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# 10 Facts about the US Treasury market

## Monitoring demand for US government debt

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Apollo Global Management

August 2024

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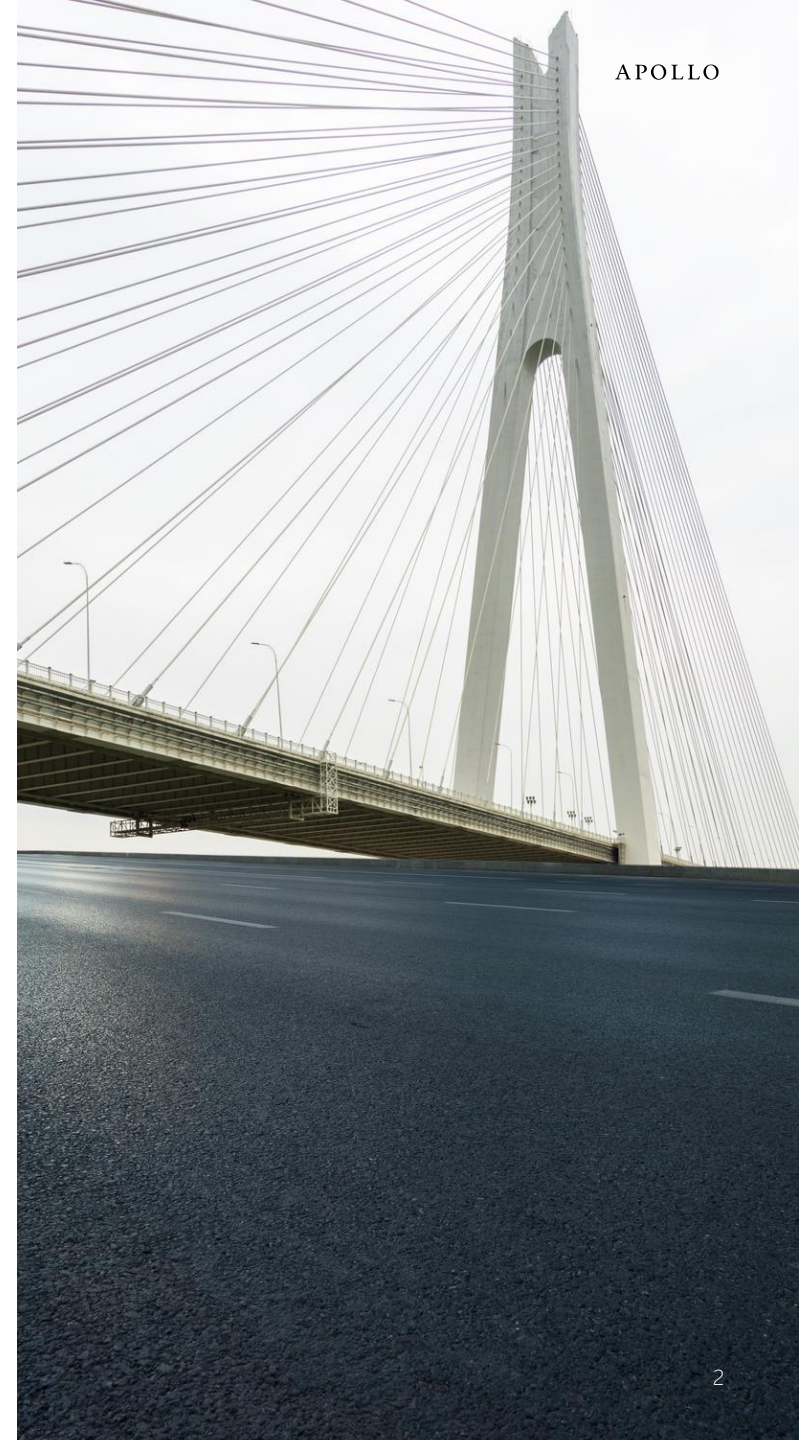
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# 10 Facts about the US Treasury market

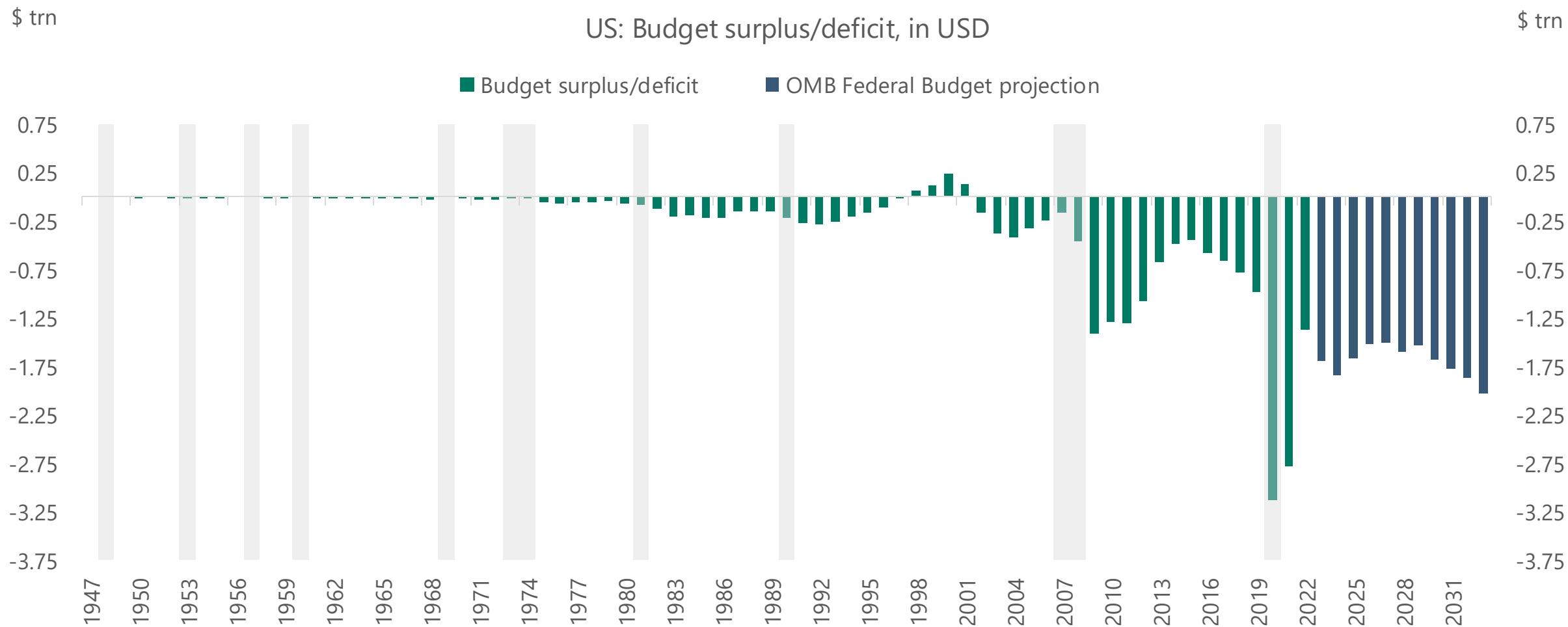
1. Government debt levels are going to rise from 100% to 200% of GDP
2. Deficits are projected to be more than \$1 trillion every year for the next 10 years
3. \$9 trillion of government debt will mature over the coming 12 months
4. Since the Fed started raising rates households, pension, and insurance have been buying more Treasuries
5. China has lowered its holdings of Treasuries from \$1.2 trillion in 2015 to \$800 billion today
6. The weighted average maturity of debt outstanding is currently 6 years
7. A rising share of debt outstanding is T-bills, currently 22%
8. Treasury auction sizes will in 2024 increase on average 27% across the yield curve
9. Debt servicing costs are currently 12% of total government outlays
10. Interest payments have doubled from \$1 billion per day before the pandemic to almost \$2 billion per day in 2023

**Investors should keep an eye on: 1) Treasury auctions, 2) rating agencies, and 3) the term premium**

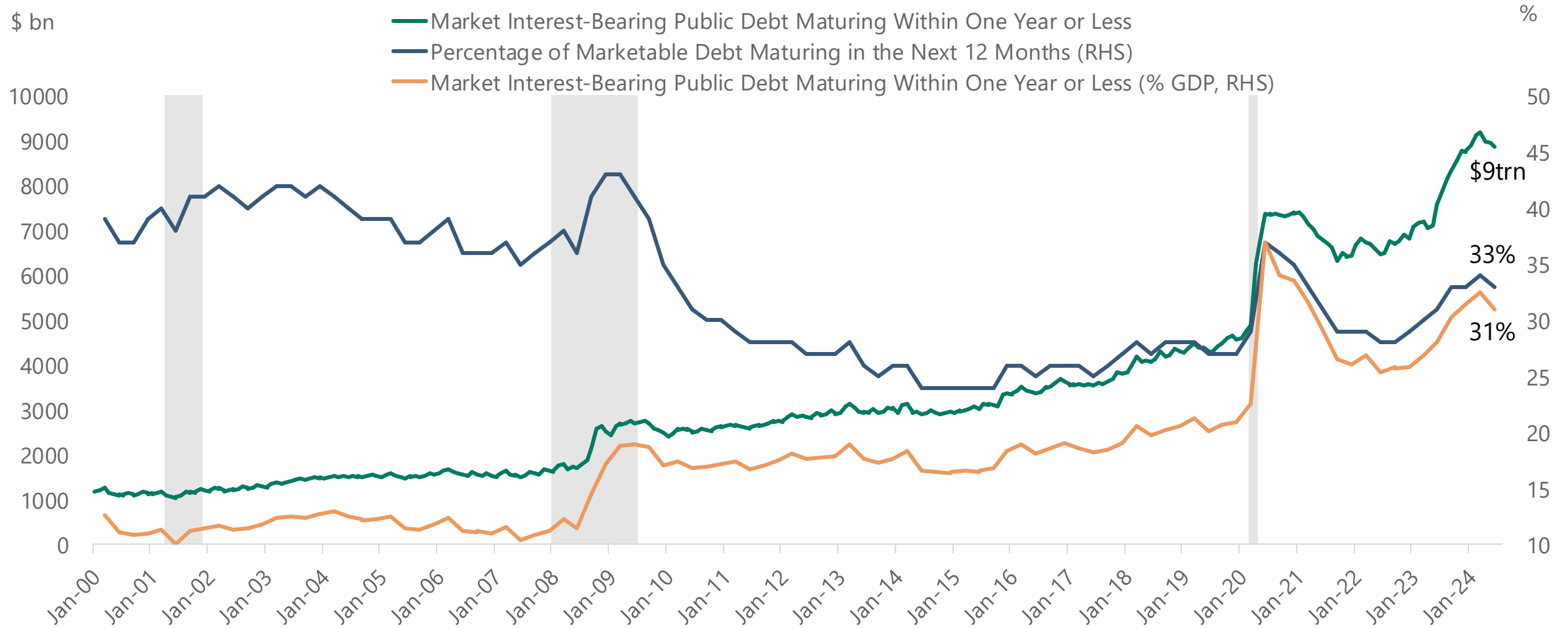
# 1. Under current policies, government debt outstanding will grow from 100% to 200% of GDP



## 2. Trillion-dollar deficits as far as the eye can see: OMB projections

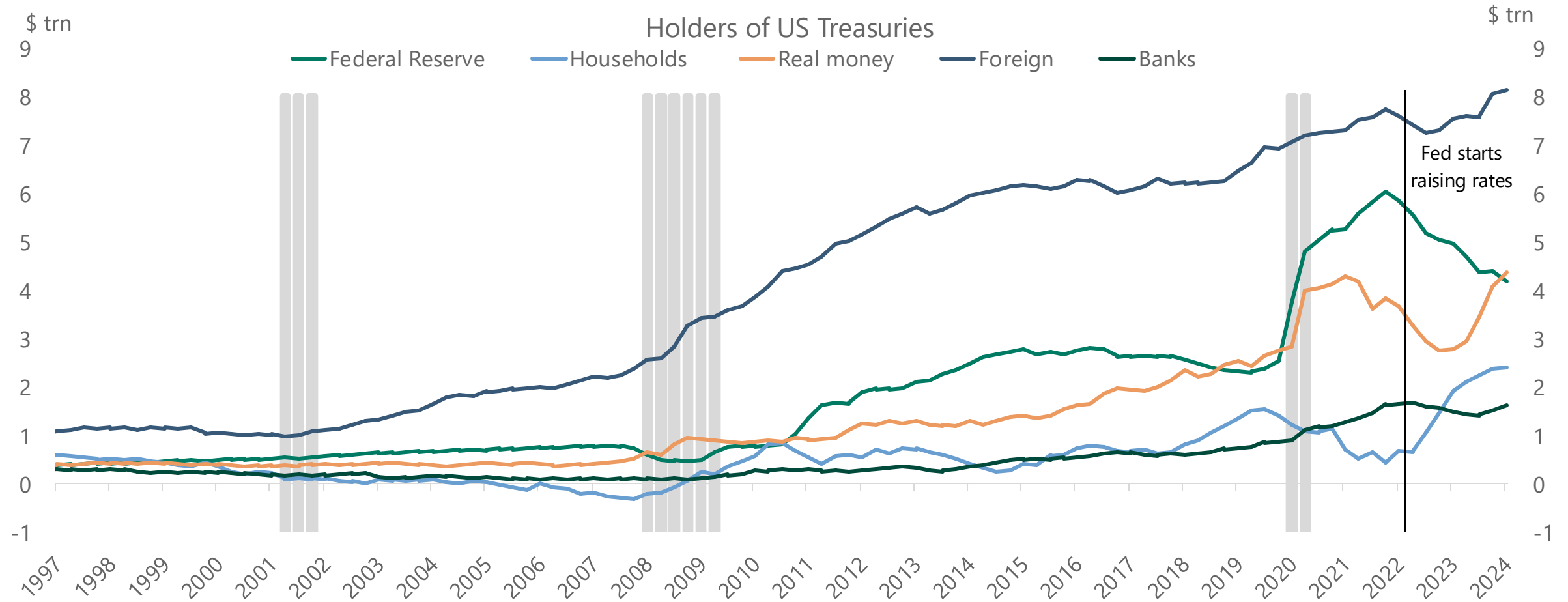


### 3. \$9trn of government debt will mature over the next year

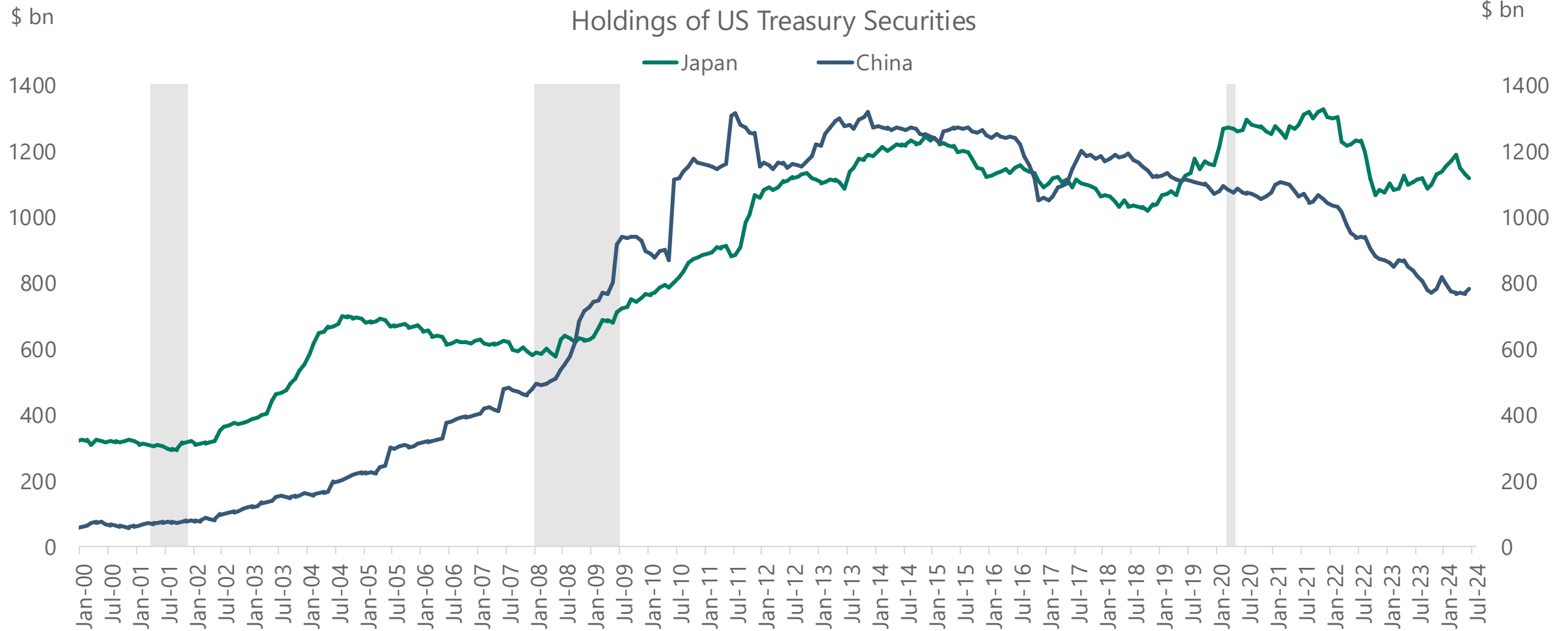


Source: Treasury, BEA, Haver Analytics, Apollo Chief Economist

# 4. US households, foreigners and real money buying Treasuries. Fed selling Treasuries



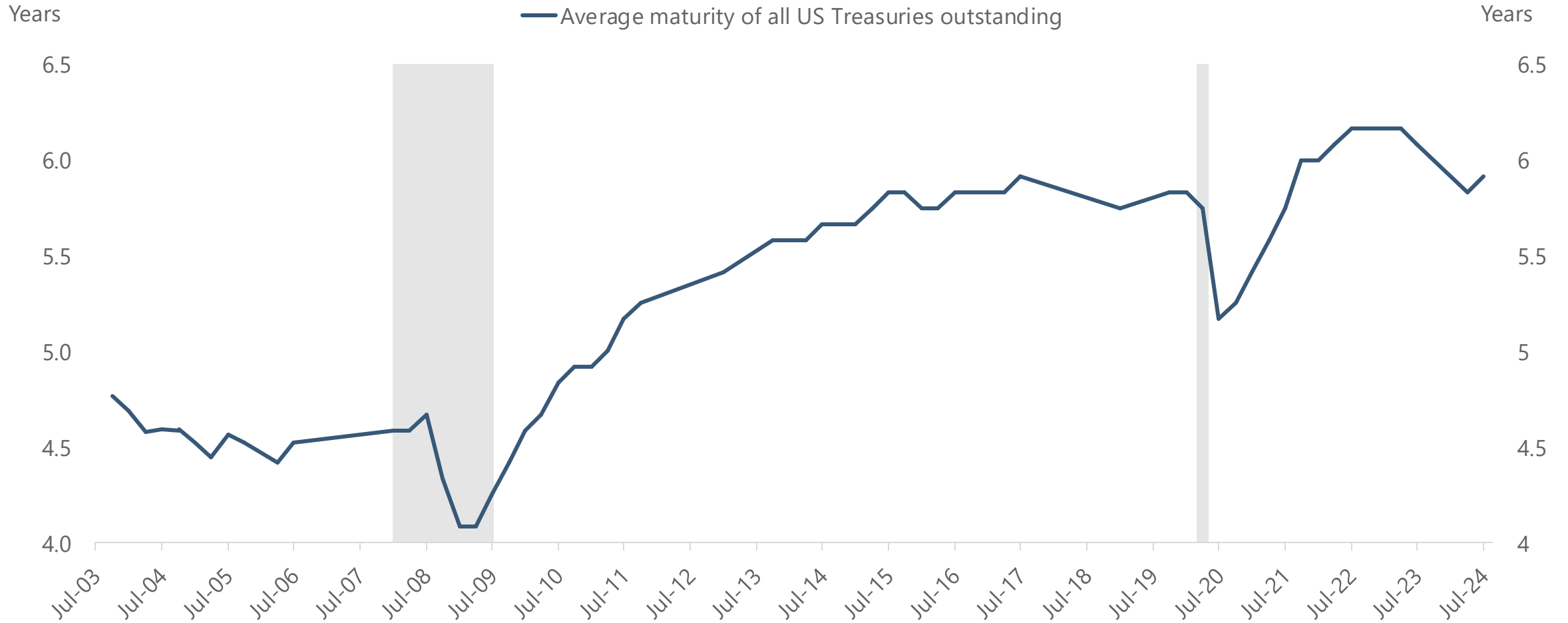
# 5. Japanese and Chinese holdings of Treasury securities



