

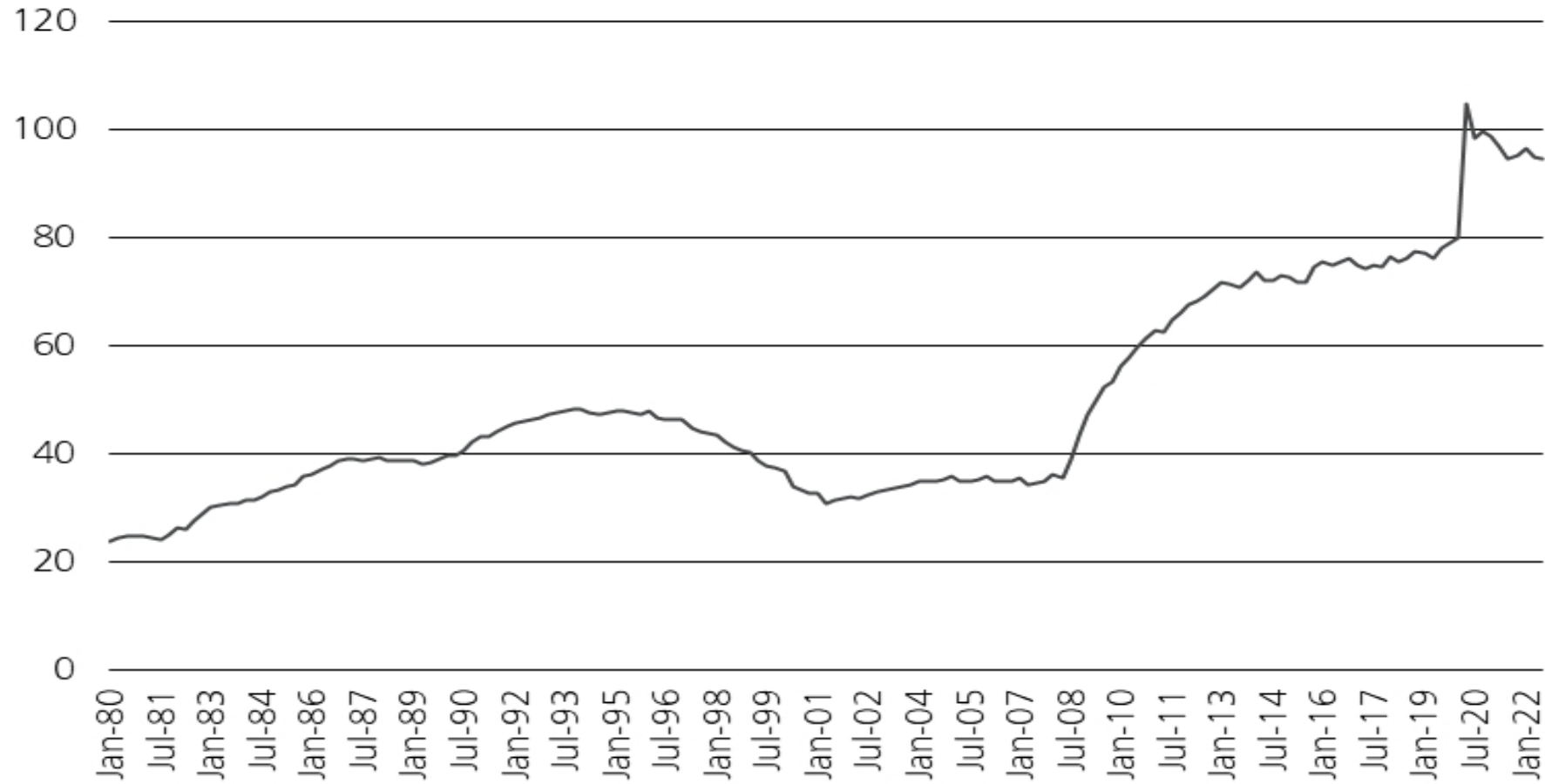
Municipal Market Update

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11 May 2023



