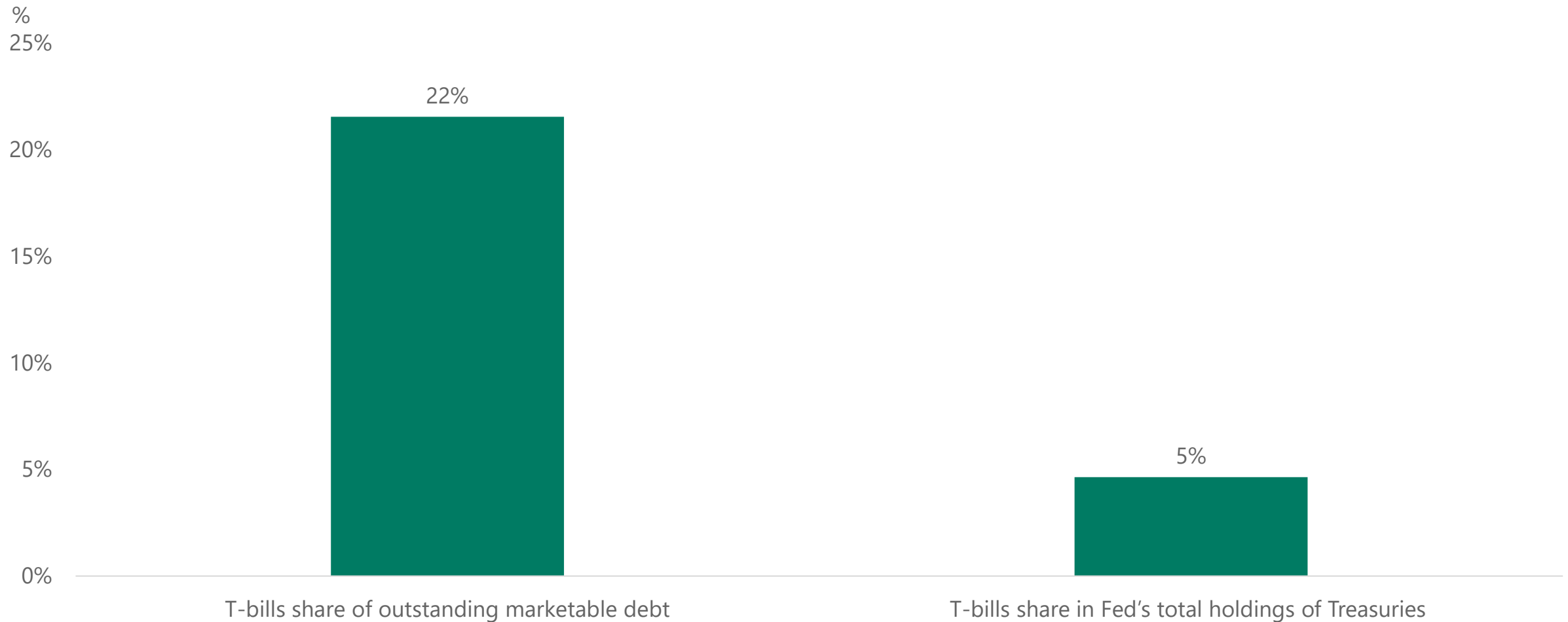


Source: Treasury, Haver Analytics, Apollo Chief Economist

Share of T-bills has increased significantly in 2023

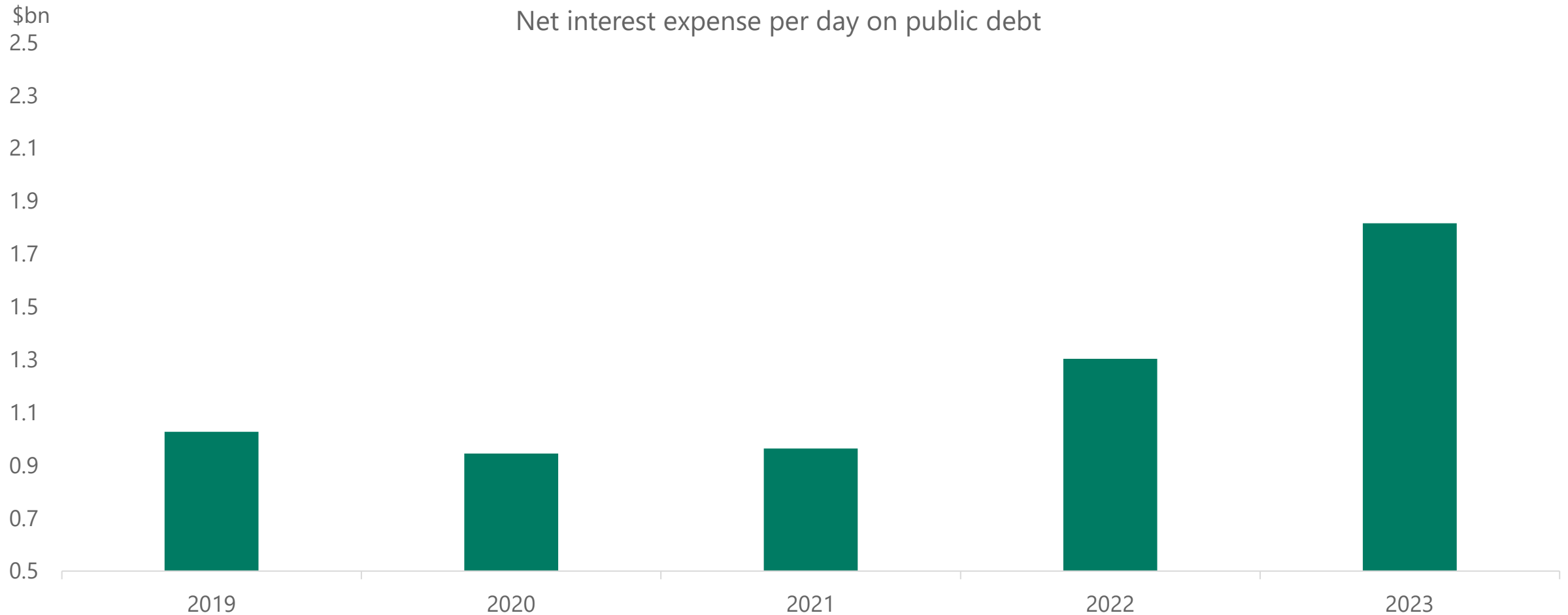


The share of T-bills on the Fed balance sheet is much smaller than T-bills as a share of outstanding marketable debt