Source: Treasury, Haver Analytics, Apollo Chief Economist

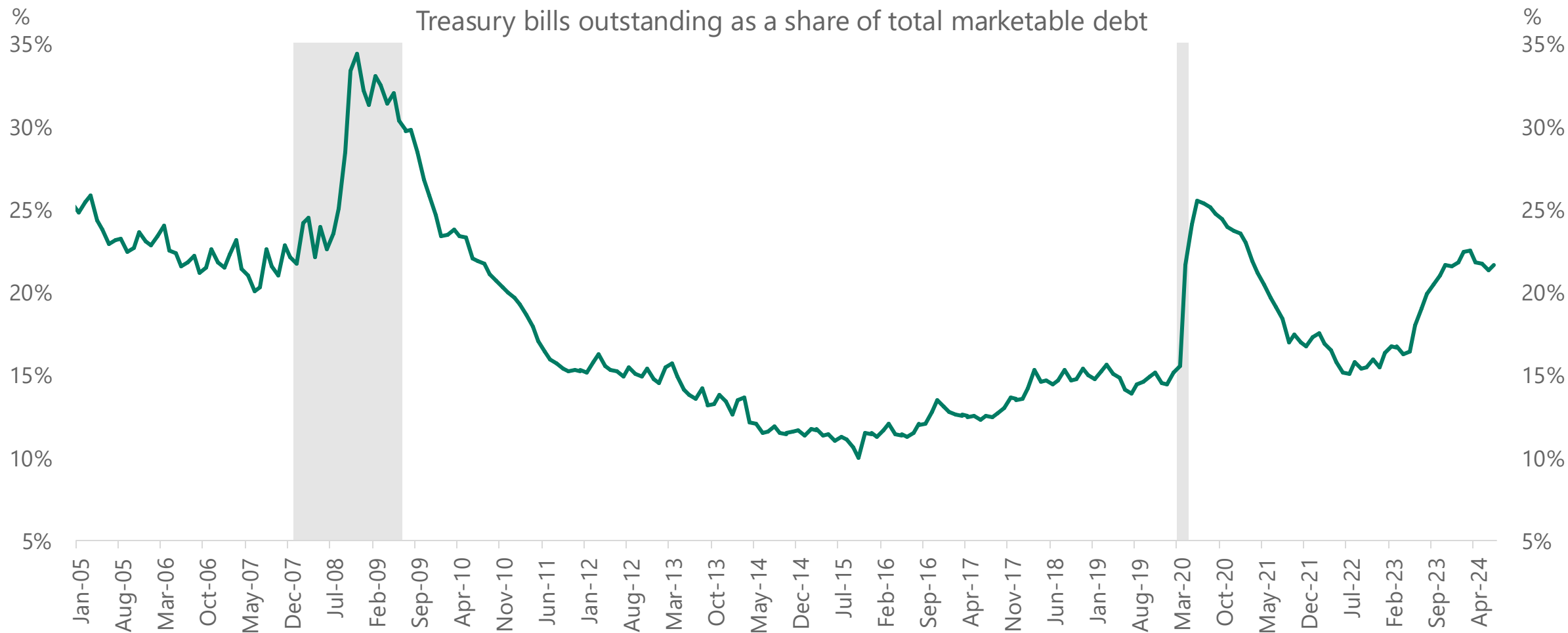


# 6. Weighted average maturity of debt outstanding

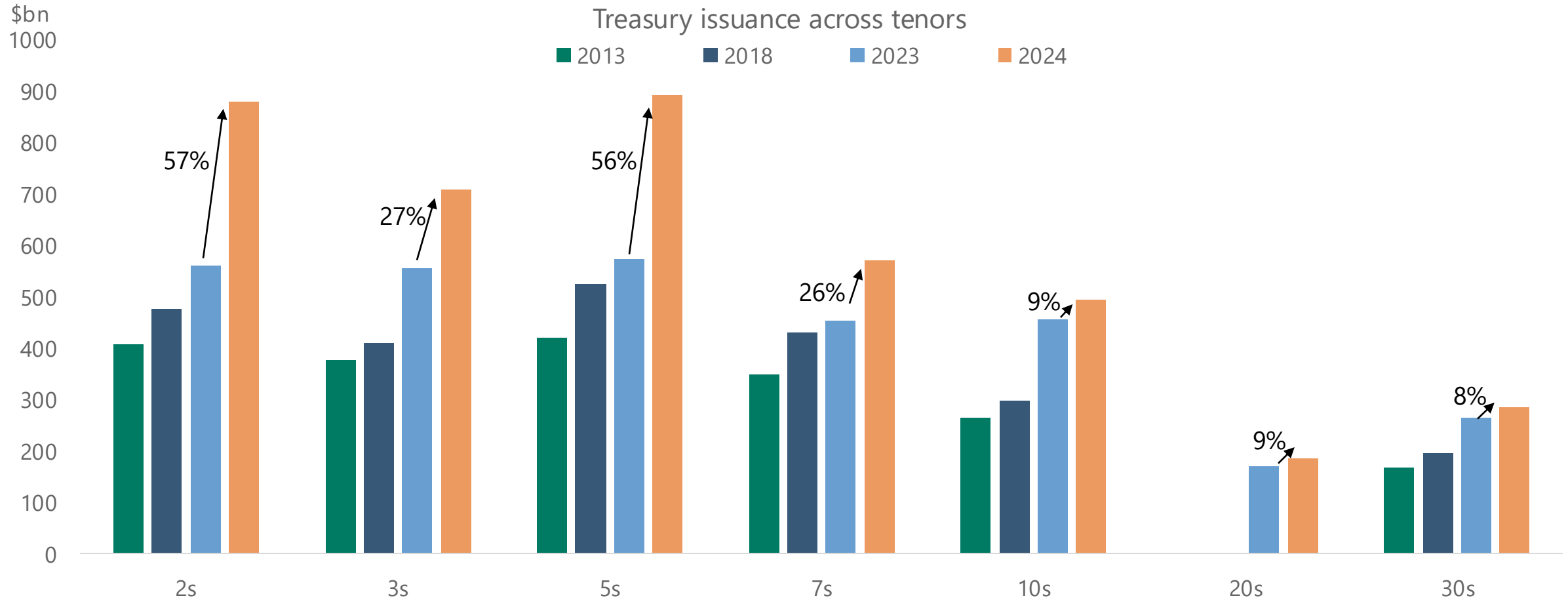


Source: Treasury, Haver Analytics, Apollo Chief Economist

## 7. Share of T-bills has increased significantly

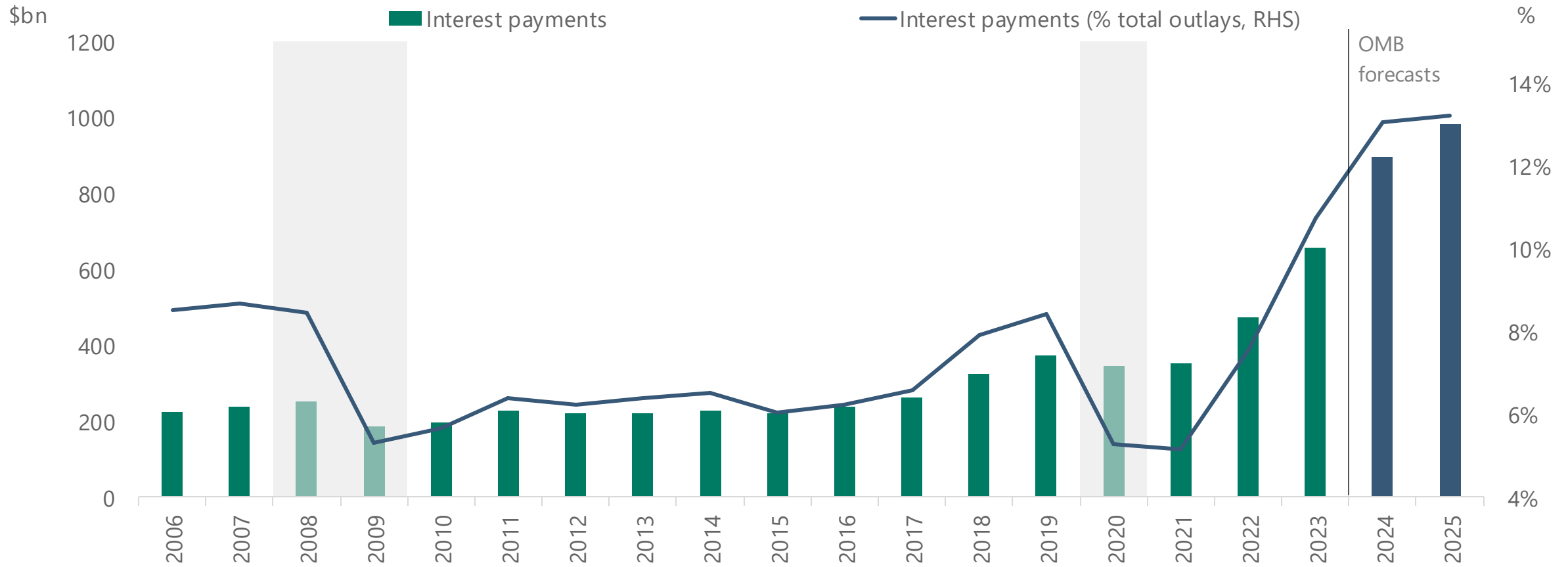


## 8. Treasury auction sizes will increase on average 27% across the yield curve



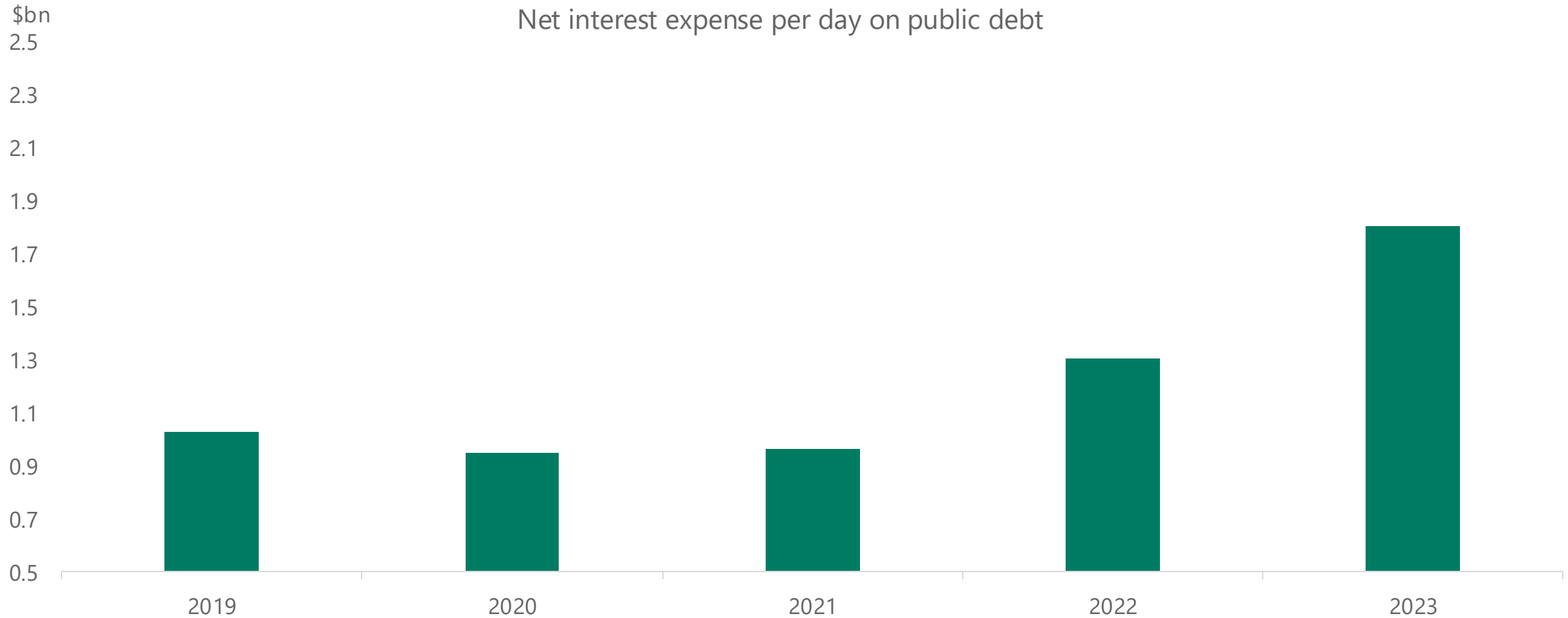
Source: SIFMA, TBAC, Haver Analytics, Apollo Chief Economist. Note: Estimates from August 2024 to Dec 2024 from the TBAC neutral issuance scenario.

# 9. Government debt servicing costs currently make up 12% of government spending



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

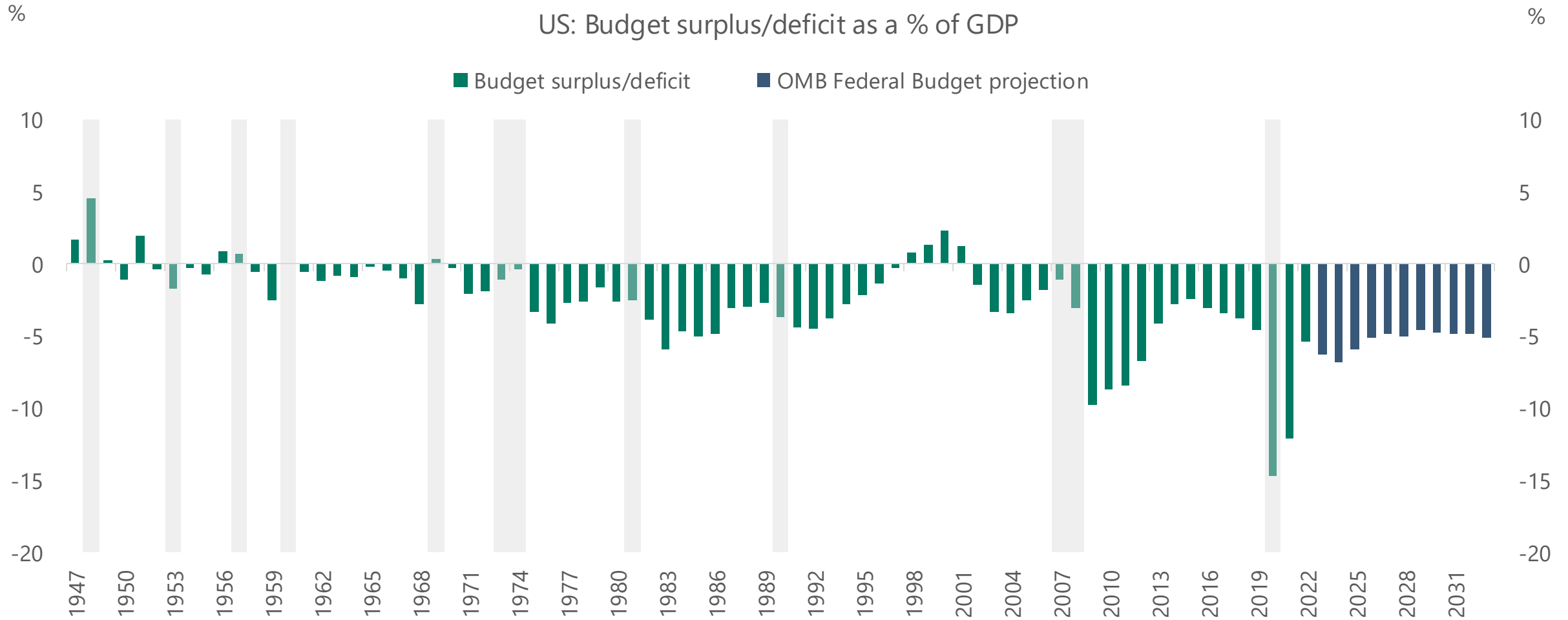
# 10. US government interest payments per day have doubled from \$1bn per day before the pandemic to almost \$2bn per day in 2023



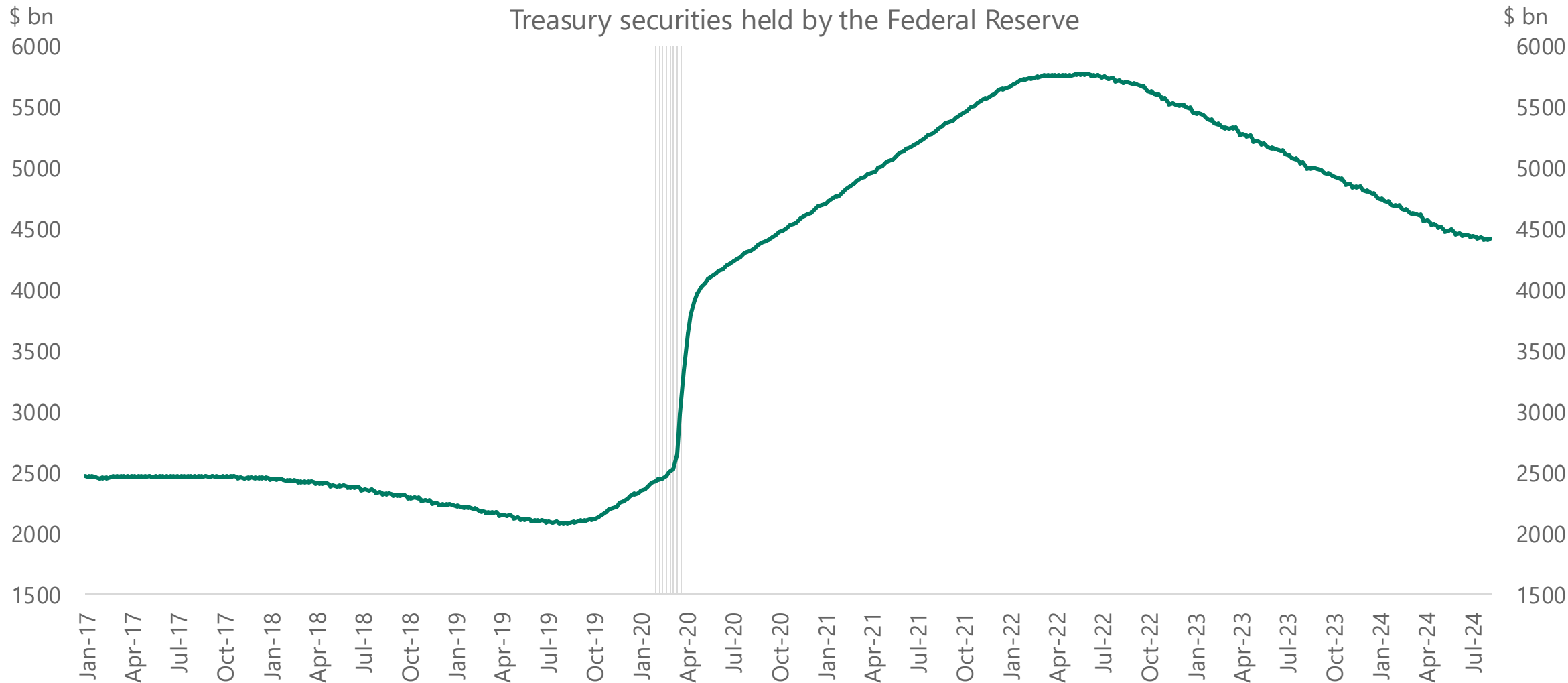
Source: CBO, Haver Analytics, Apollo Chief Economist. Note: Interest rate assumption by CBO: 2.1% in 2022 and 2.7% in 2023. Annual CBO data divided by 365.

# Government budget deficits and debt levels

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



# More Treasury supply from QT

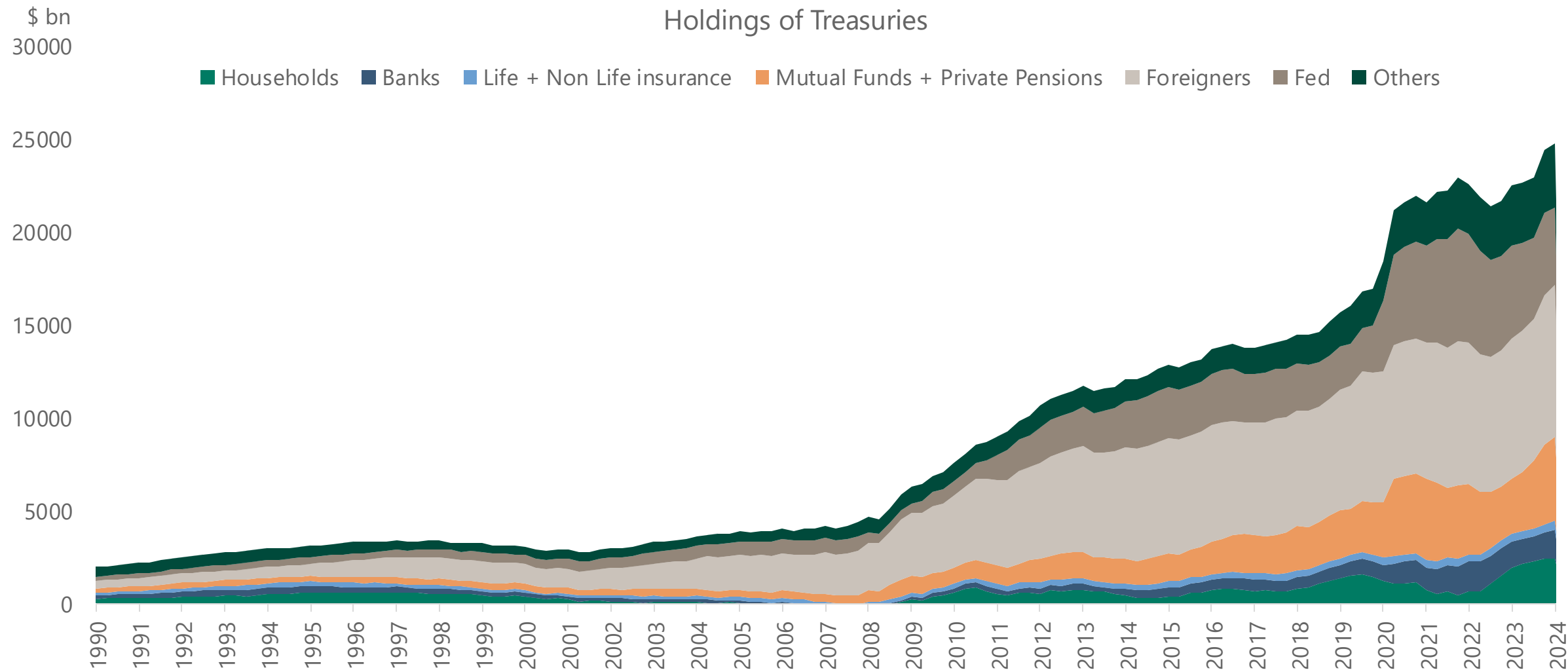


Source: U S Treasury, Bloomberg,, Apollo Chief Economist



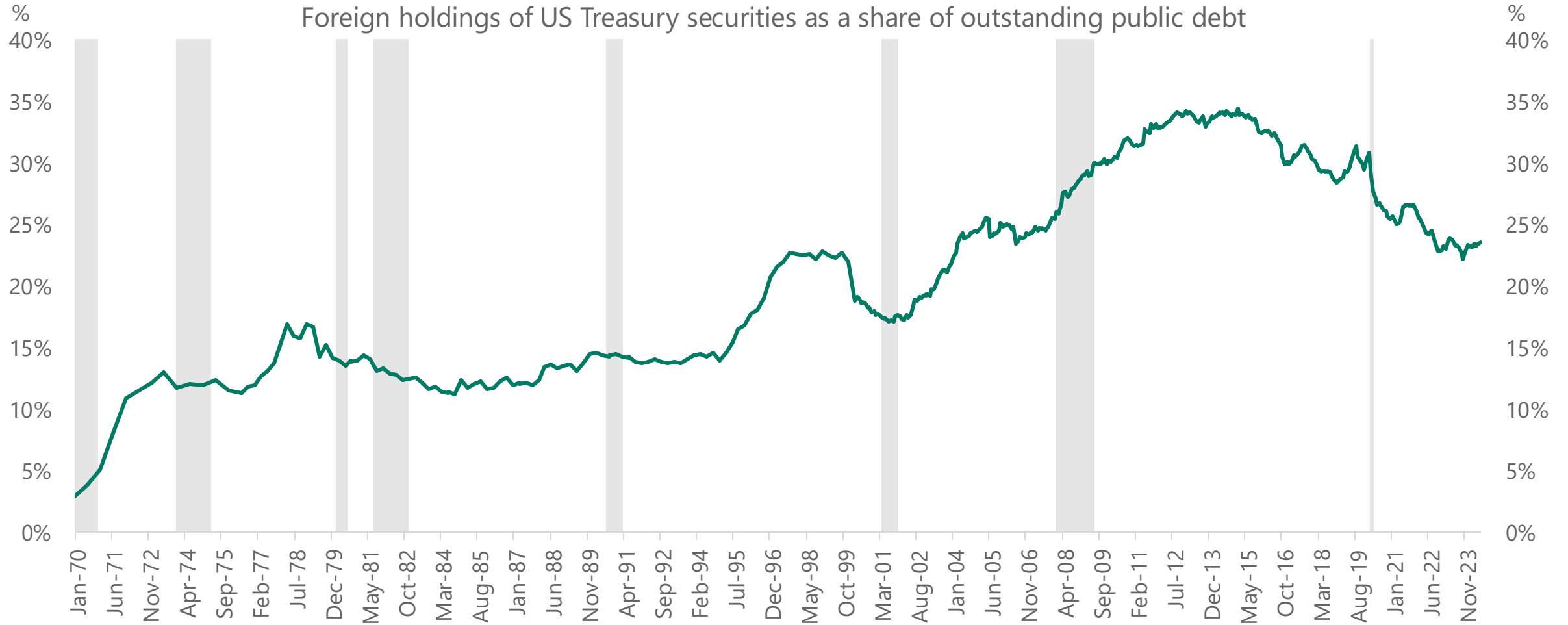
Who owns US government debt?

# Who owns the \$25trn Treasuries outstanding?



Source: FFUNDS, Haver, Apollo Chief Economist

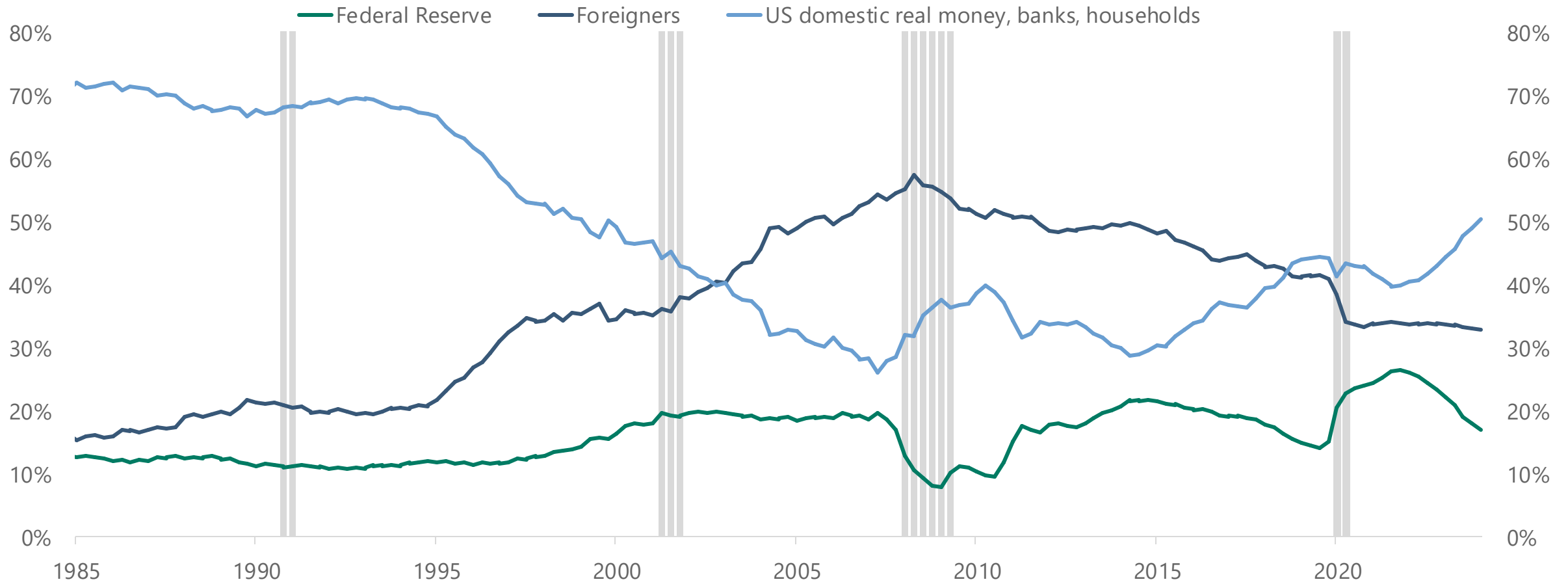
# Trend decline in foreign ownership of US government bonds since 2015



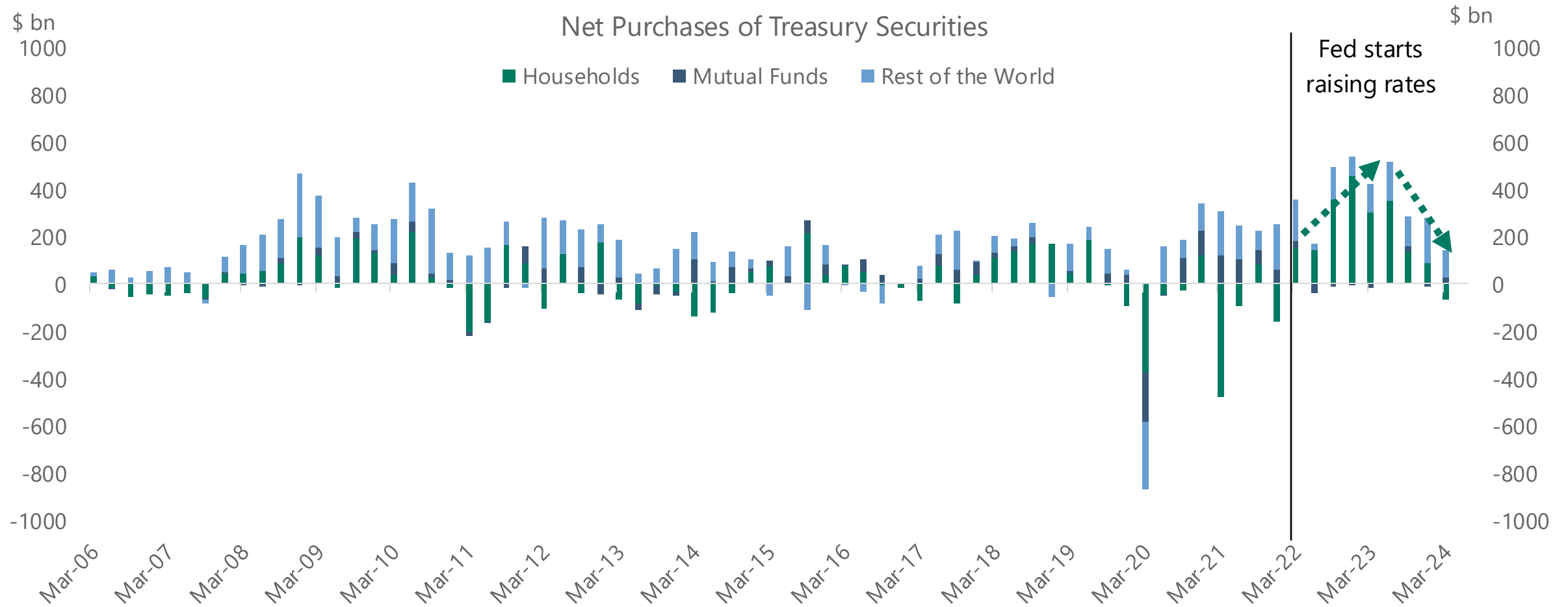
Source: Treasury, Haver Analytics, Apollo Chief Economist

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

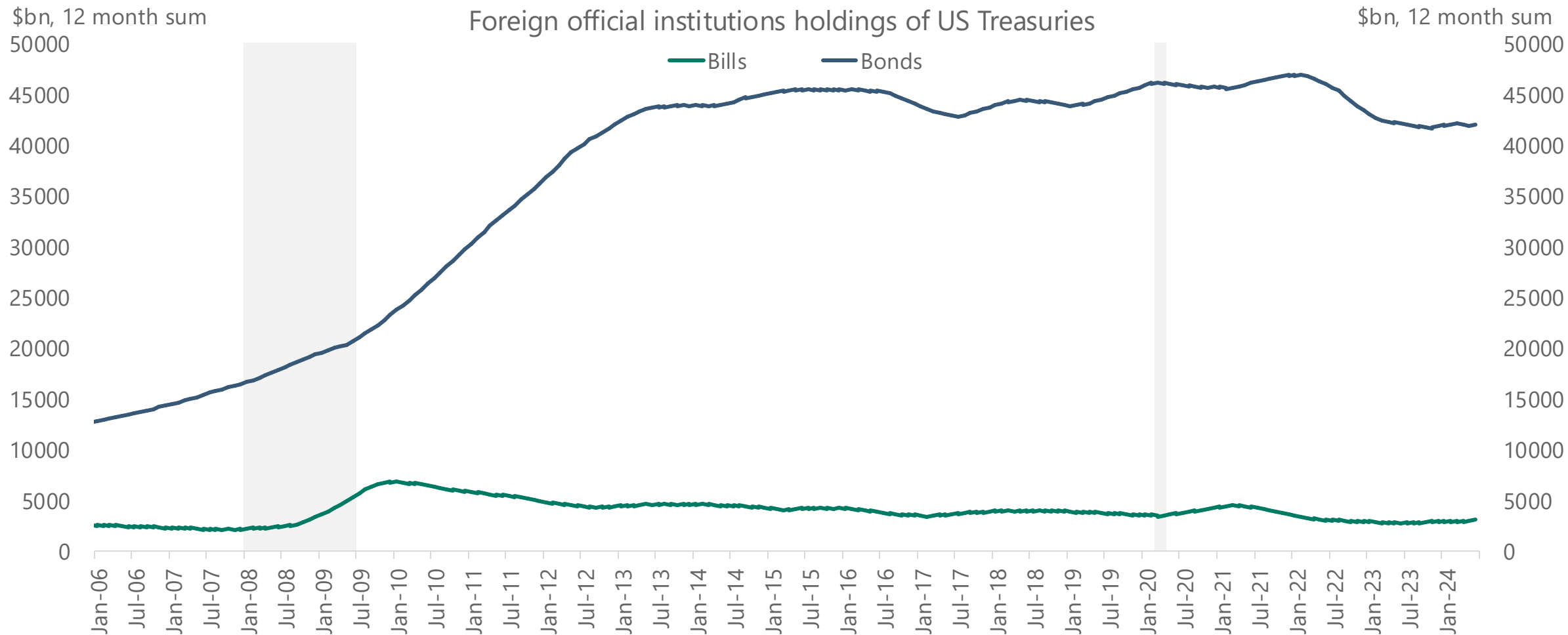
Holdings of Treasuries (% Treasury debt outstanding)



As the Fed was raising rates, US households were big buyers of US Treasuries.  
But this trend is now reversing

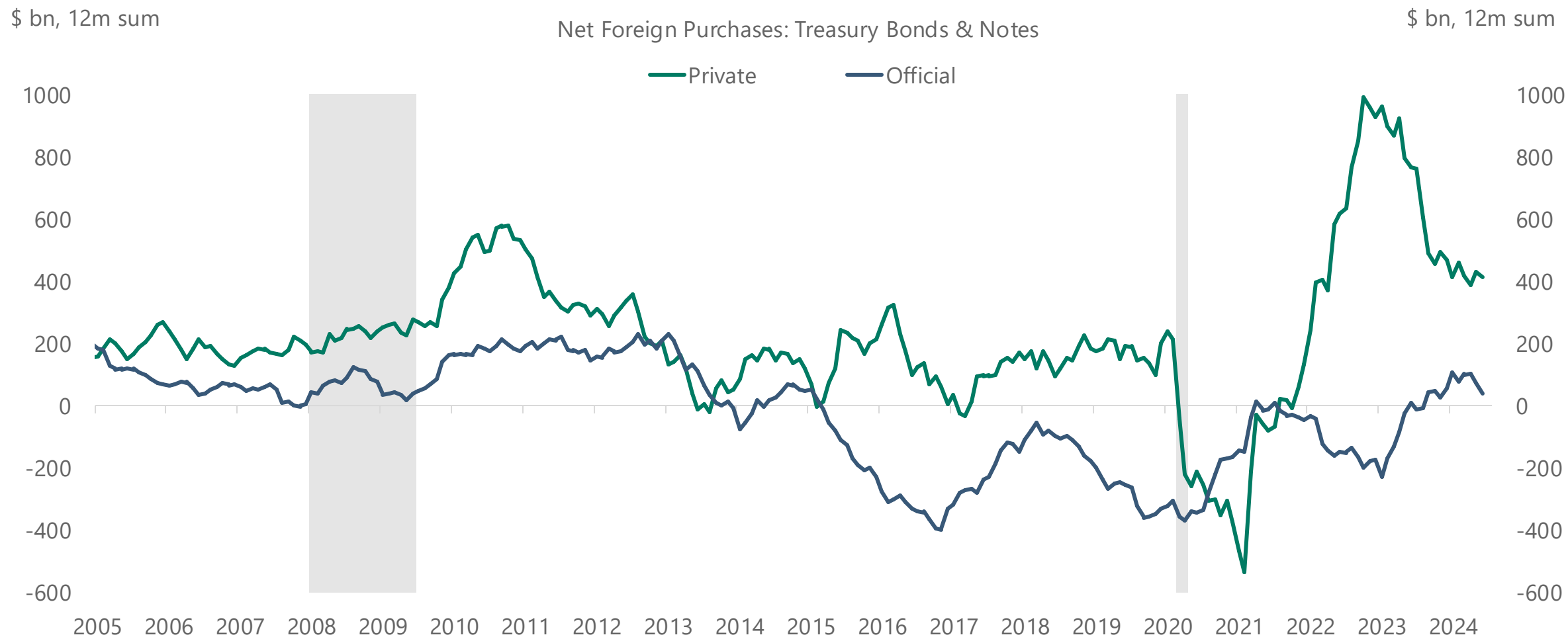


# Foreign official holdings of Treasury bills and bonds



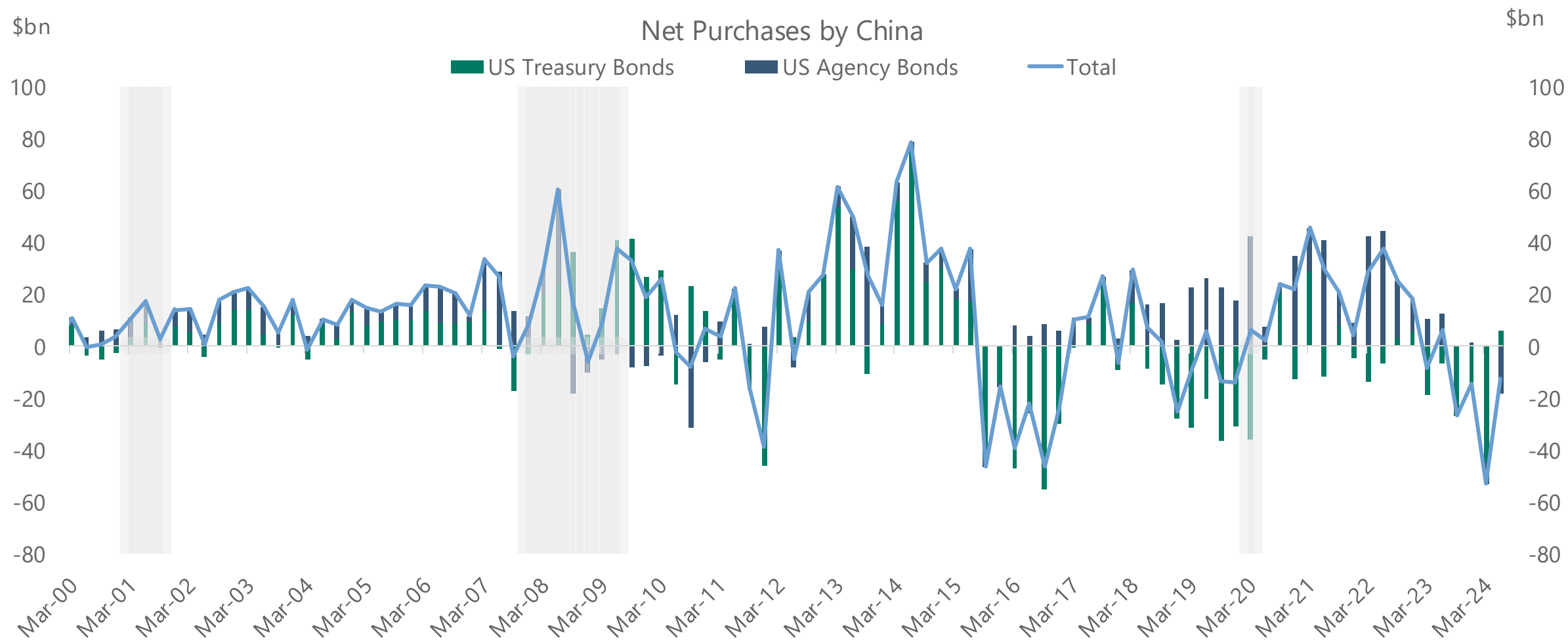
Source: Treasury, Haver Analytics, Apollo Chief Economist