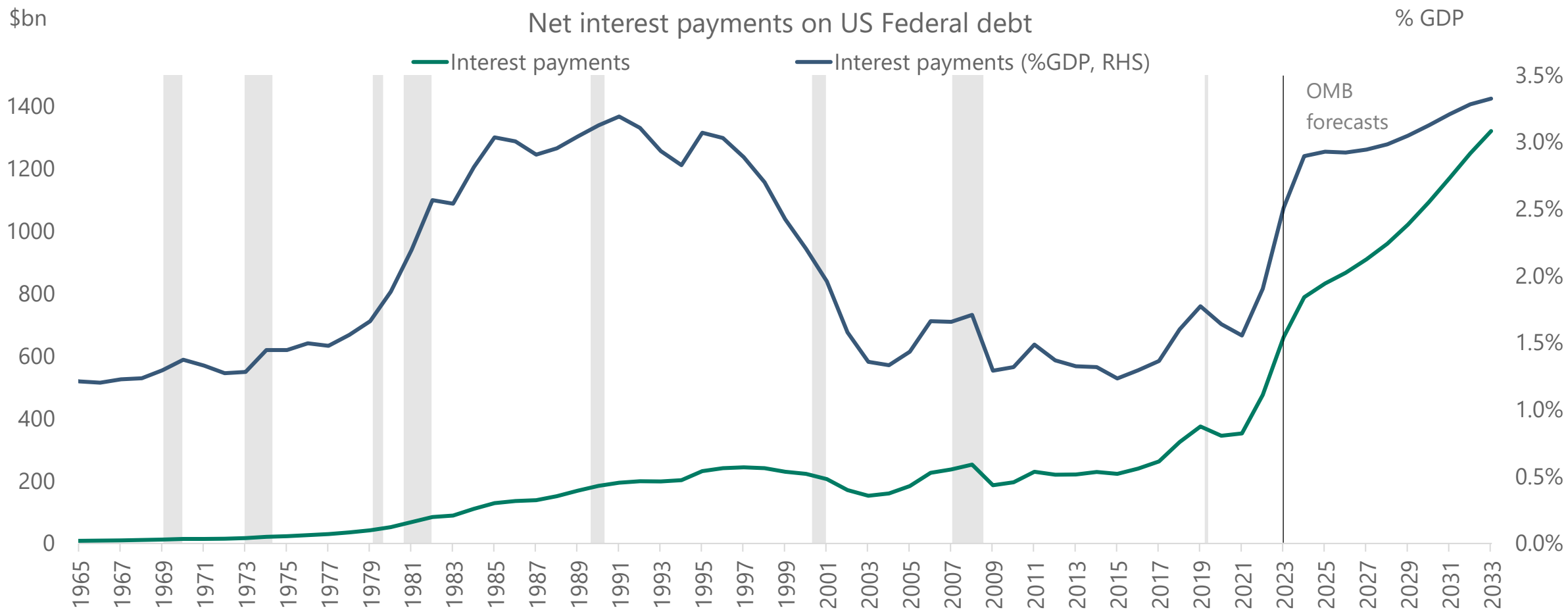


Debt servicing costs rising

US government interest payments per day have doubled from \$1bn per day before the pandemic to almost \$2bn per day in 2023

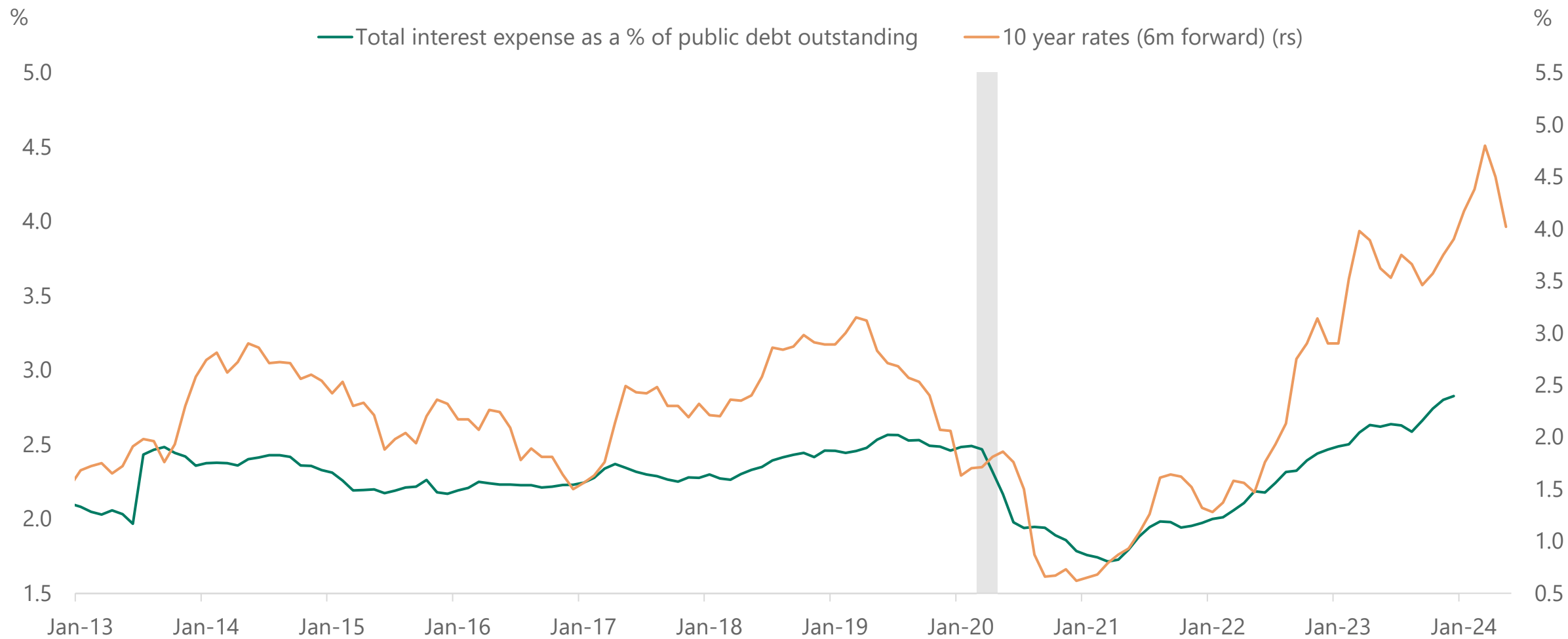


Debt servicing costs rising rapidly



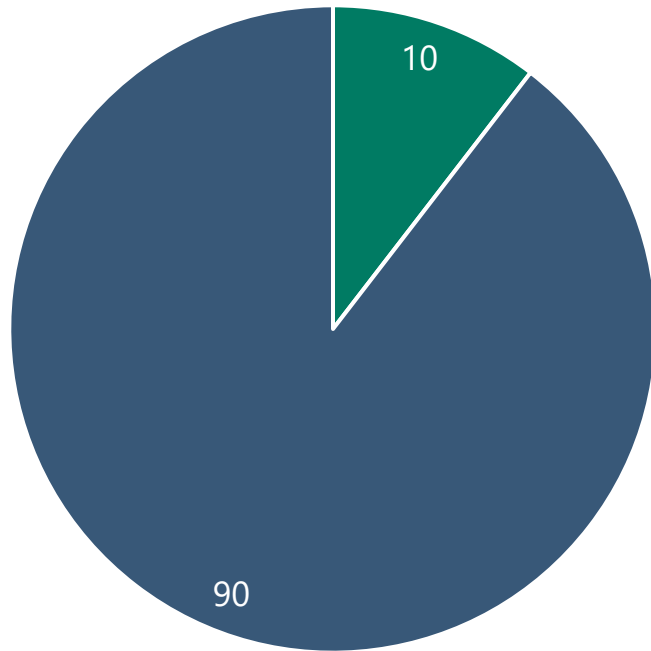
Source: Treasury, OMB, Haver Analytics, Apollo Chief Economist. Note: OMB estimates 10-year yield at around 3.5% in the next 10 years

Interest payments on government debt are rising



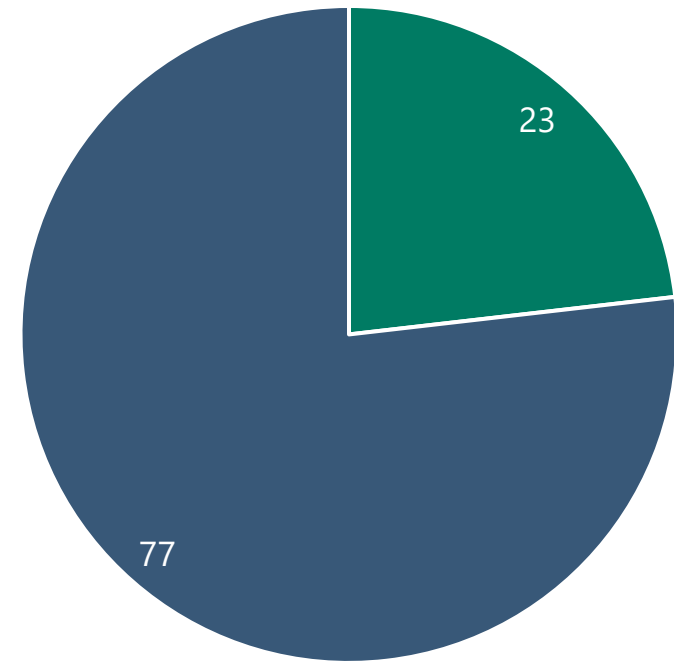
CBO: Debt servicing costs will grow as a share of total outlays over the next 30 years

Total outlays, 2023



■ Net Interest ■ Noninterest

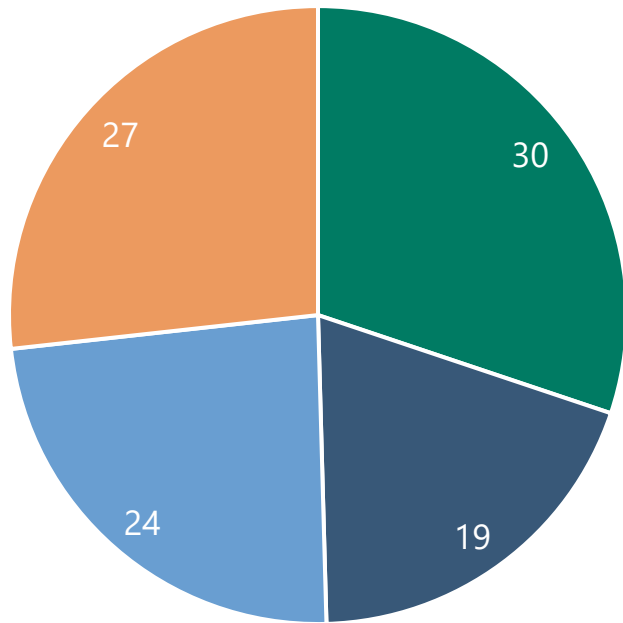
Total outlays, 2053



■ Net Interest ■ Noninterest

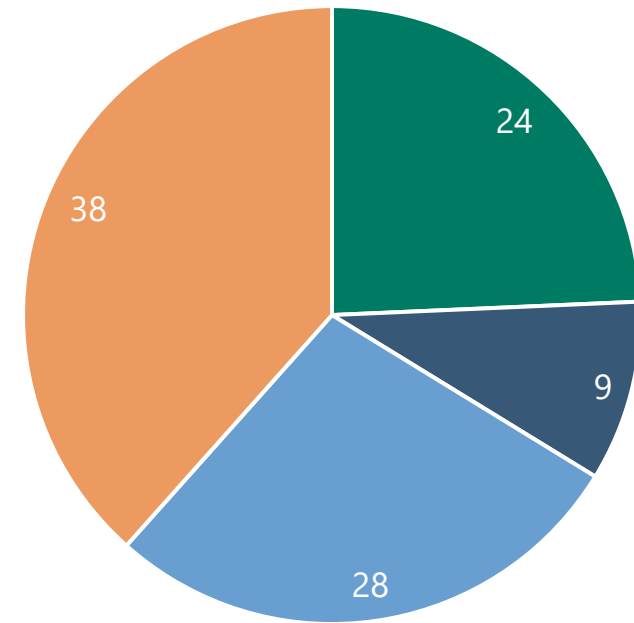
CBO: Non-interest outlays distribution, 2023 vs 2053