# Foreign purchases of Treasuries come mainly from the private sector



Source: Treasury, Haver Analytics, Apollo Chief Economist

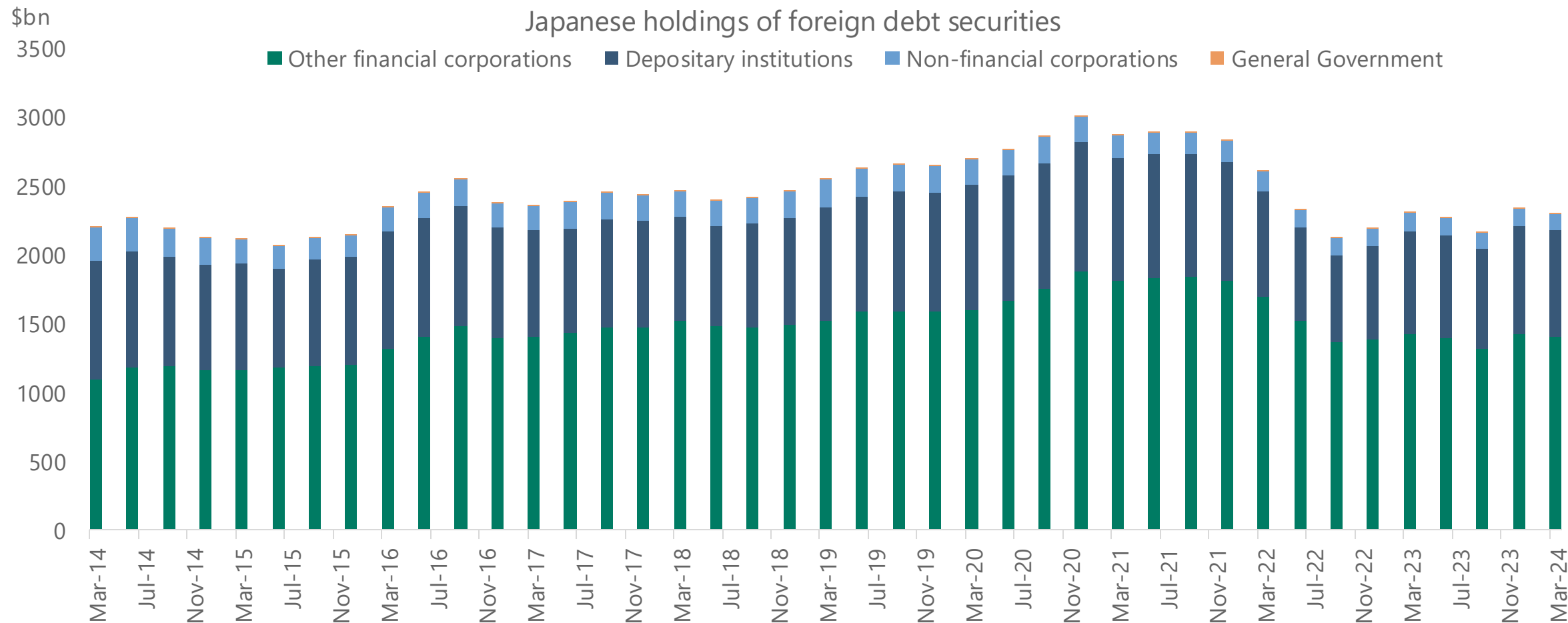
# China is selling US Treasury and Agency bonds



Source: US Treasury, Bloomberg, Apollo Chief Economist

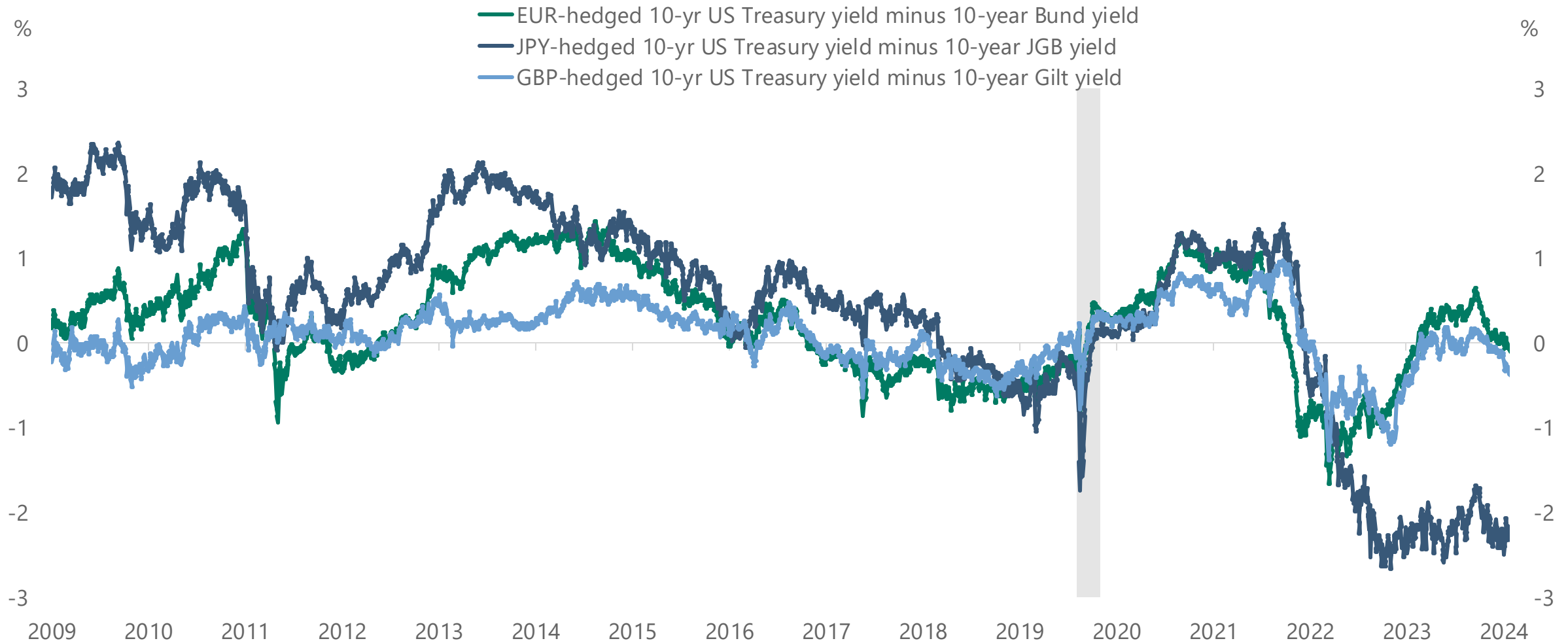


# Japan: Insurance and pension own most of the foreign debt securities



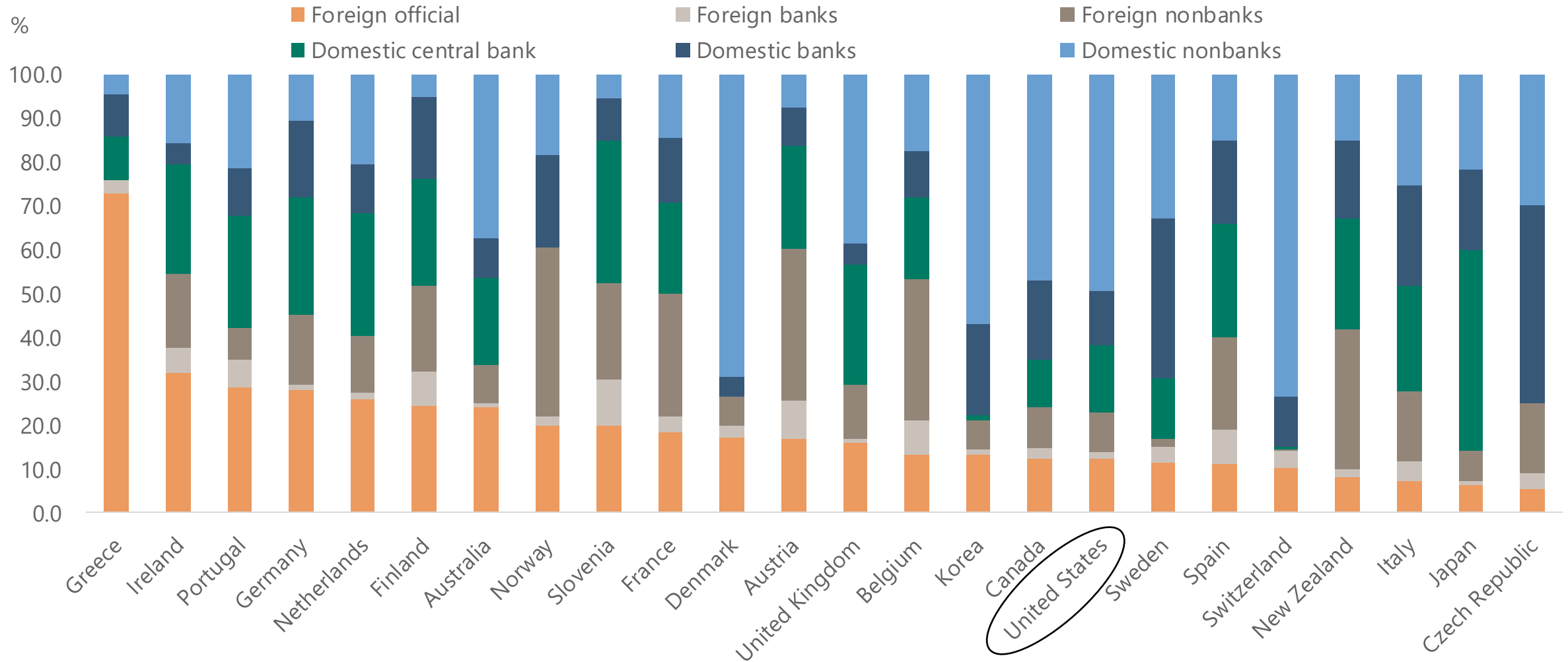
Source: Ministry of Finance Japan, Bloomberg, Apollo Chief Economist

# Hedging costs are high for Japanese investors buying US Treasuries



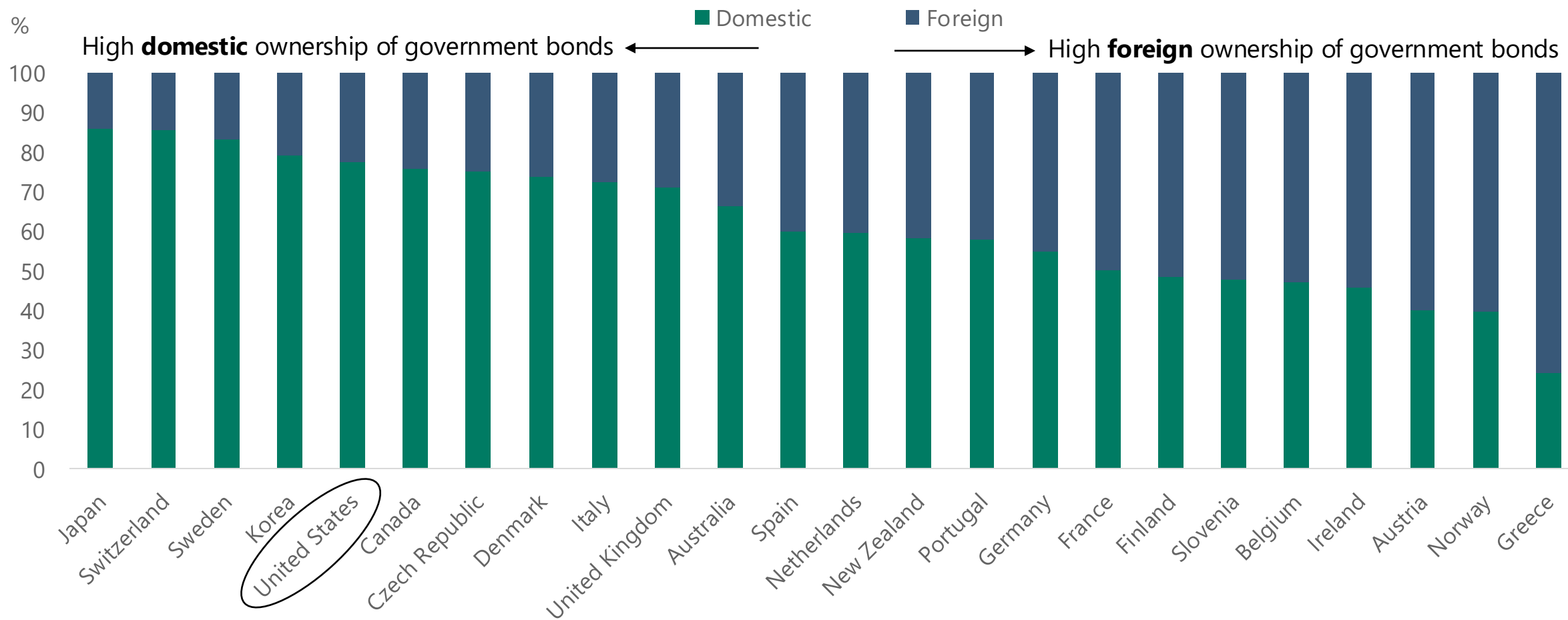
Source: Bloomberg, Apollo Chief Economist. Note: Hedged Treasury yield is calculated as  $\left(\frac{((-3 \text{ month forward}/10000)/\text{exchange rate})+1\right)^{4-1} \times 100 + 10 \text{ year US Treasury yield}$ .

# Who owns different countries' government debt?



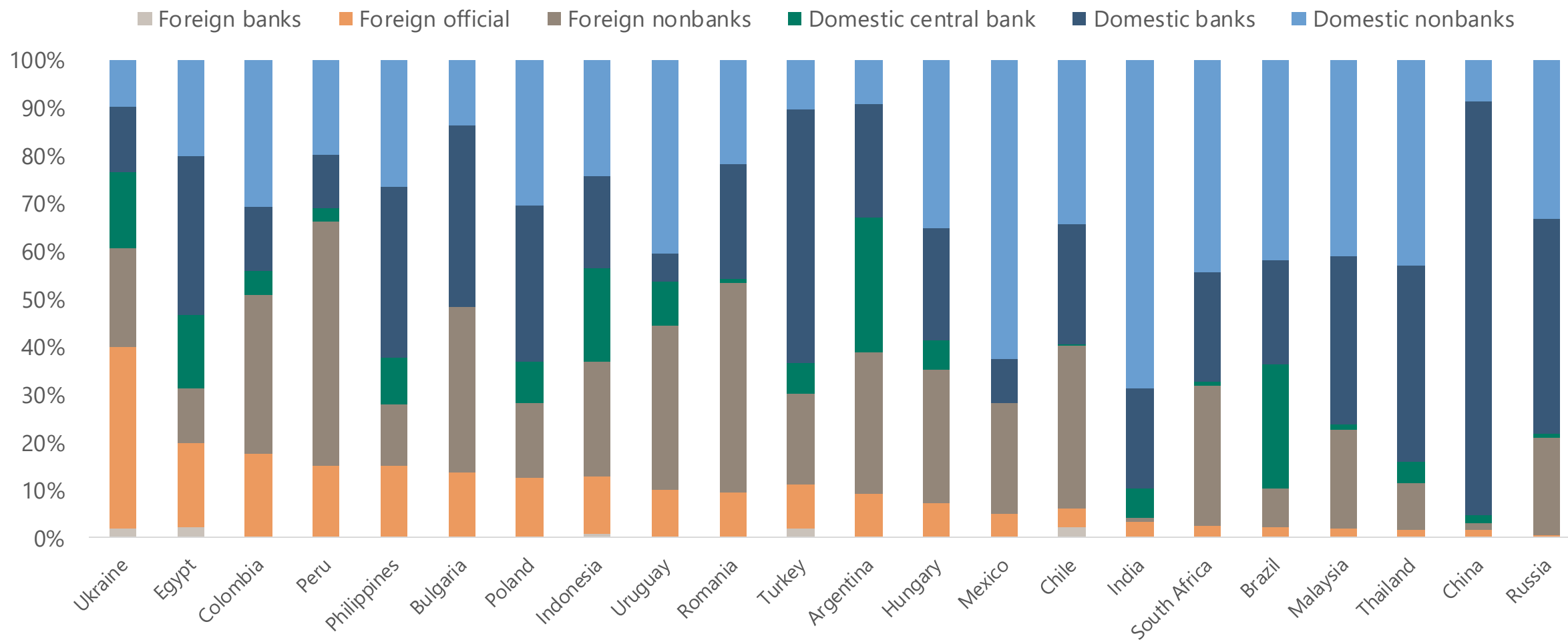
Source: The IMF, Apollo Chief Economist. Note: Data as of Q4 2023

# Switzerland, Japan, Korea, and US have high **domestic** ownership of government bonds



Source: IMF, Apollo Chief Economist. Note: Data as of Q4 2023

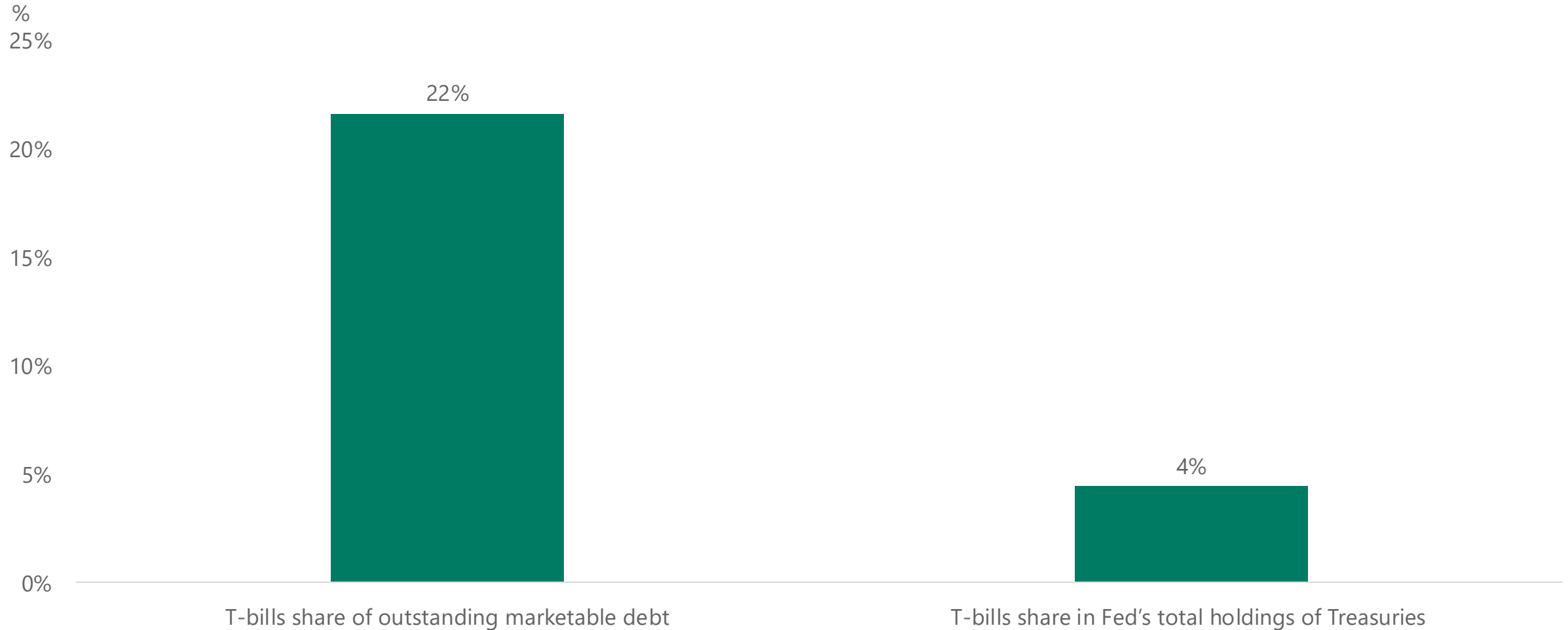
# EM: Who owns different countries' government debt?