Total non-interest outlays, 2023



- Discretionary
- Social Security
- Other Mandatory
- Major Health Care Programs

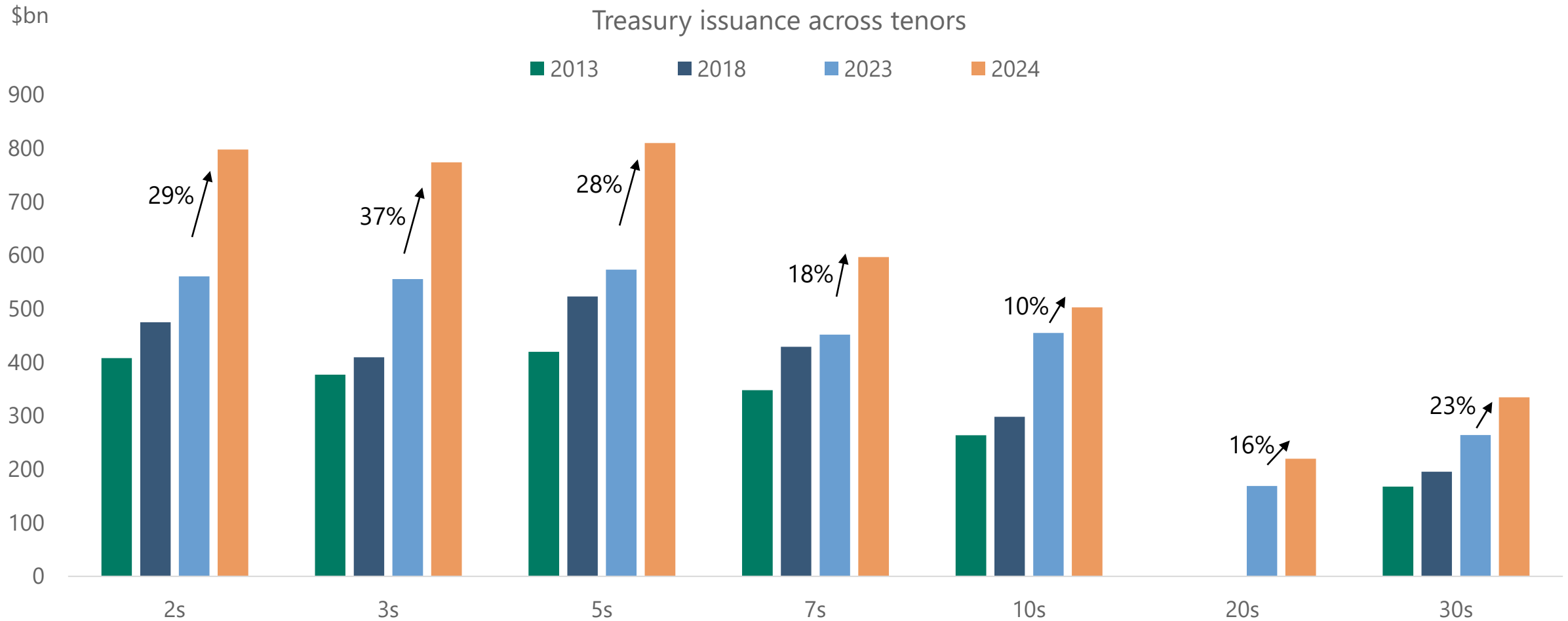
Total non-interest outlays, 2053



- Discretionary
- Social Security
- Other Mandatory
- Major Health Care Programs

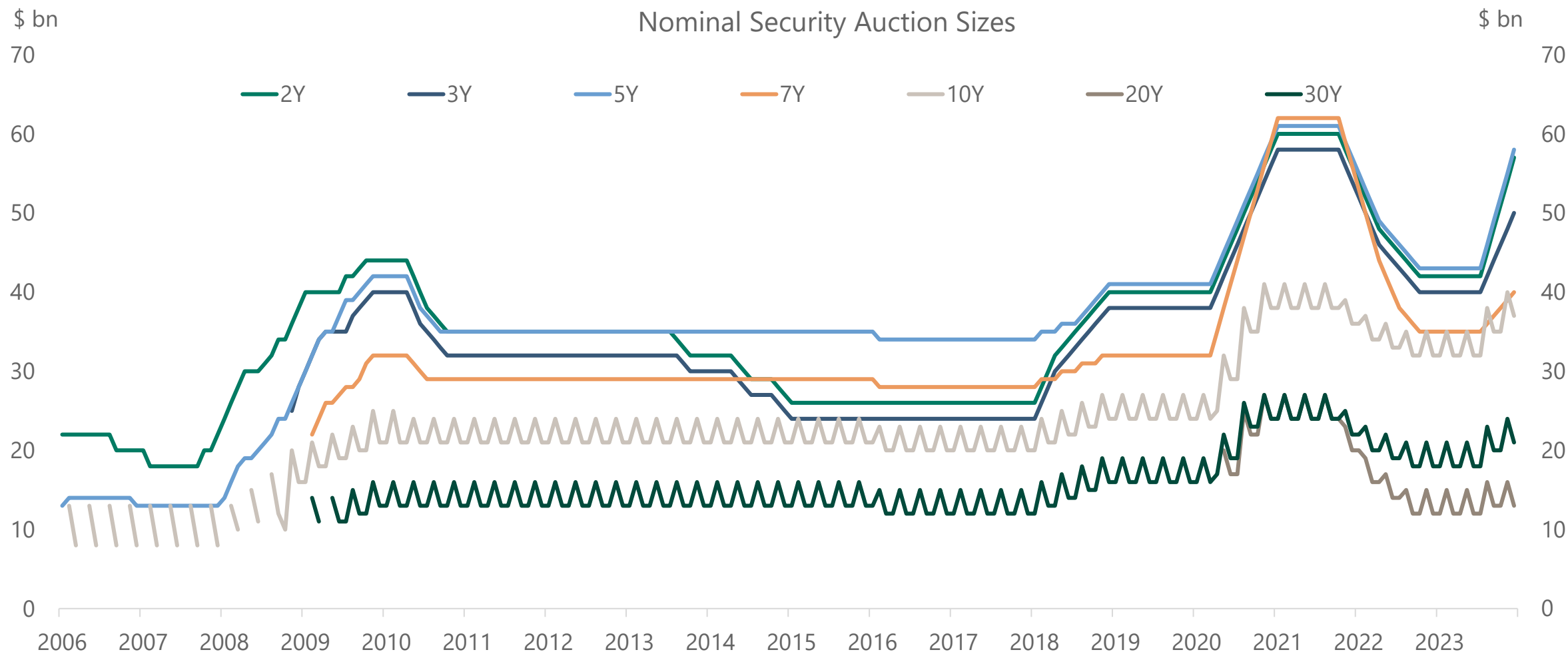
Treasury auction metrics

Treasury auction sizes will in 2024 increase on average 23% across the yield curve

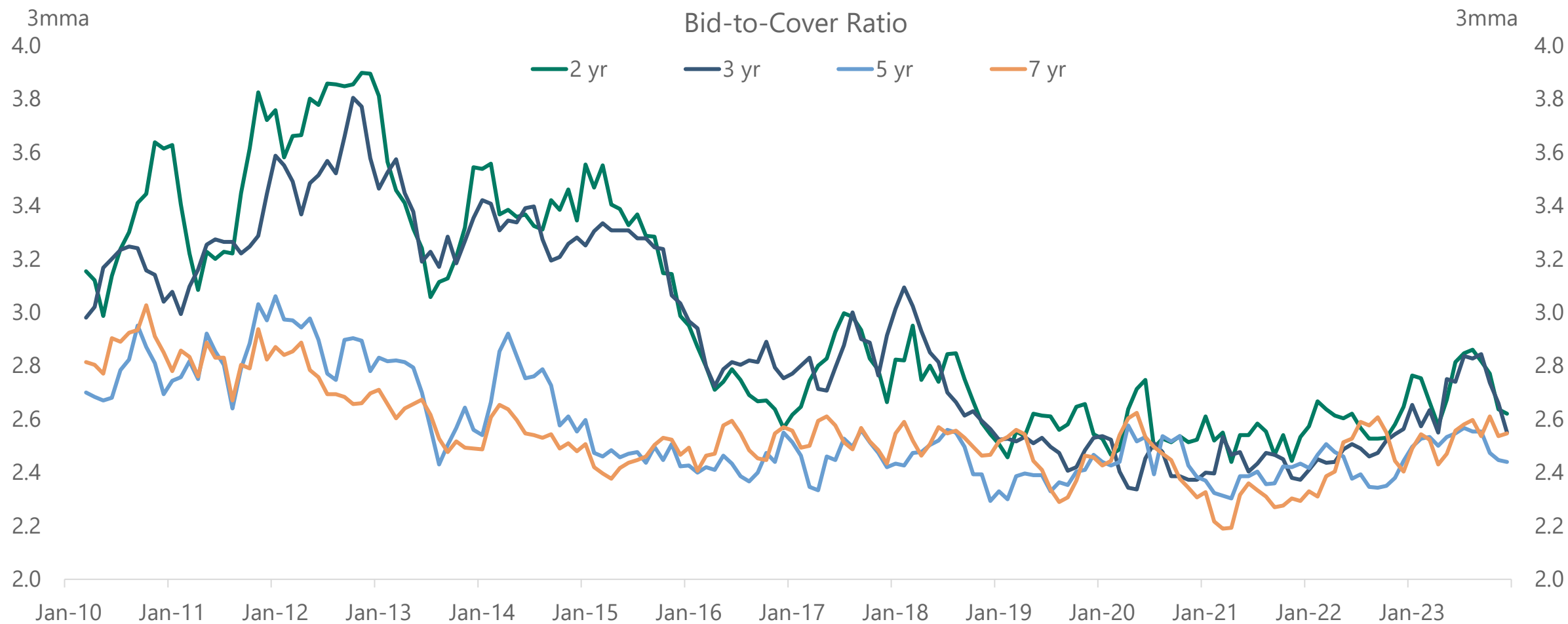


Source: SIFMA, TBAC, Haver Analytics, Apollo Chief Economist. Note: Estimates from September 2023 to Dec 2024 from the TBAC neutral issuance scenario.