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

# The maturity structure of US government debt

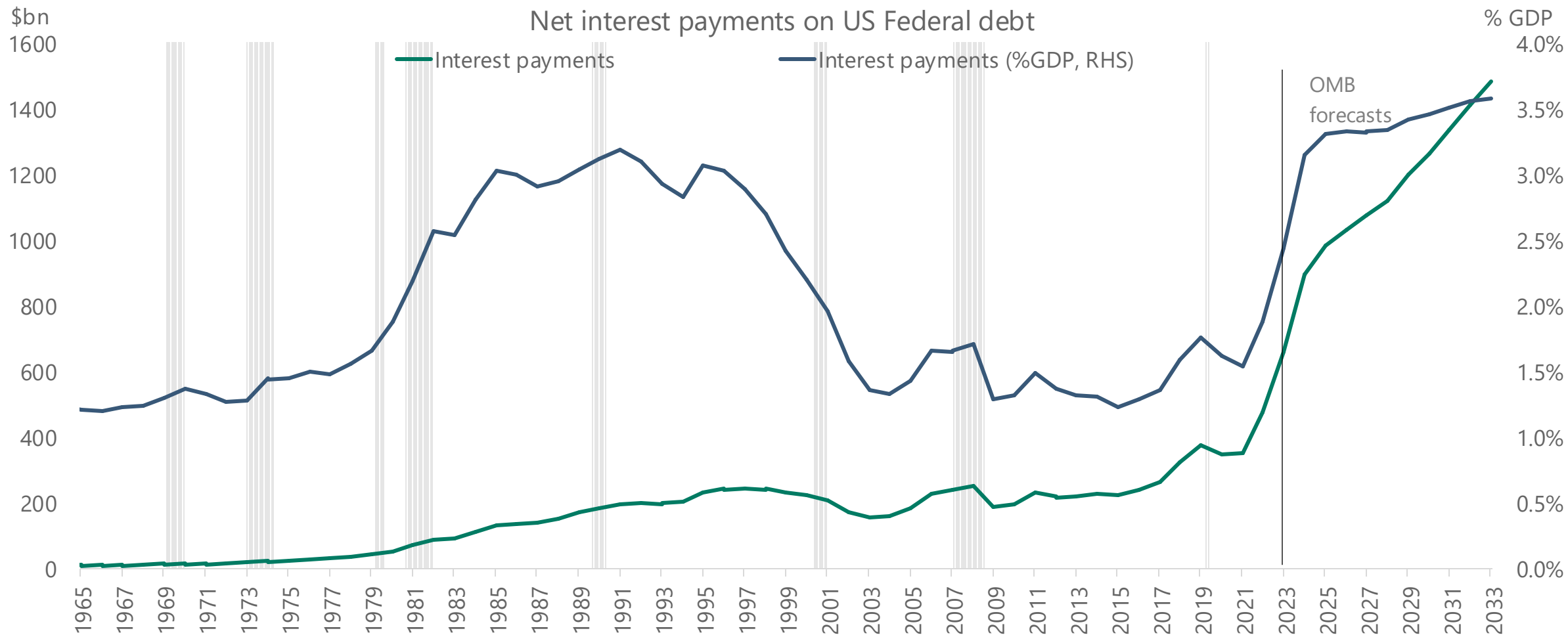
The share of T-bills on the Fed balance sheet is much smaller than T-bills as a share of outstanding marketable debt



Debt servicing costs rising

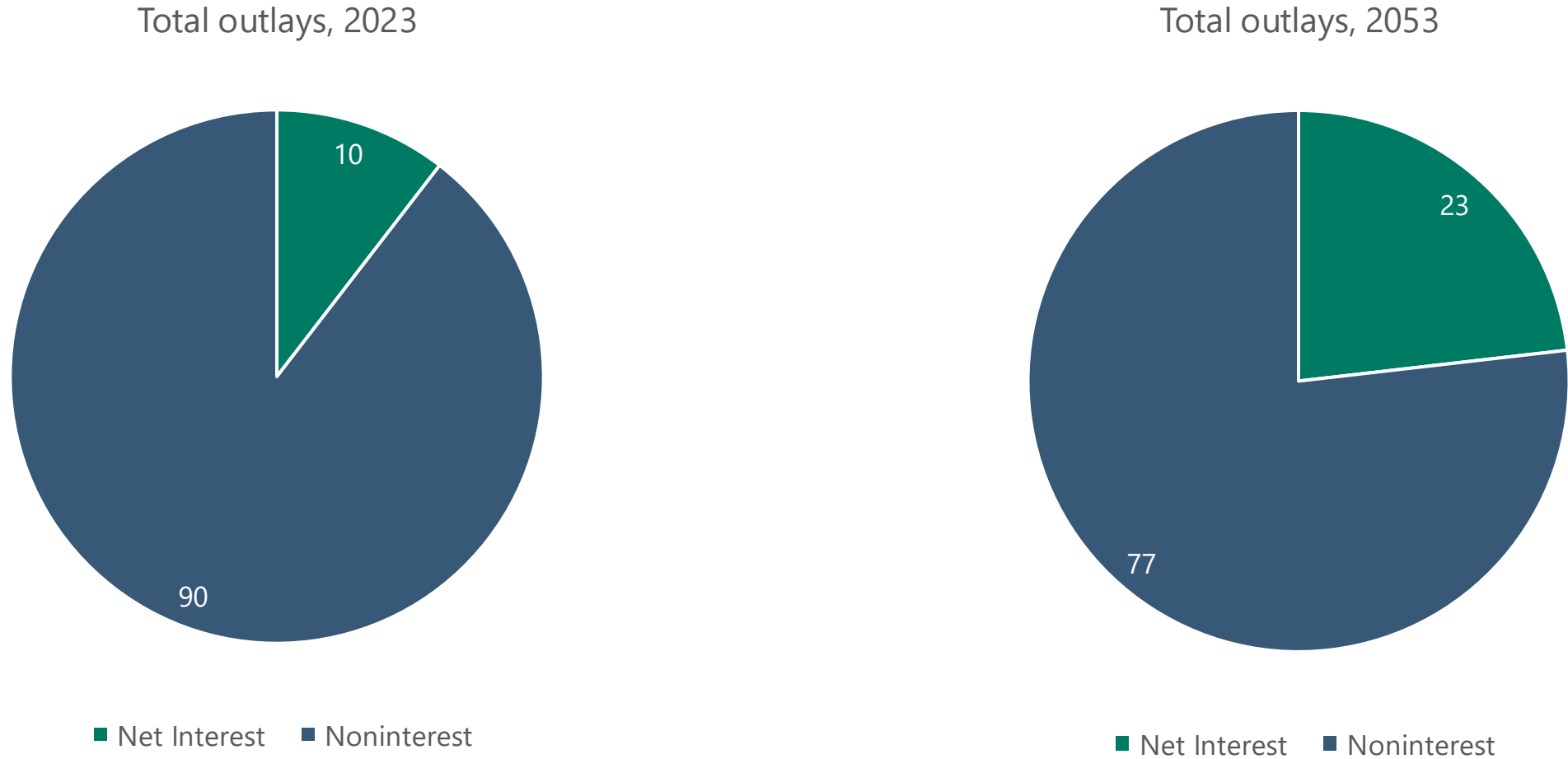


# Debt servicing costs rising rapidly



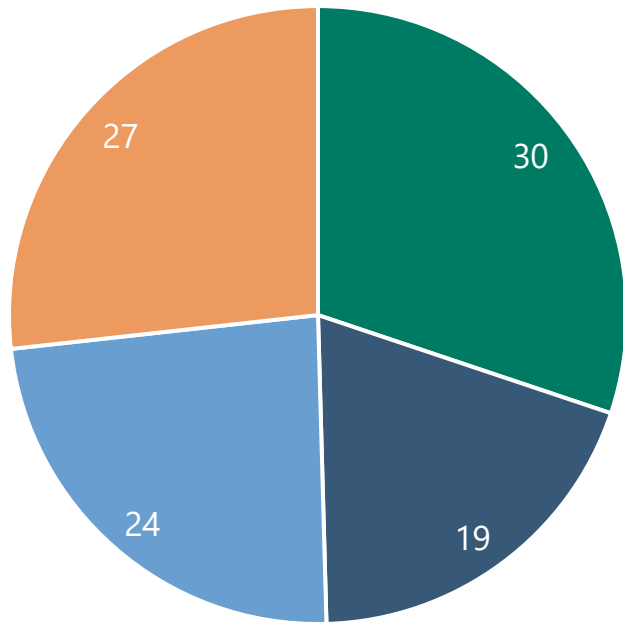
Source: Treasury, OMB, Haver Analytics, Apollo Chief Economist. Note: OMB estimates 10-year yield at around 3.5% in the next 10 years

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



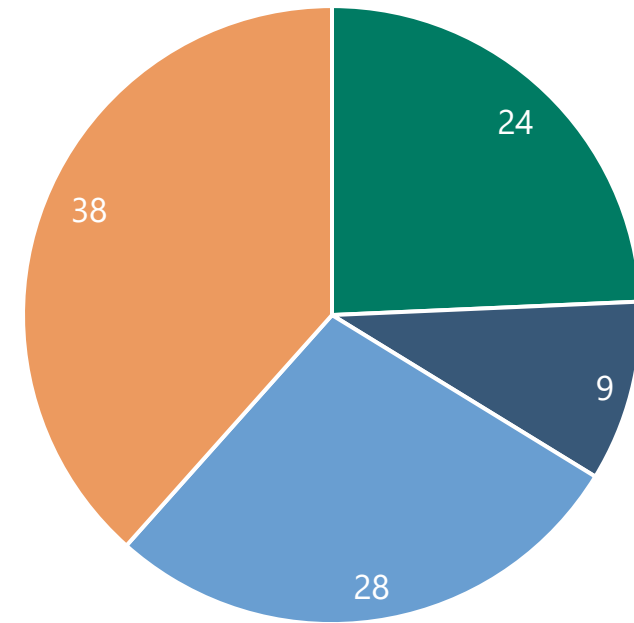
# CBO: Non-interest outlays distribution, 2023 vs 2053

Total non-interest outlays, 2023



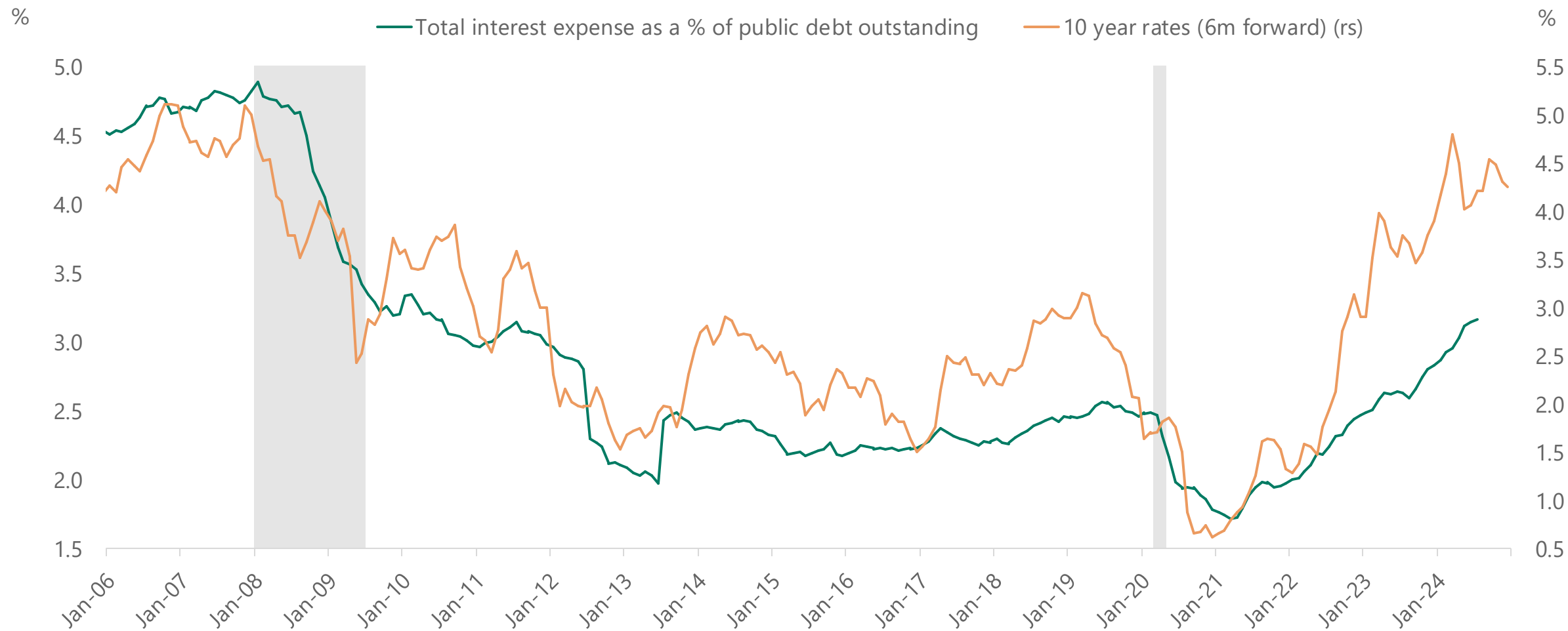
- Discretionary
- Other Mandatory
- Social Security
- Major Health Care Programs

Total non-interest outlays, 2053



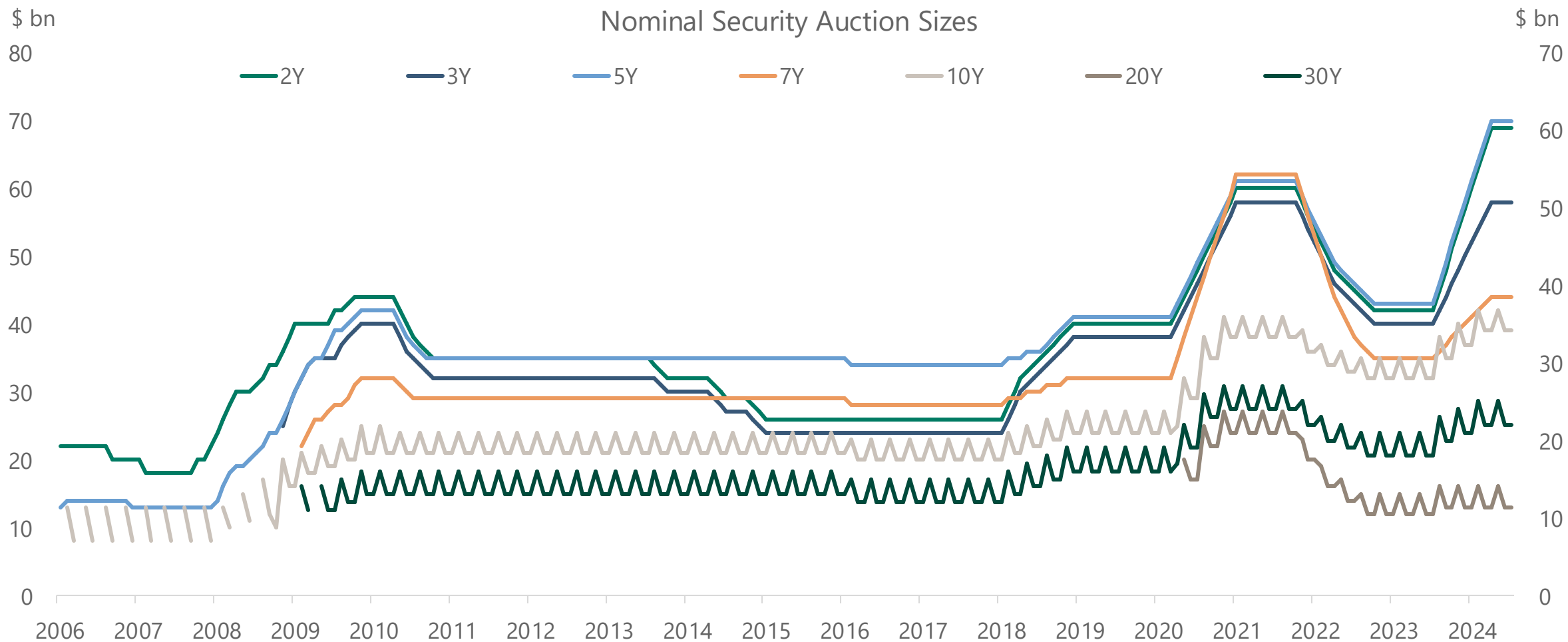
- Discretionary
- Other Mandatory
- Social Security
- Major Health Care Programs

# Interest payments on government debt are rising



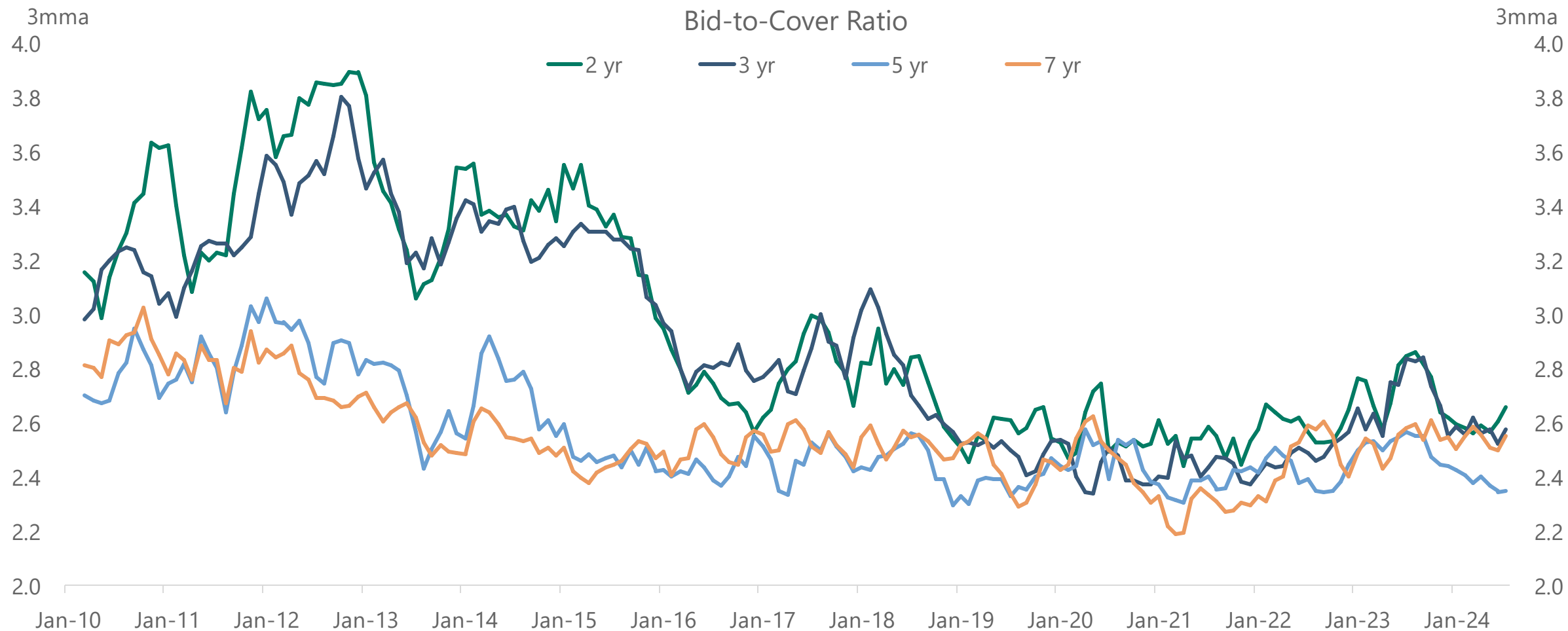
# Treasury auction metrics

# Auction sizes growing in 2024



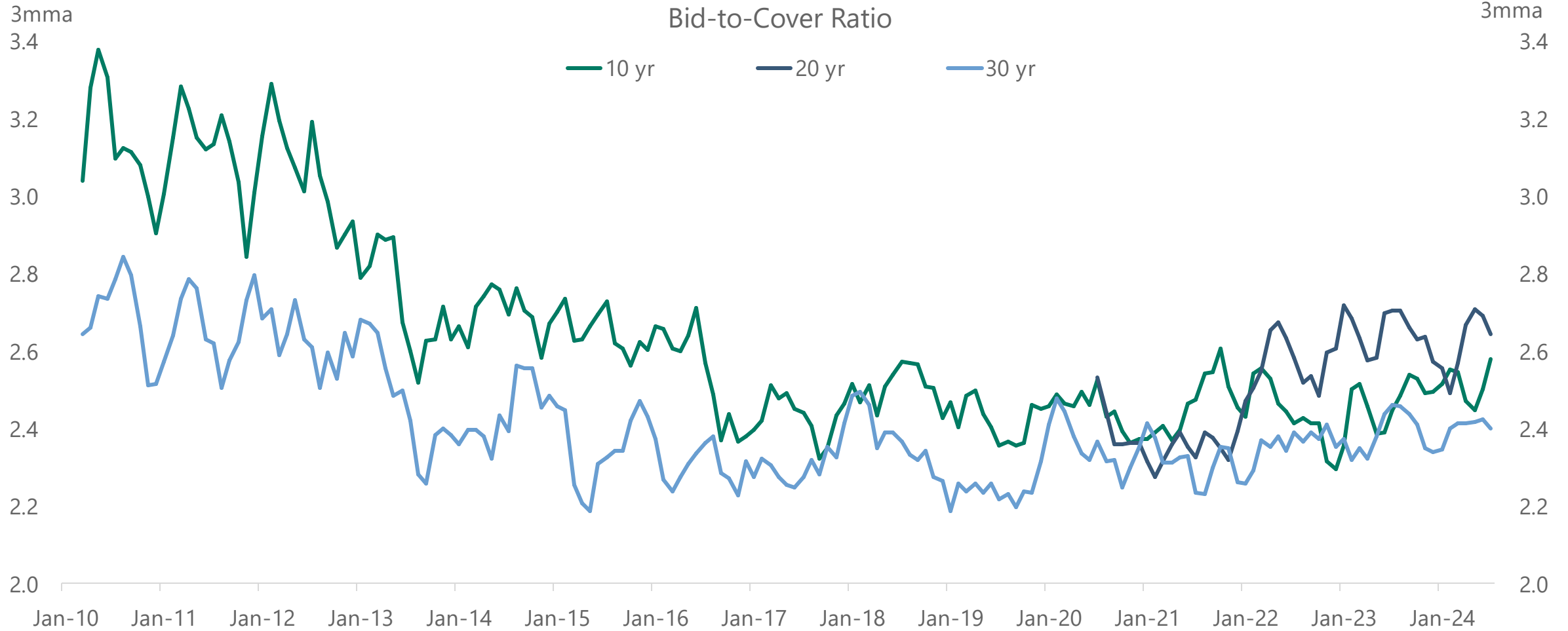
Source: Bureau of Public Debt, Haver Analytics, Apollo Chief Economist