Auction sizes growing in 2024

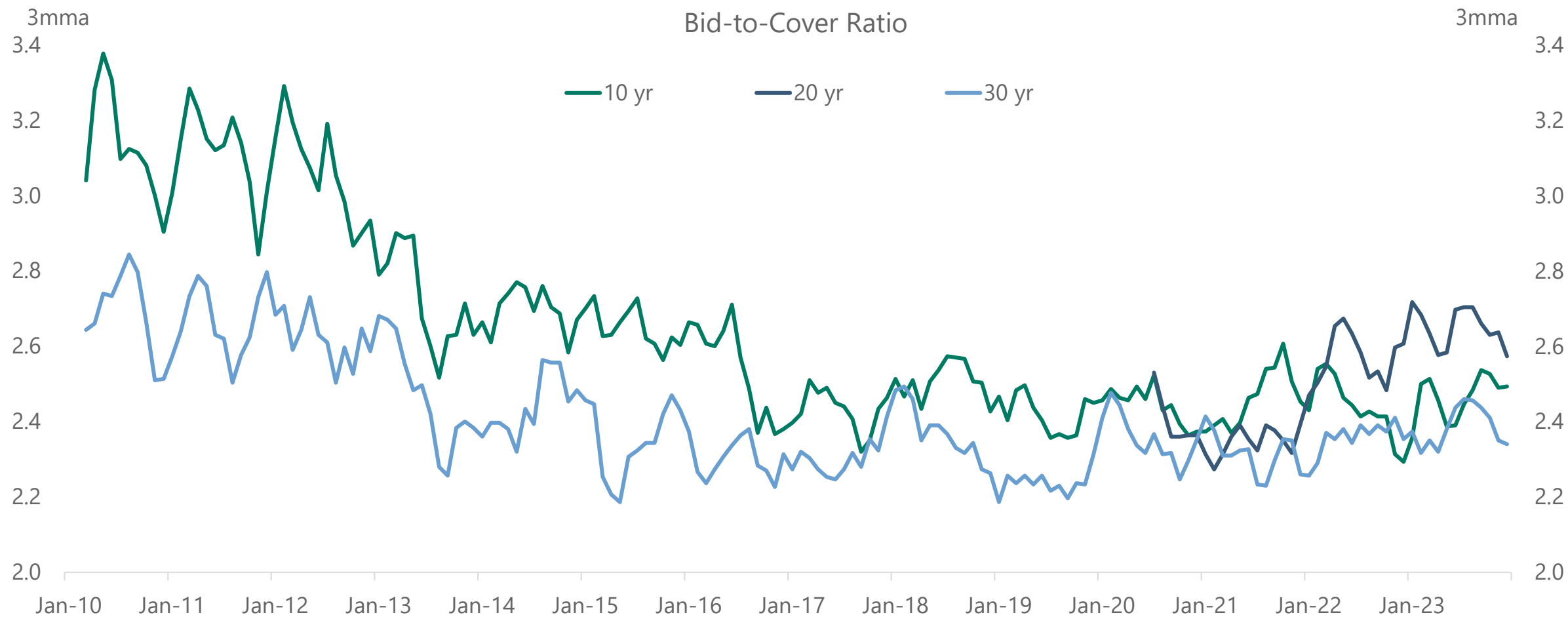


Downside risks to bid-to-cover ratios in 2024

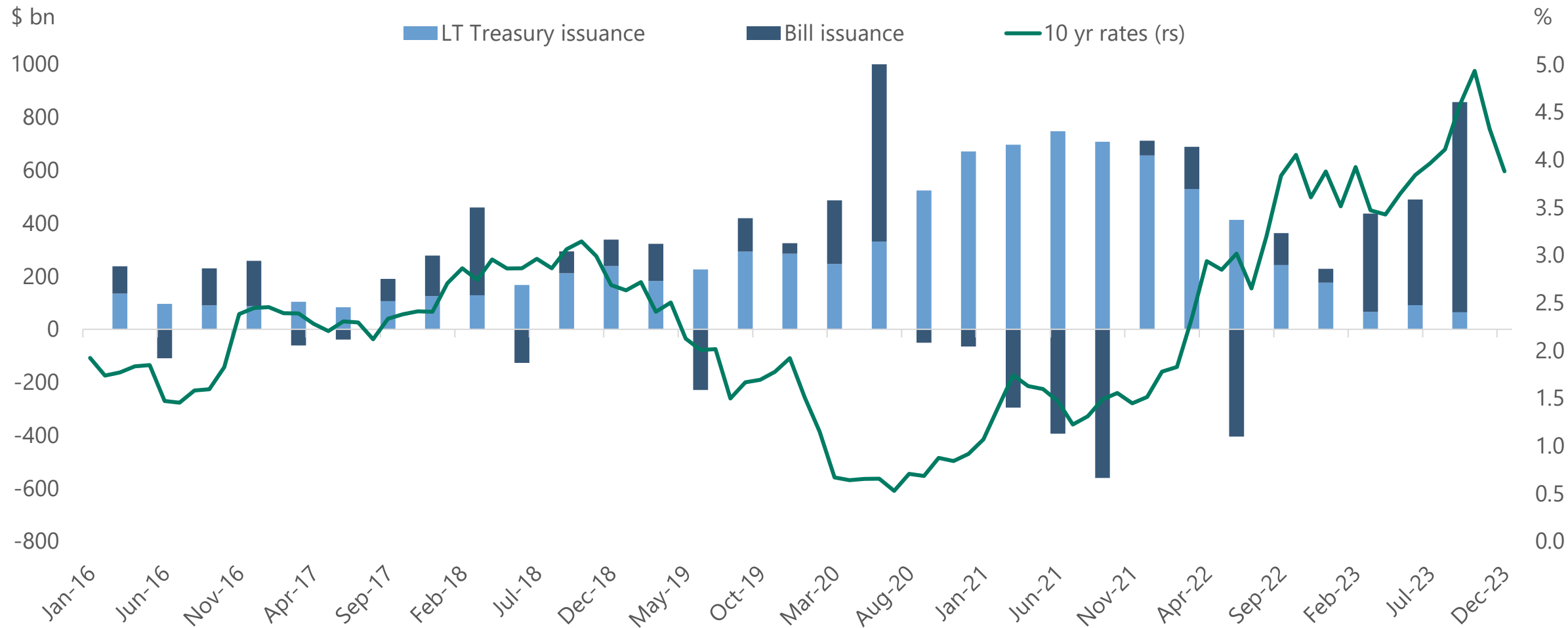


Source: Bureau of Public Debt, Haver Analytics, Apollo Chief Economist

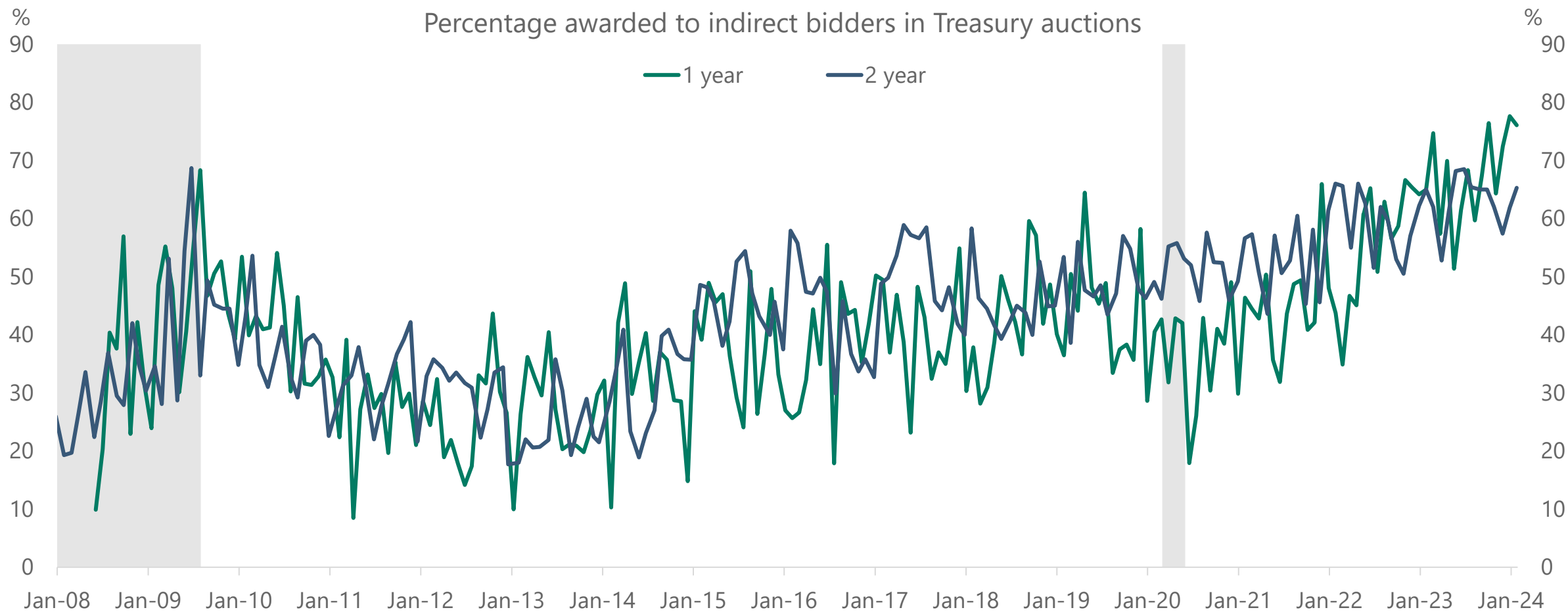
Downside risks to bid-to-cover ratios in 2024