# Downside risks to bid-to-cover ratios in 2024



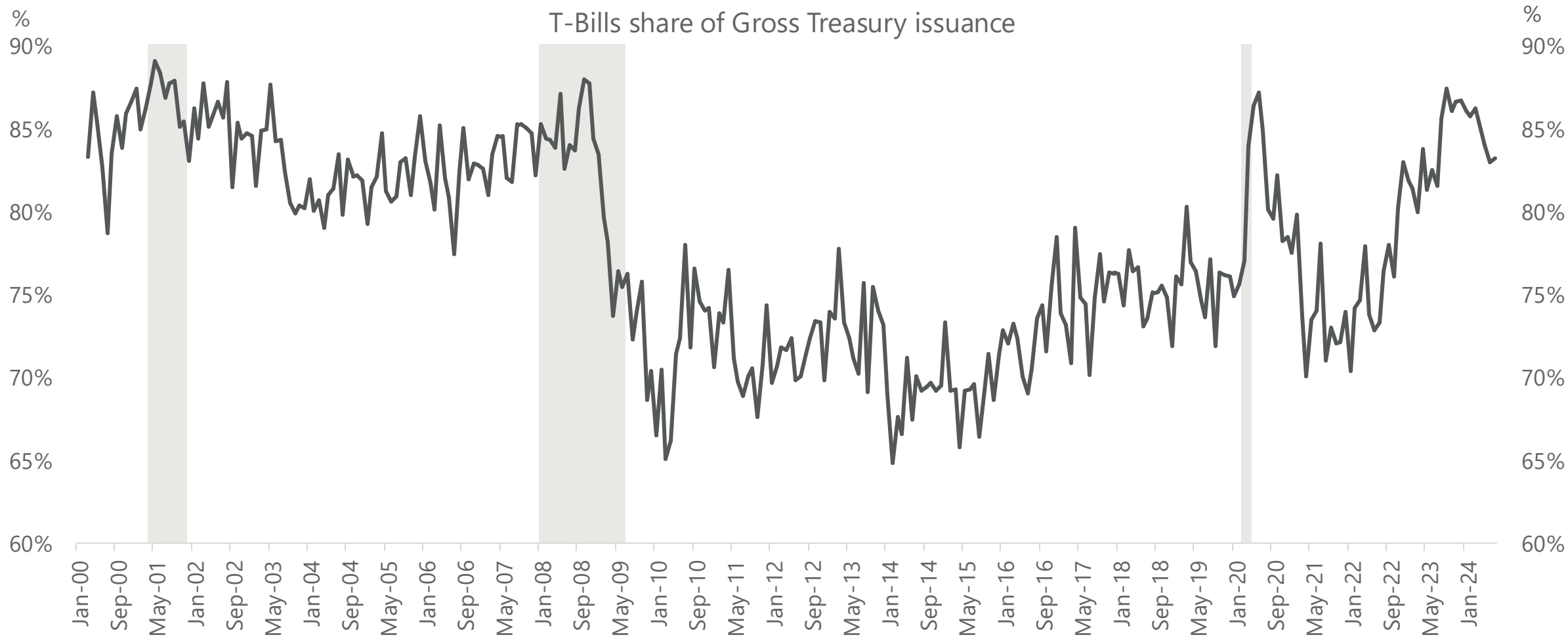
Source: Bureau of Public Debt, Haver Analytics, Apollo Chief Economist

# Downside risks to bid-to-cover ratios in 2024



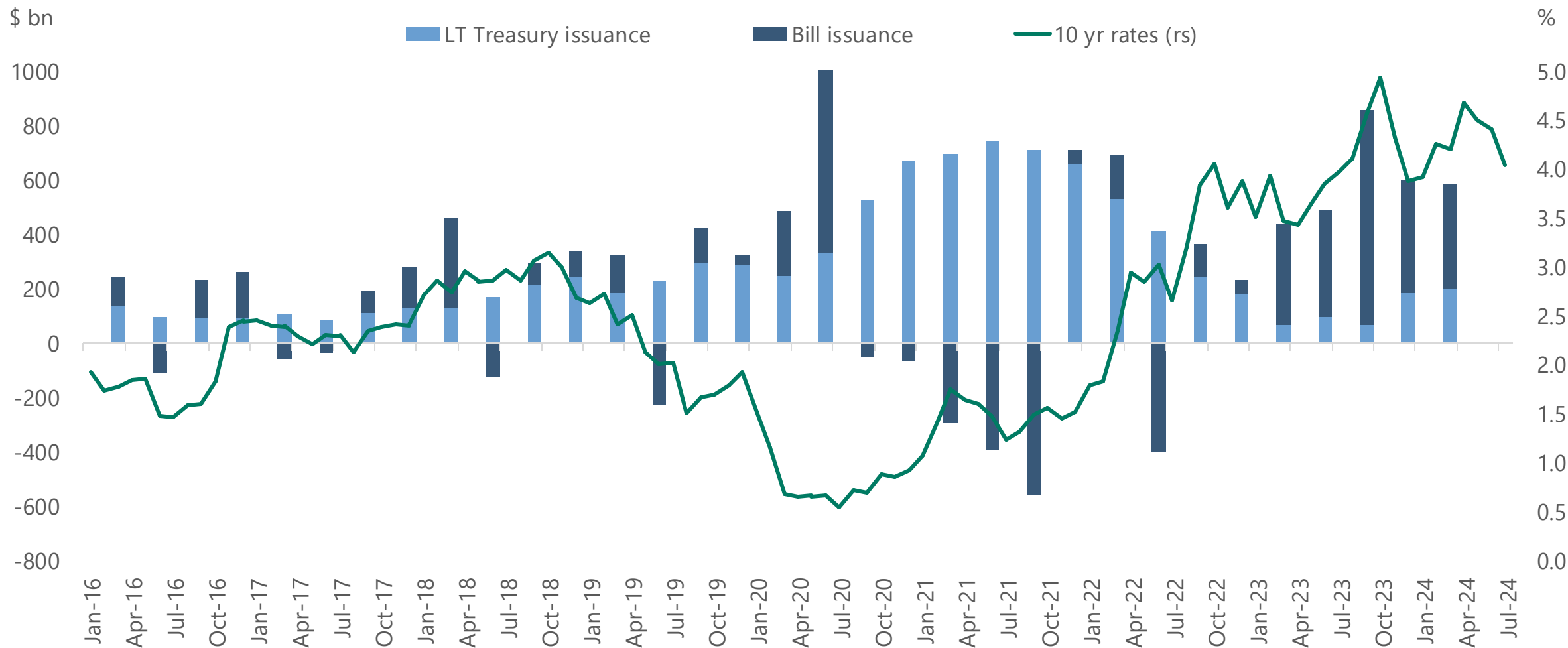


# Very high share of Treasury issuance is T-bills



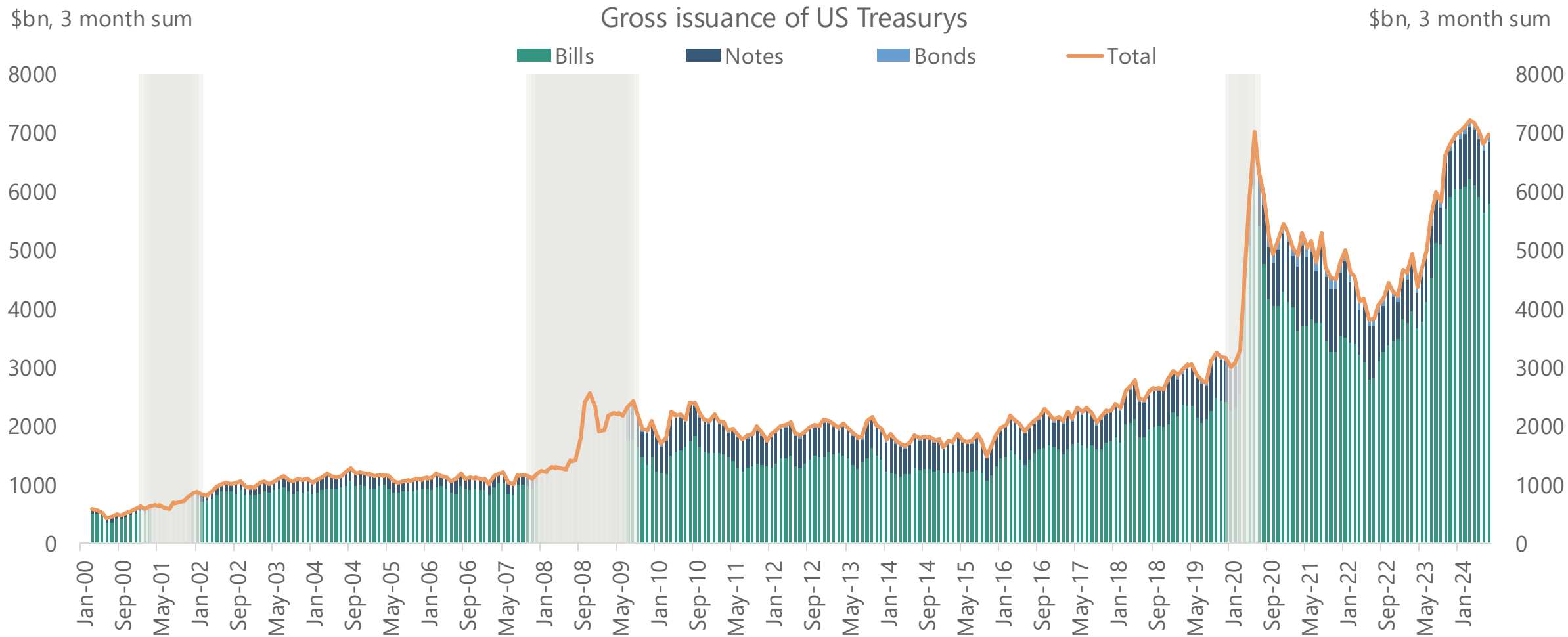
Source: SIFMA, Haver Analytics, Apollo Chief Economist

# Bill issuance has been very big in 2023



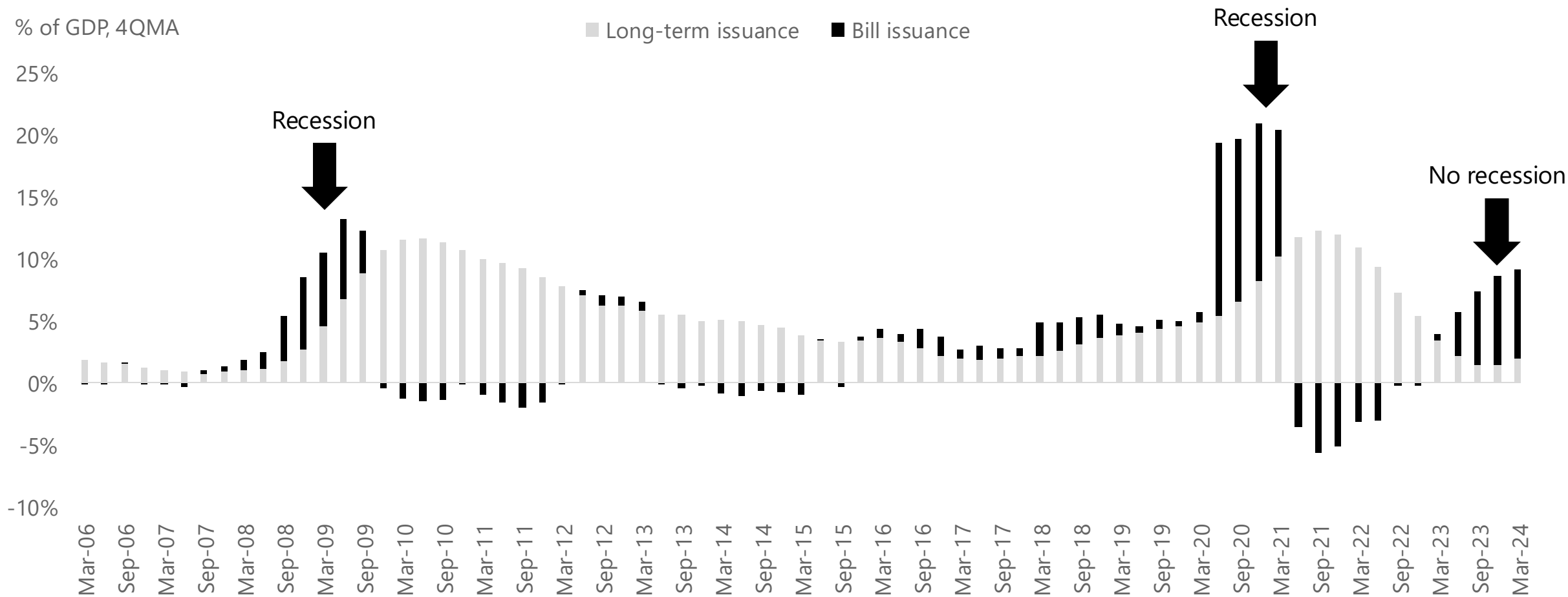
Source: FFUNDS, Haver Analytics, Apollo Chief Economist

# T-bill issuance dominates



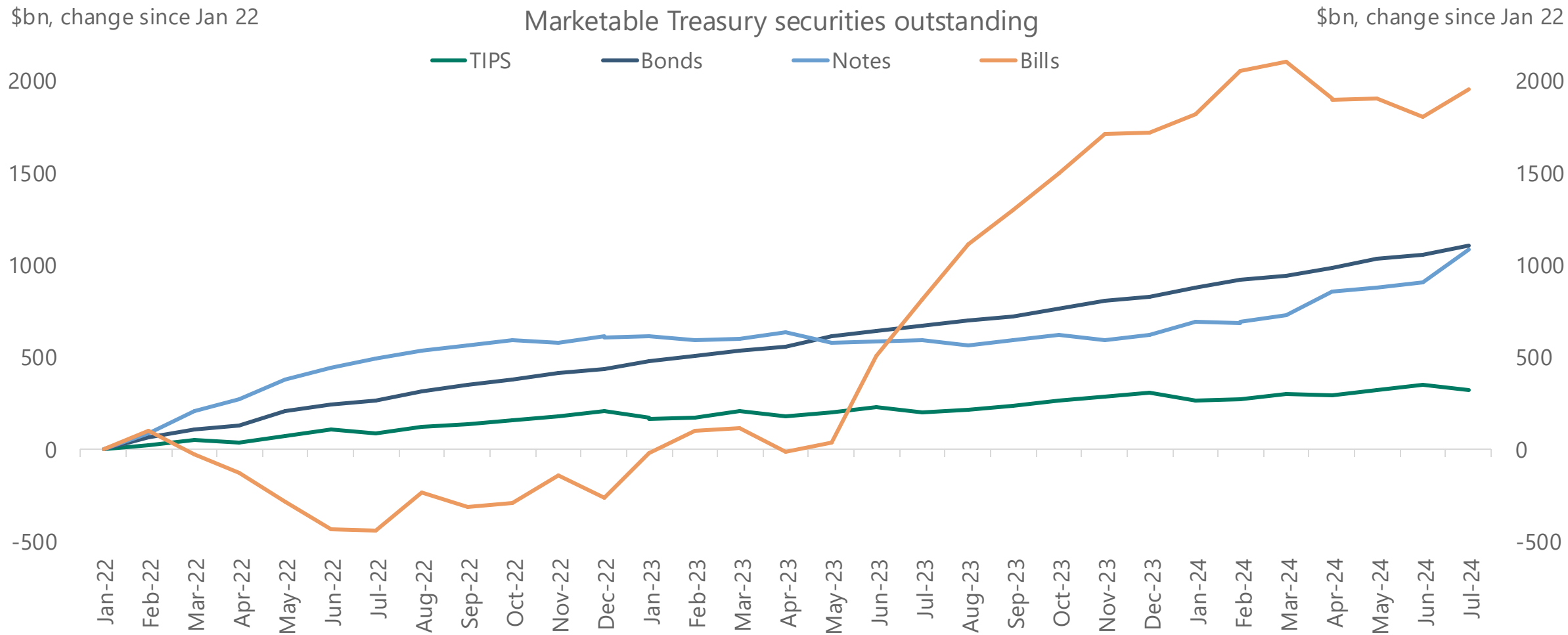
Source: SIFMA, Haver Analytics, Apollo Chief Economist

# Normally, the Treasury only issues a lot of T-bills during recessions



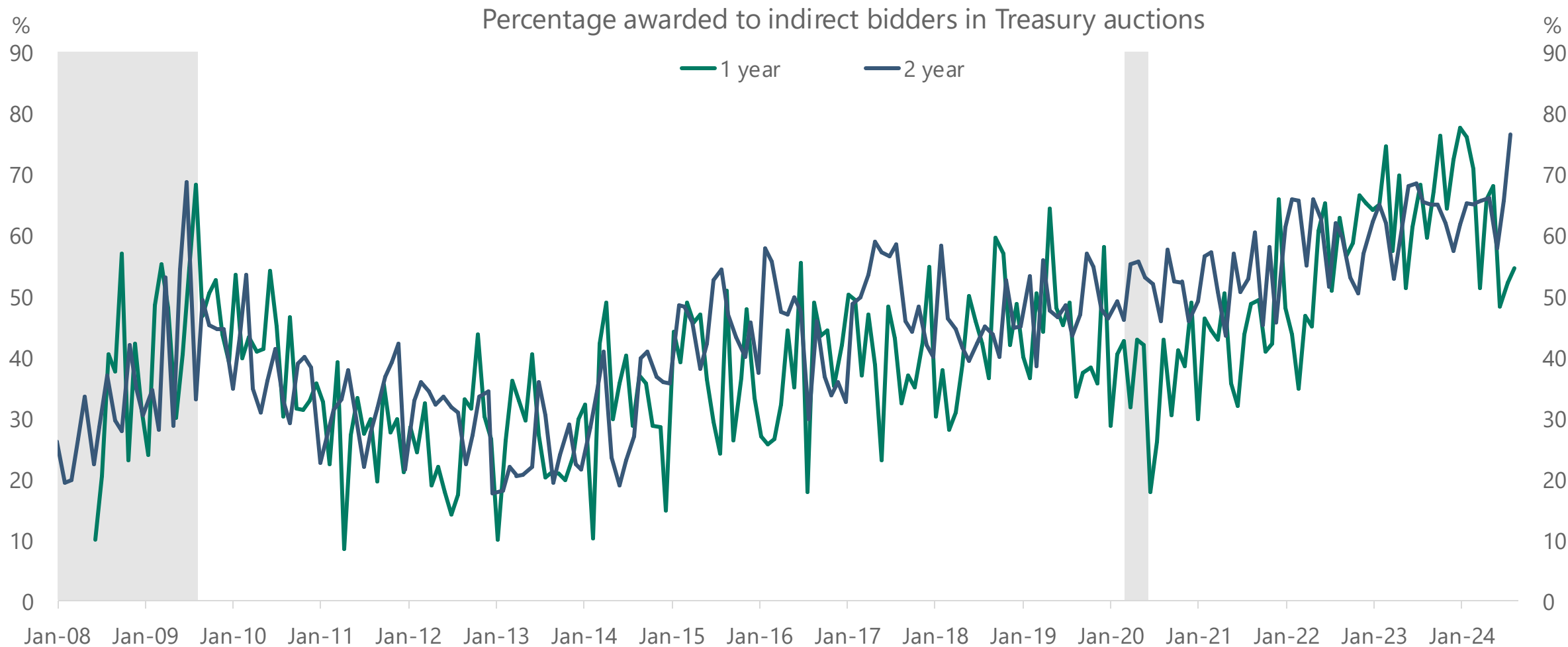
Source: Haver Analytics, Apollo Chief Economist.

# Significant increase in the supply of T-bills

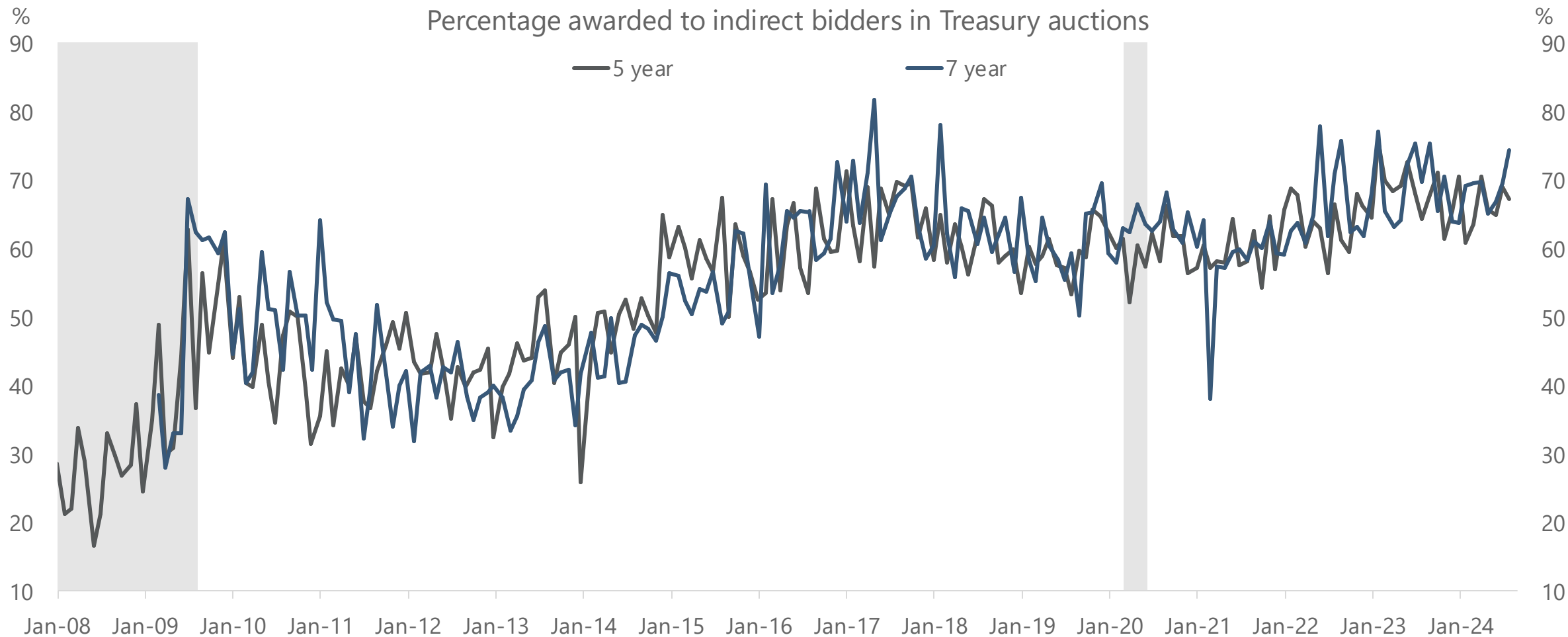


Source: Treasury, Haver Analytics, Apollo Chief Economist

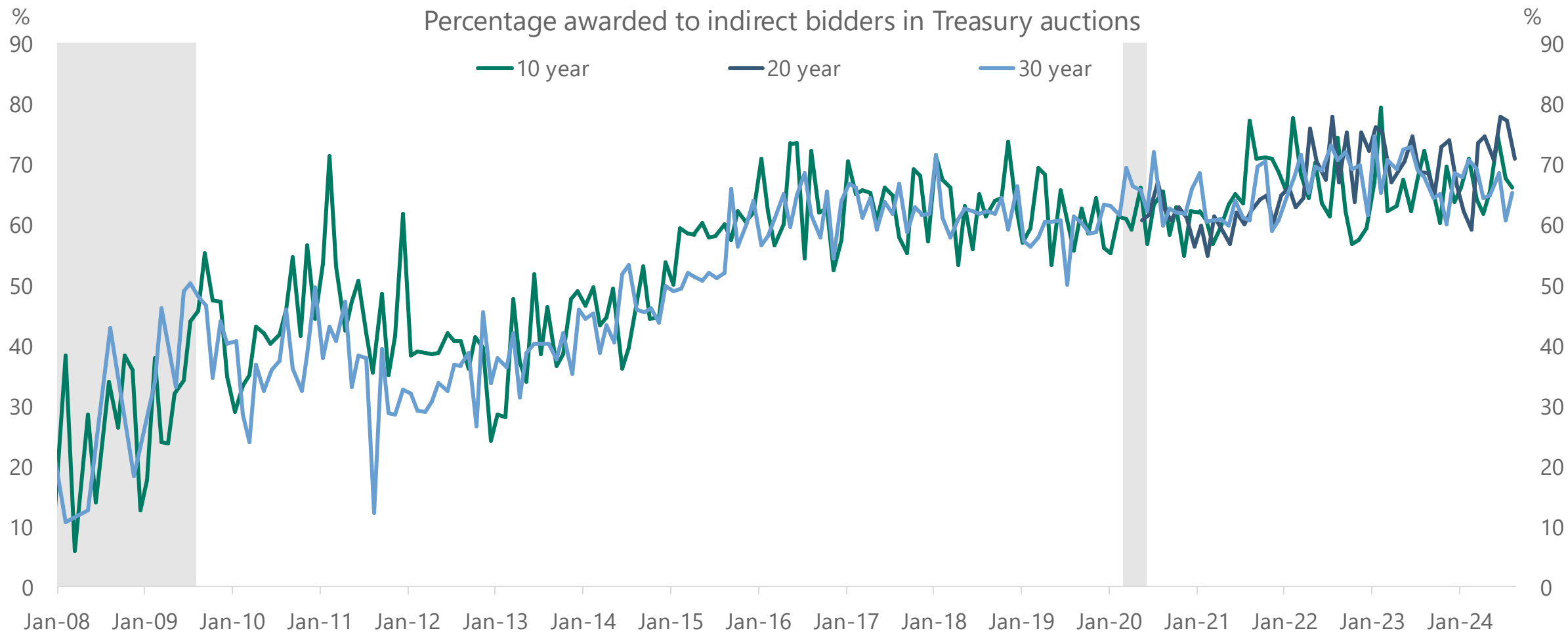
# Indirect bidder share rising for 1- and 2-year notes



# Indirect bidder share for 5- and 7-year notes

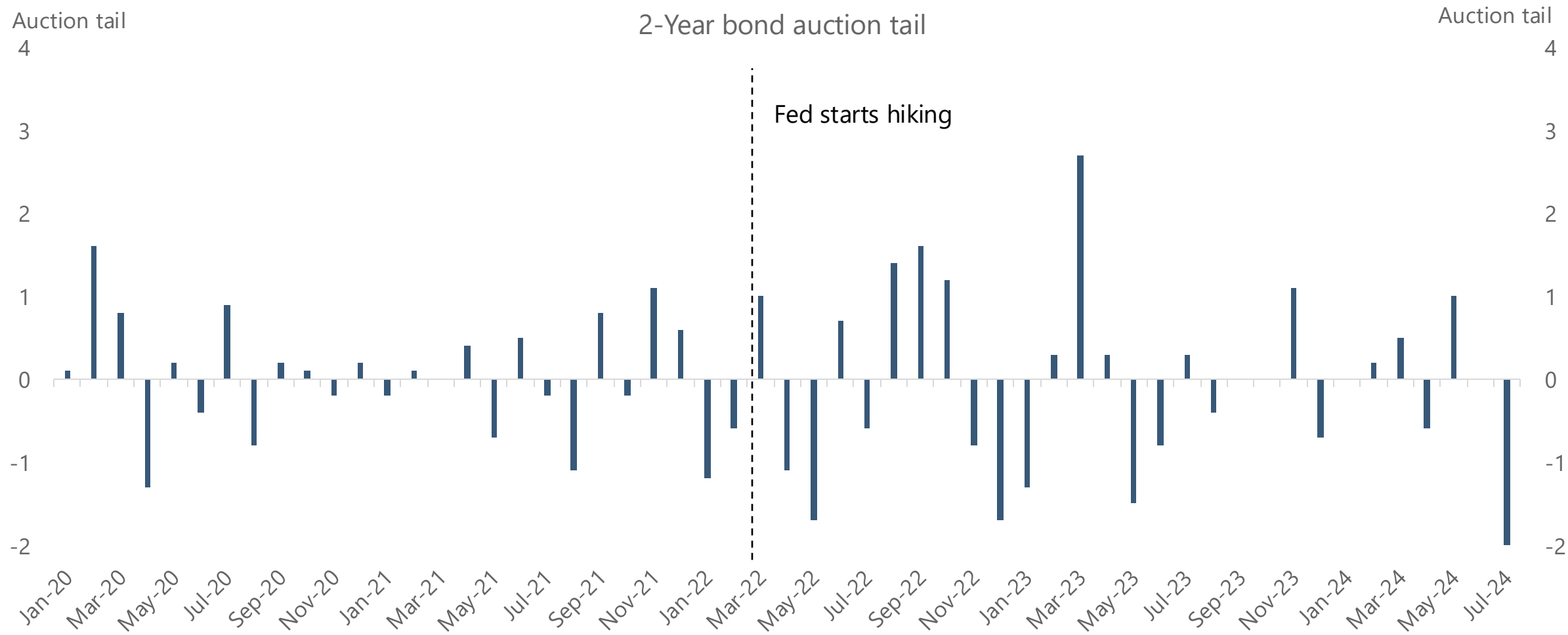


# Indirect bidder share for 10- 20- and 30-year Treasuries



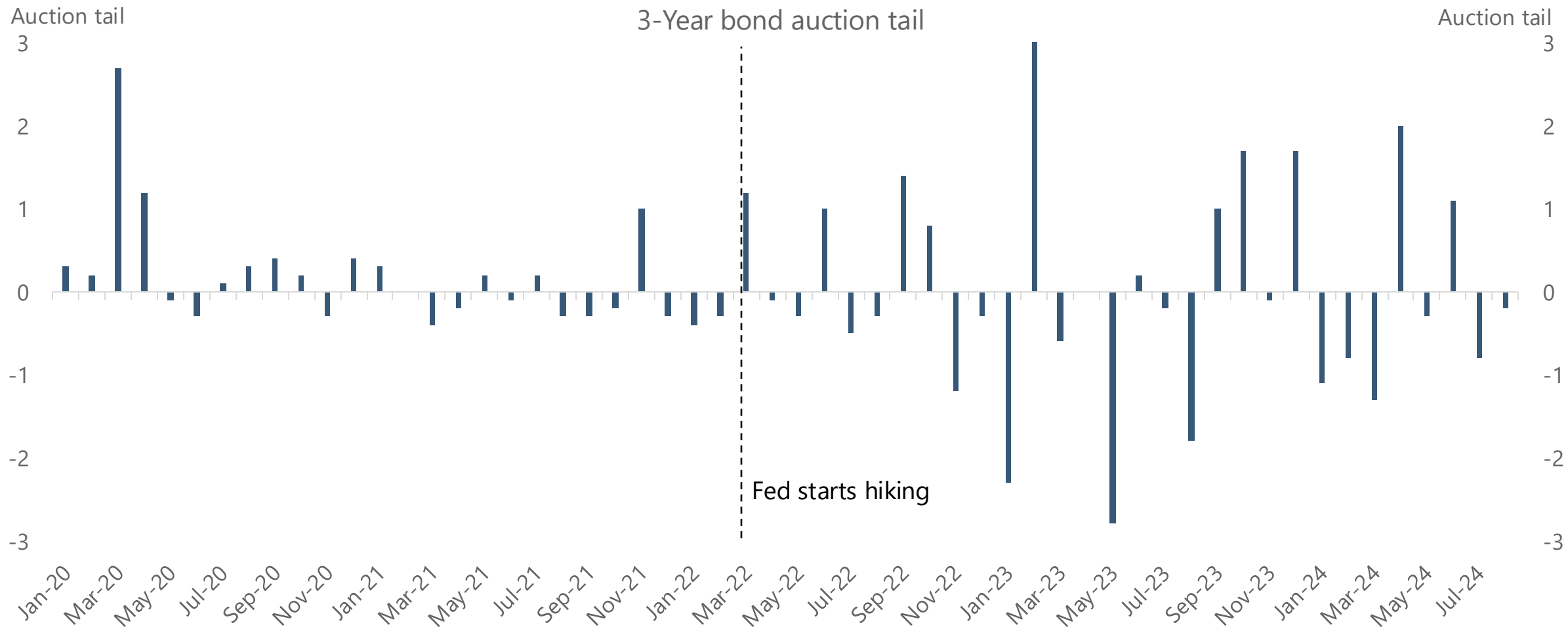


# 2-year bond auction tails



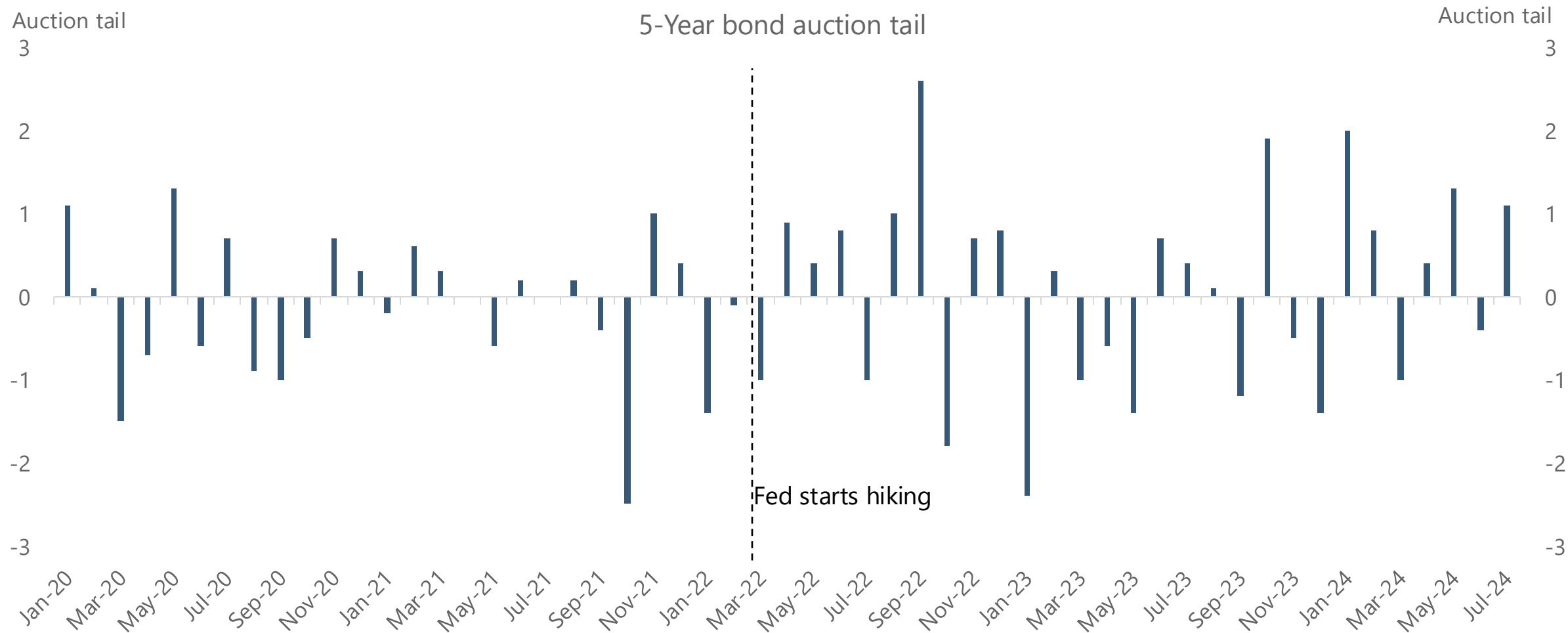
Source: U.S. Treasury Department, Bloomberg, Apollo Chief Economist. Note: Bloomberg ticker USB2YTL Index.

# 3-year bond auction tails



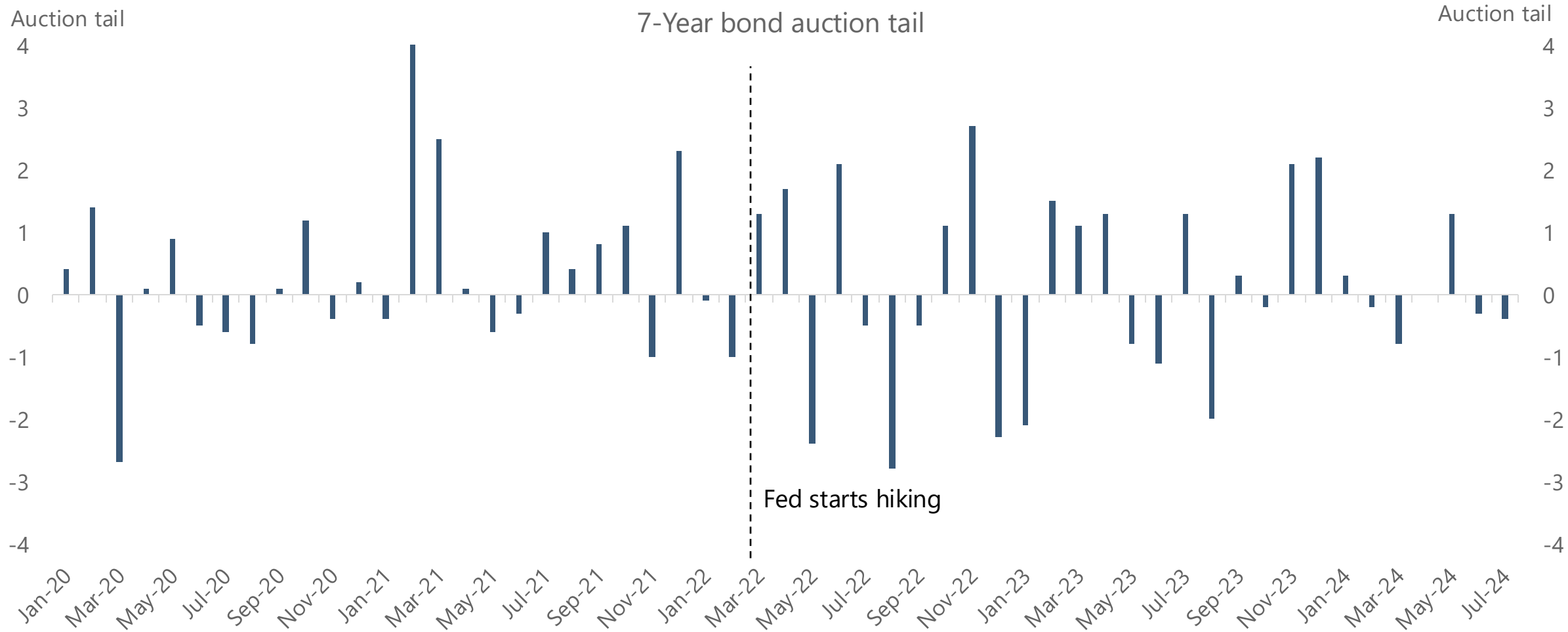
Source: U.S. Treasury Department, Bloomberg, Apollo Chief Economist. Note: Bloomberg ticker USN3YTL Index.