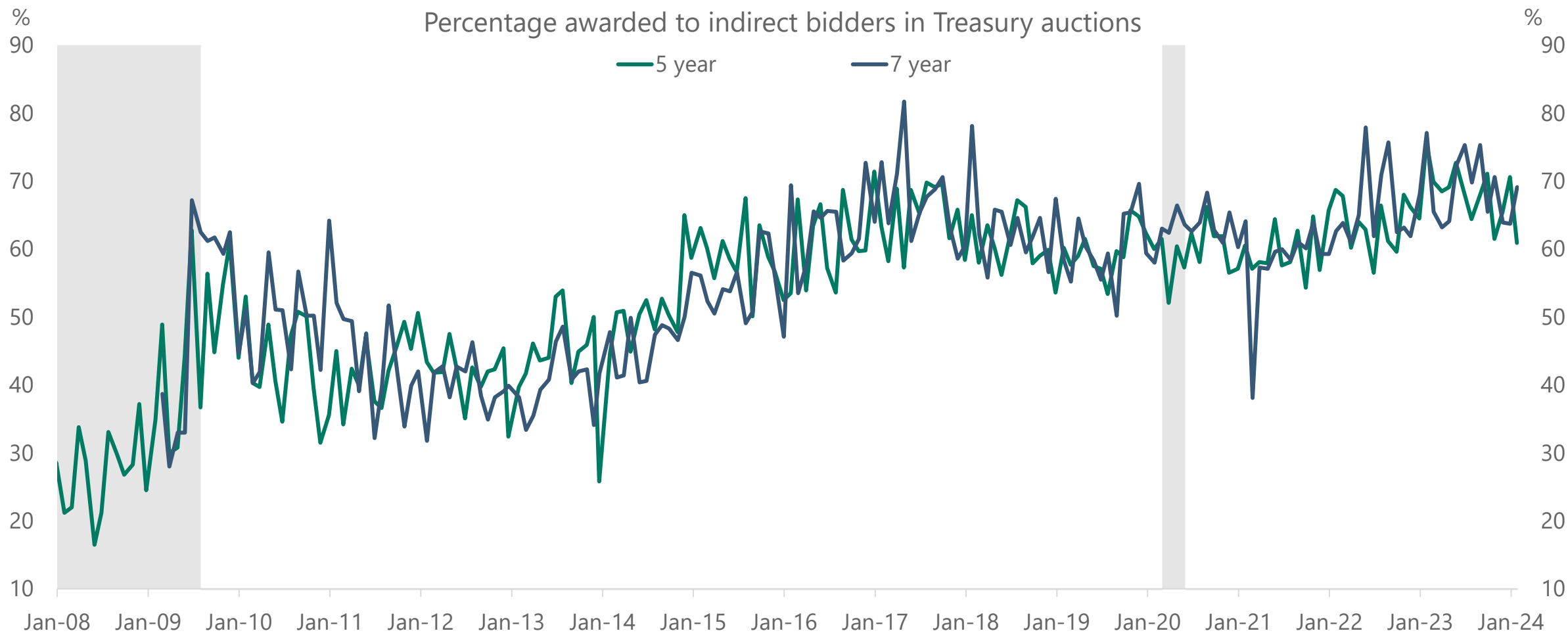
Bill issuance has been very big in 2023



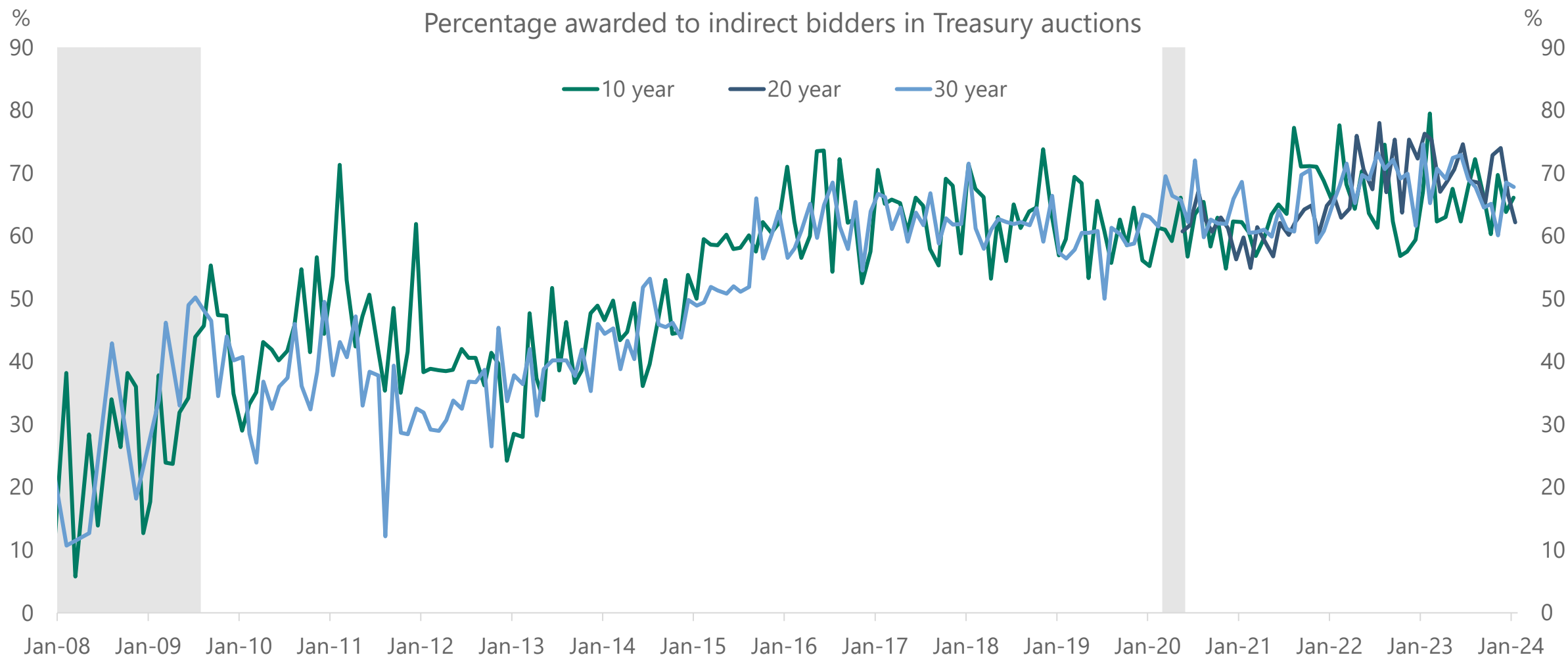
Indirect bidder share rising for 1- and 2-year notes



Indirect bidder share for 5- and 7-year notes



Indirect bidder share for 10- 20- and 30-year Treasuries



Conclusion

Growing debt levels: What to watch?