# 5-year bond auction tails



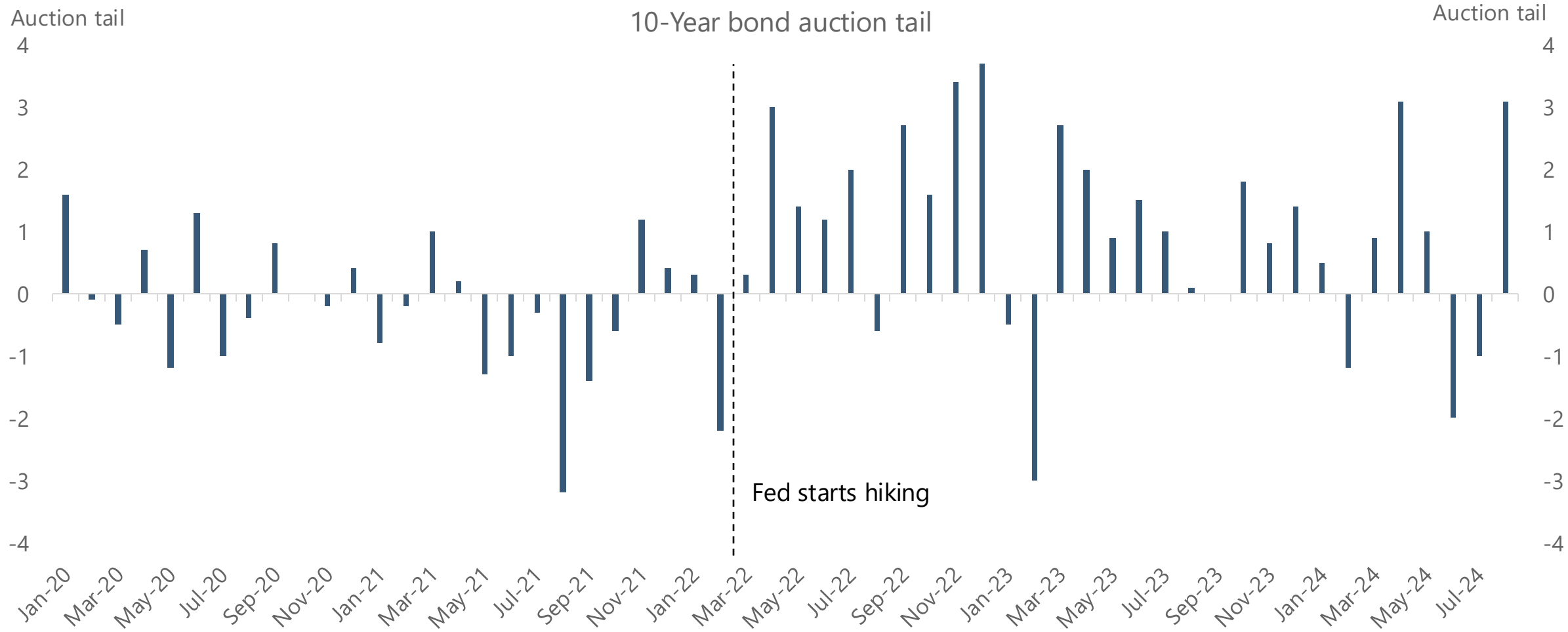
Source: U.S. Treasury Department, Bloomberg, Apollo Chief Economist. Note: Bloomberg ticker USB5YTL Index.

# 7-year bond auction tails



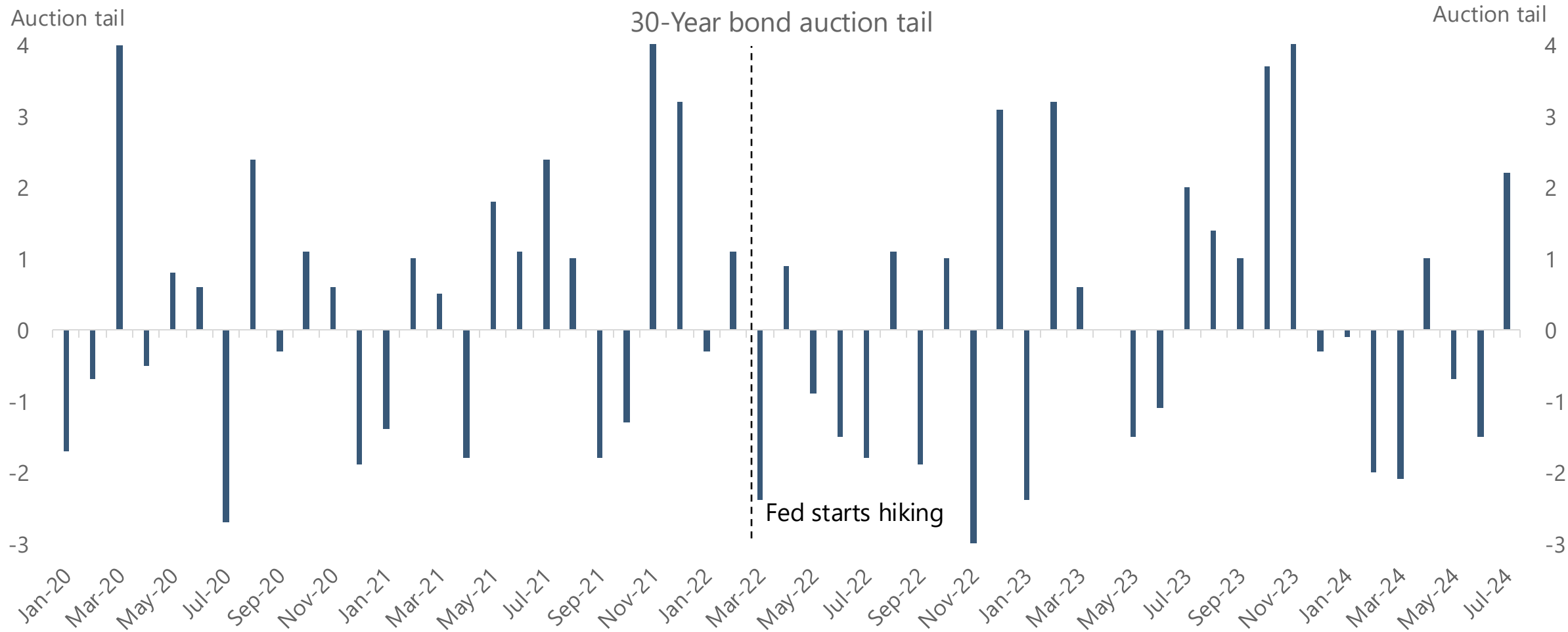
Source: U.S. Treasury Department, Bloomberg, Apollo Chief Economist. Note: Bloomberg ticker USB7YTL Index.

# 10-year bond auction tails



Source: U.S. Treasury Department, Bloomberg, Apollo Chief Economist. Note: Bloomberg ticker USN10YTL Index.

# 30-year bond auction tails



Source: U.S. Treasury Department, Bloomberg, Apollo Chief Economist. Note: Bloomberg ticker USBD30TL Index.

# Conclusion

## Growing debt levels: What to watch?

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



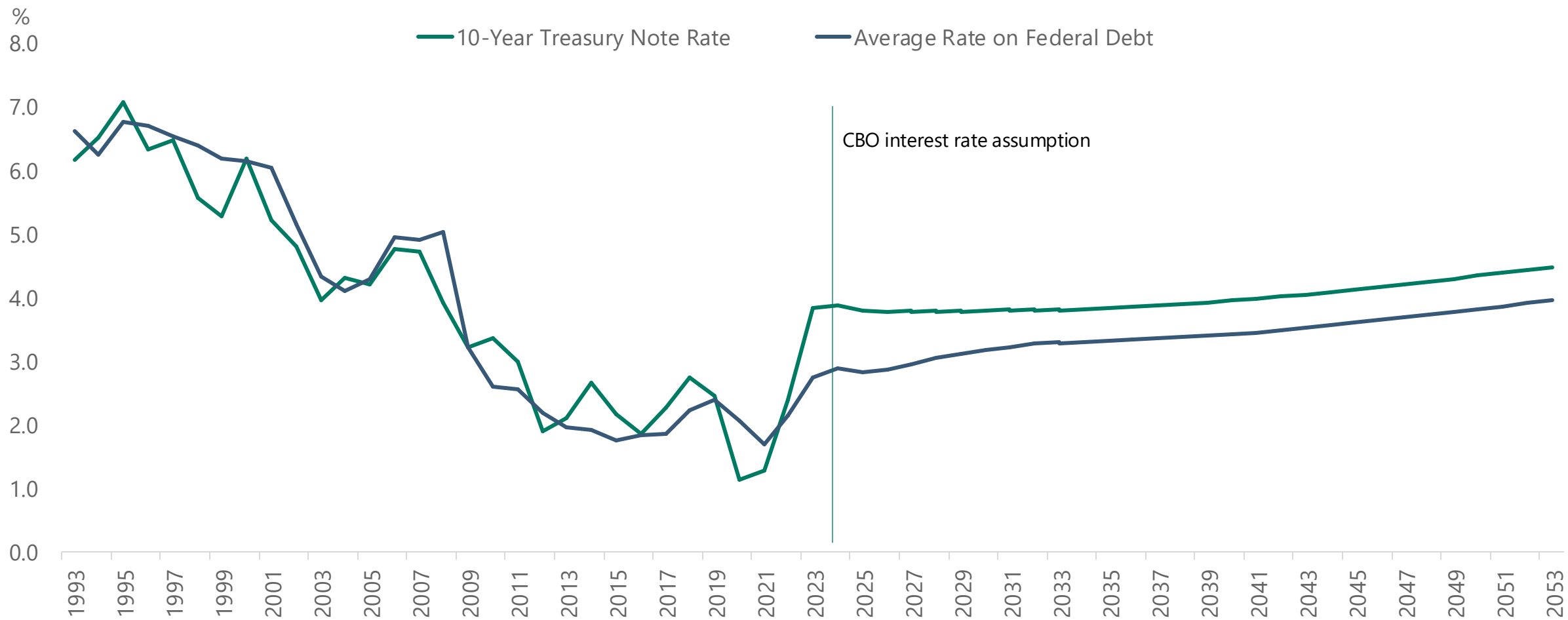
# Term premium is key

10 year Treasury term premium

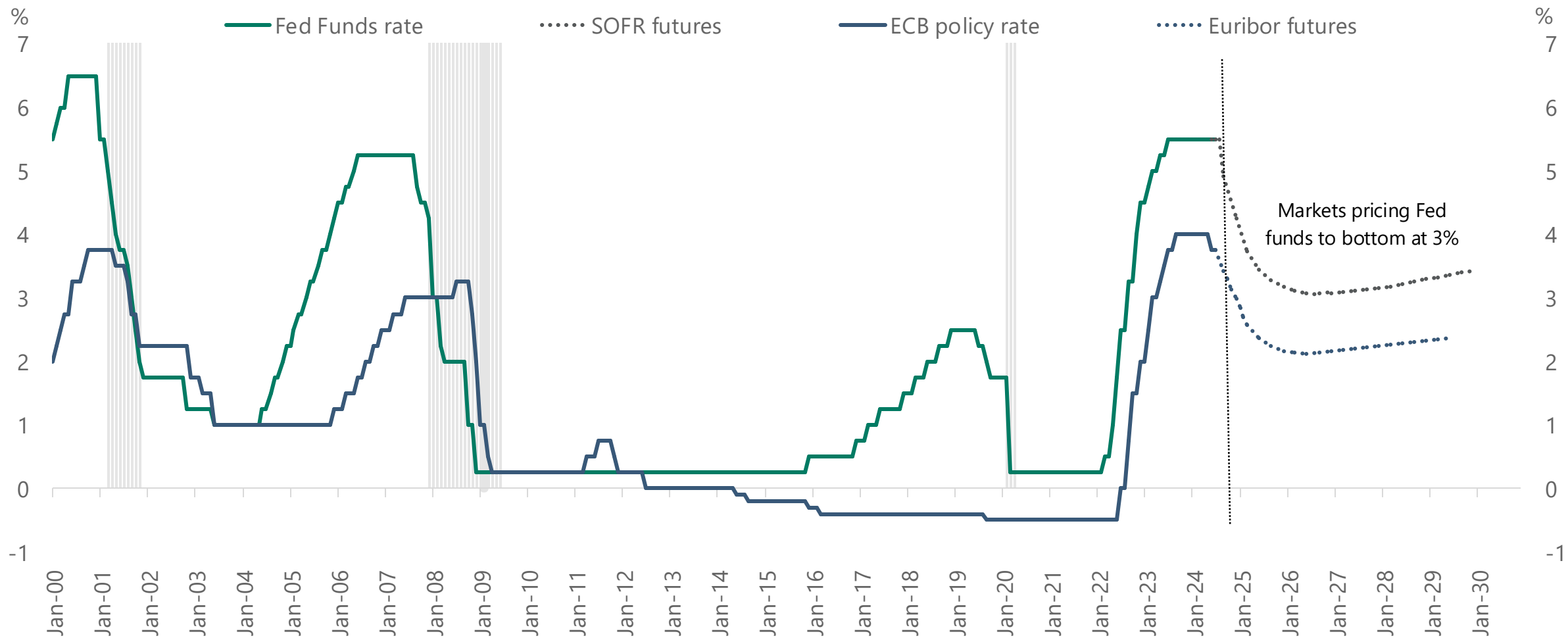


# Appendix

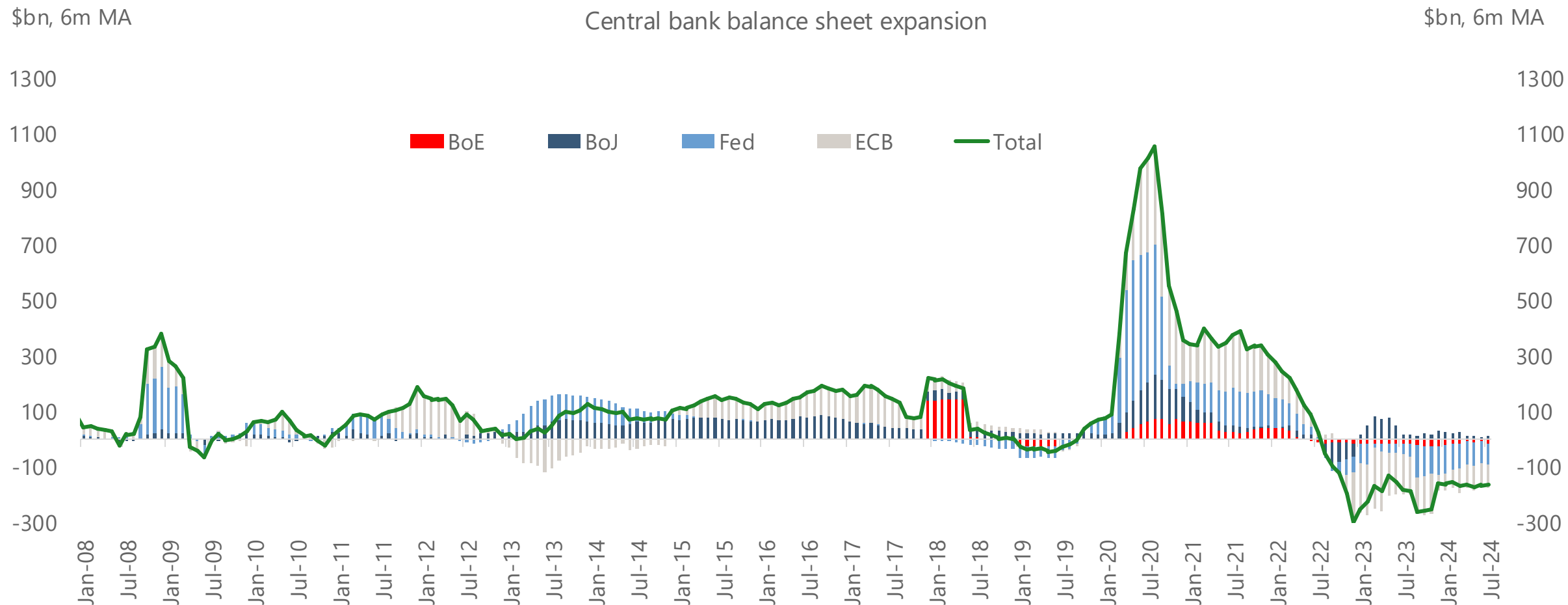
# CBO interest rate assumptions



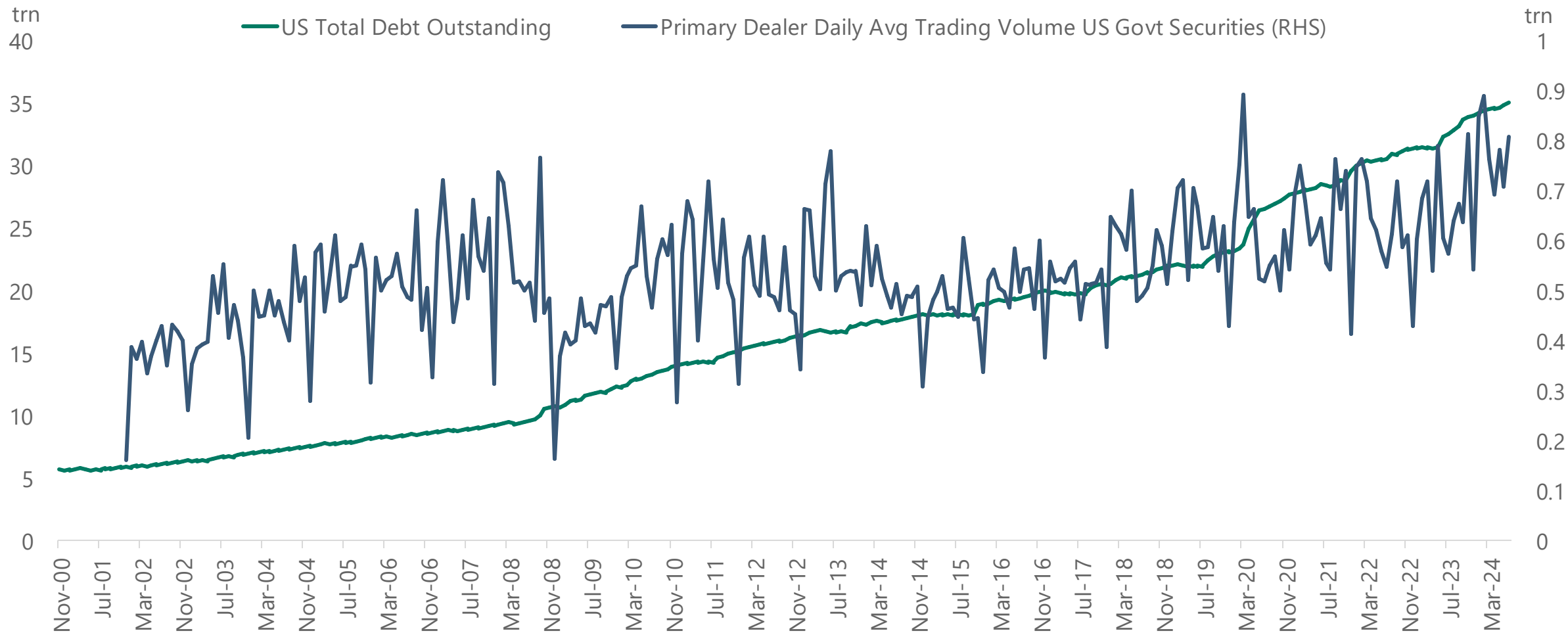
# Interest rates will remain permanently higher



# G4 Central bank balance sheets



# Liquidity: Public debt outstanding vs primary dealer trading volume





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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.