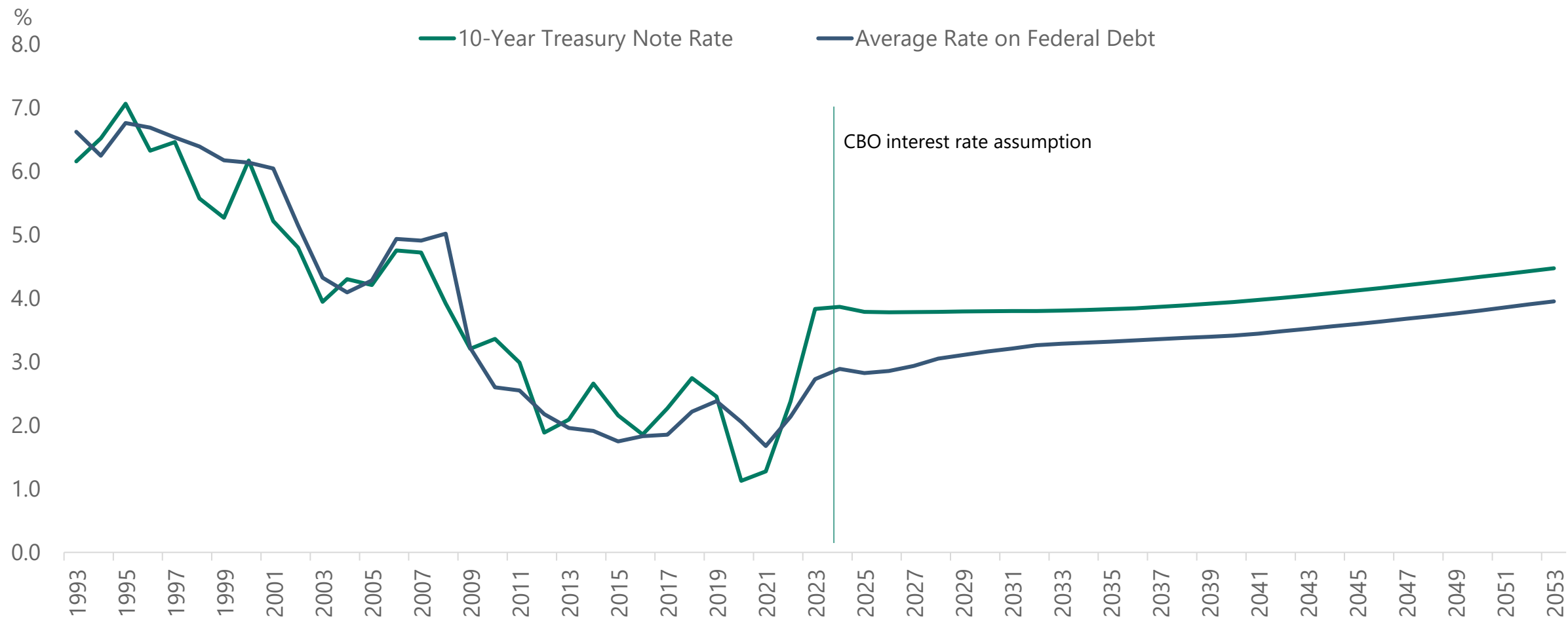
1. Treasury auctions
2. Ratings agencies
3. The term premium

Term premium is key

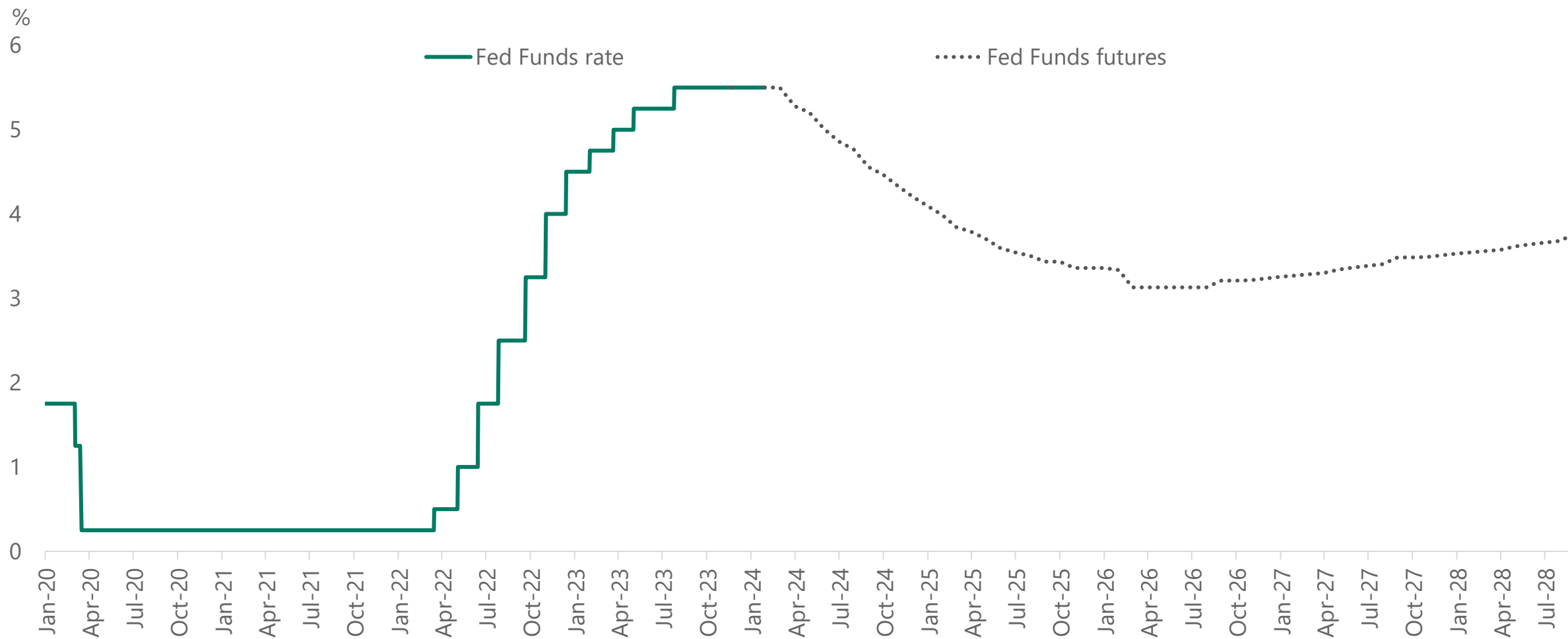


Appendix

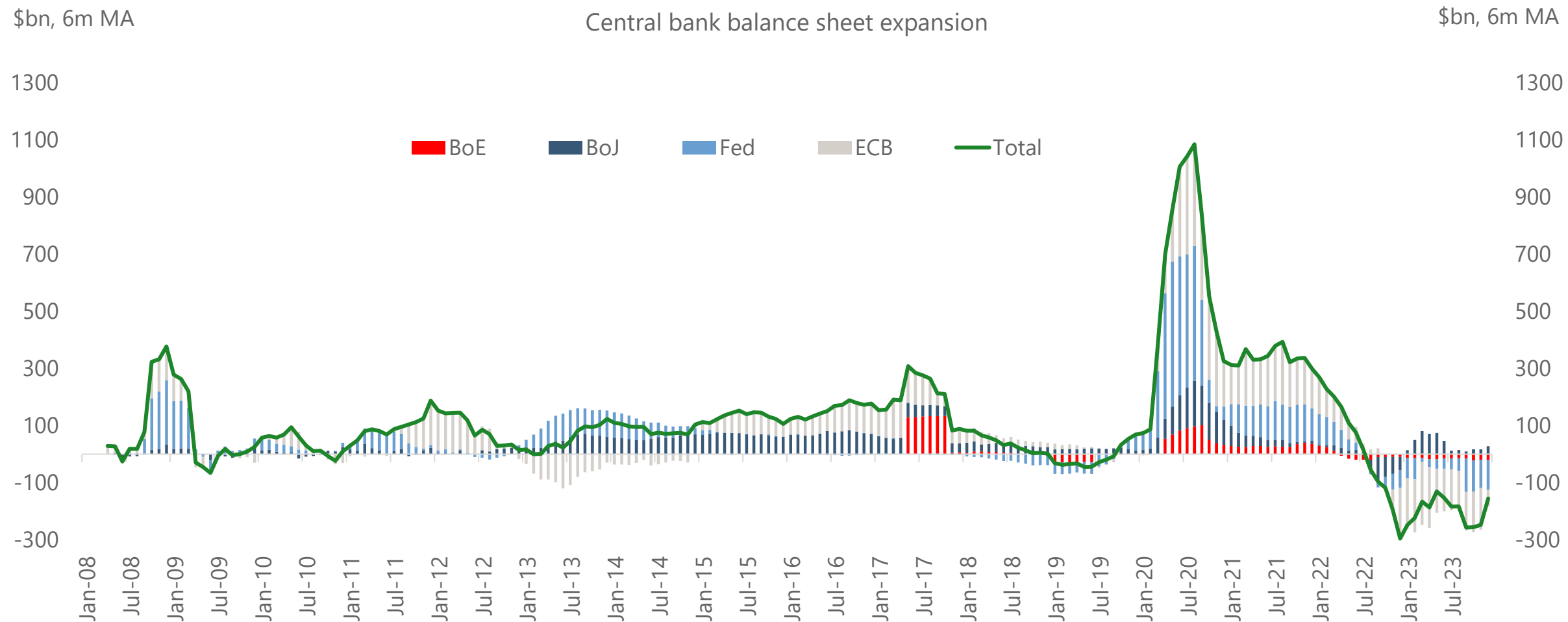
CBO interest rate assumption



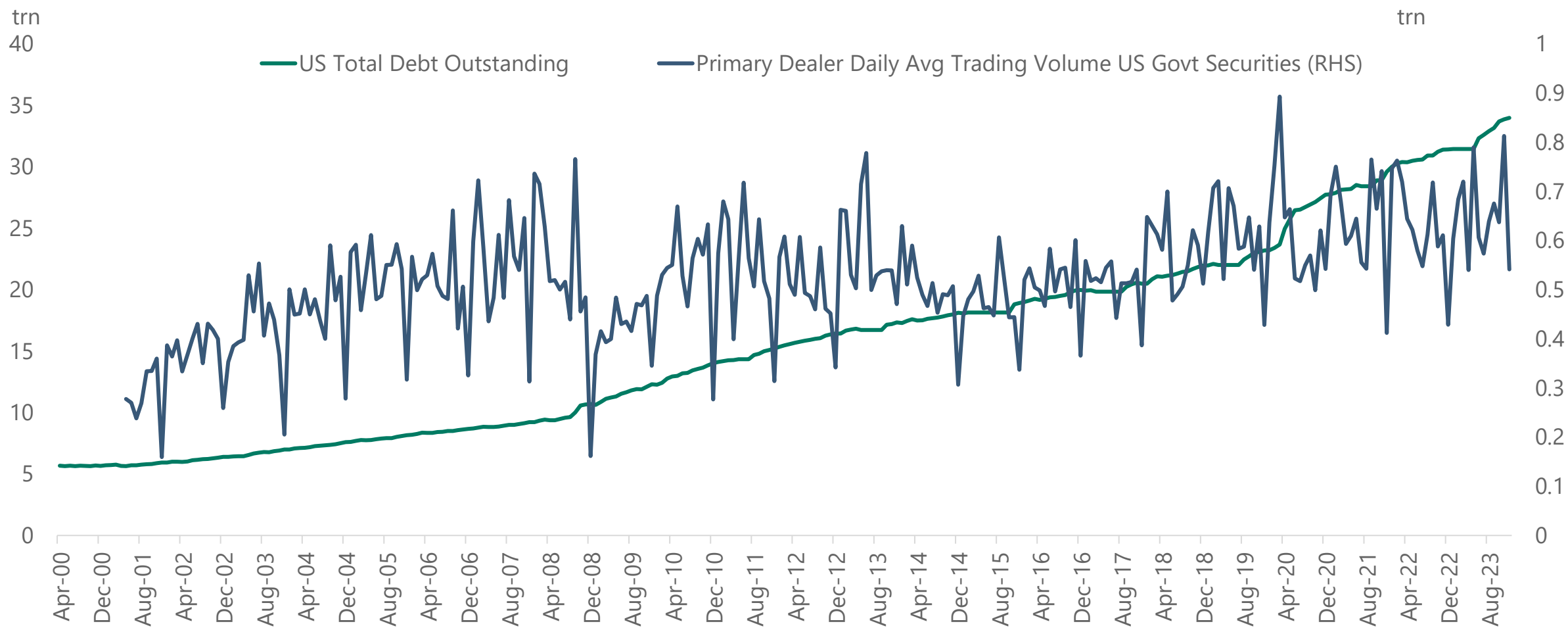
Market pricing rates higher for longer



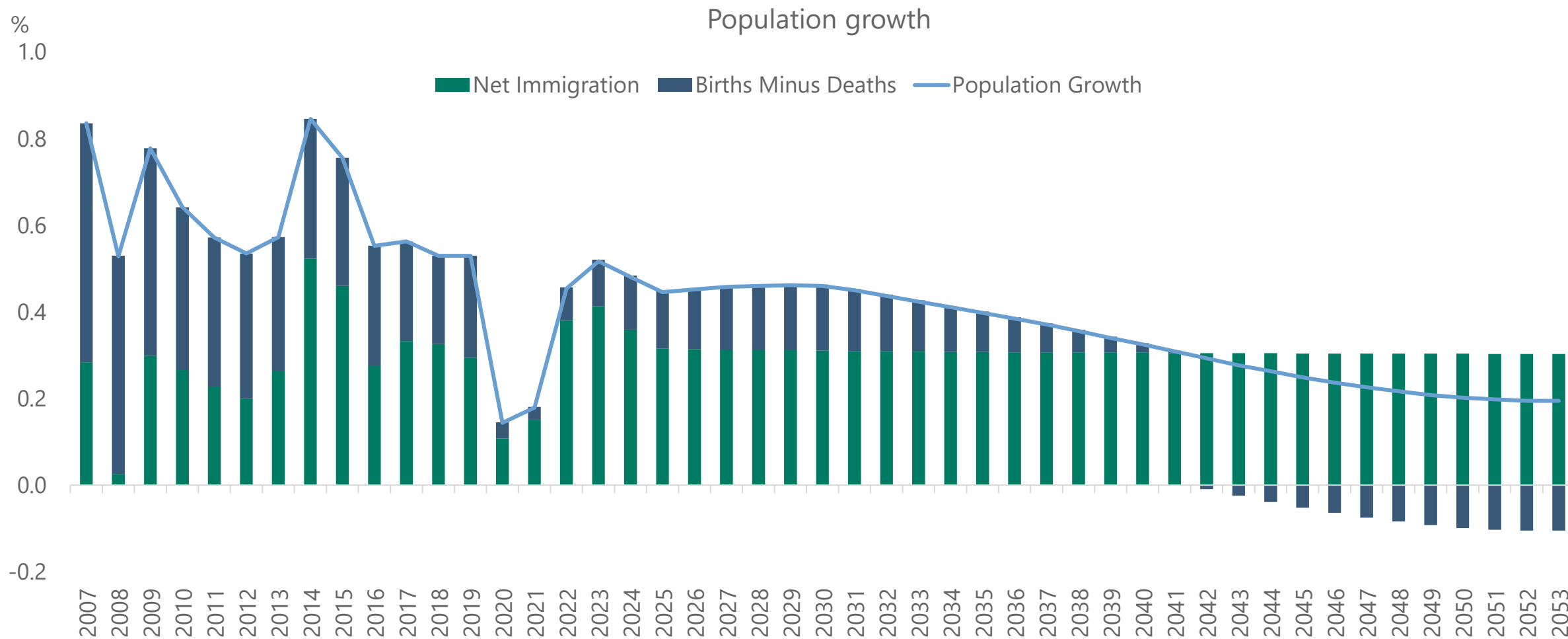
G4 Central bank balance sheets



Low liquidity: Public debt outstanding vs primary dealer trading volume



Factors contributing to population growth: Migration is key driver





Torsten Slok, Ph.D.

Chief Economist

Apollo Global Management

tslok@apollo.com

Torsten Slok joined Apollo in August 2020 as Chief Economist and he leads Apollo's macroeconomic and market analysis across the platform.

Prior to joining, Mr. Slok worked for 15 years as Chief Economist at Deutsche Bank where his team was top ranked in the annual Institutional Investor survey for a decade. Prior to joining Deutsche Bank Mr. Slok worked at the IMF in Washington, DC and at the OECD in Paris.

Mr. Slok has a Ph.D in Economics and has studied at the University of Copenhagen and Princeton University.