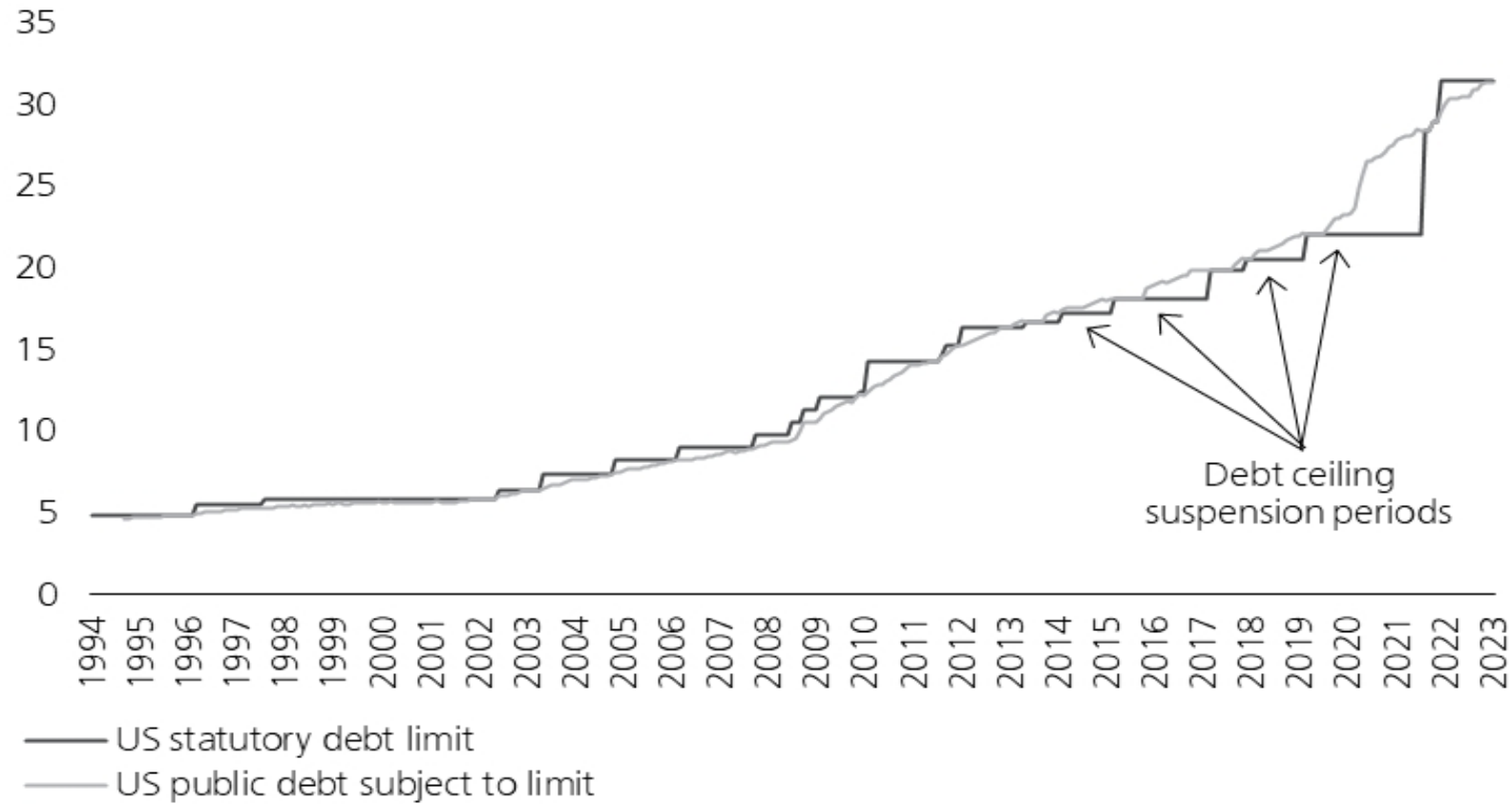
US debt held by the public as percent of GDP



Source: Federal Reserve Bank of St. Louis, 2023

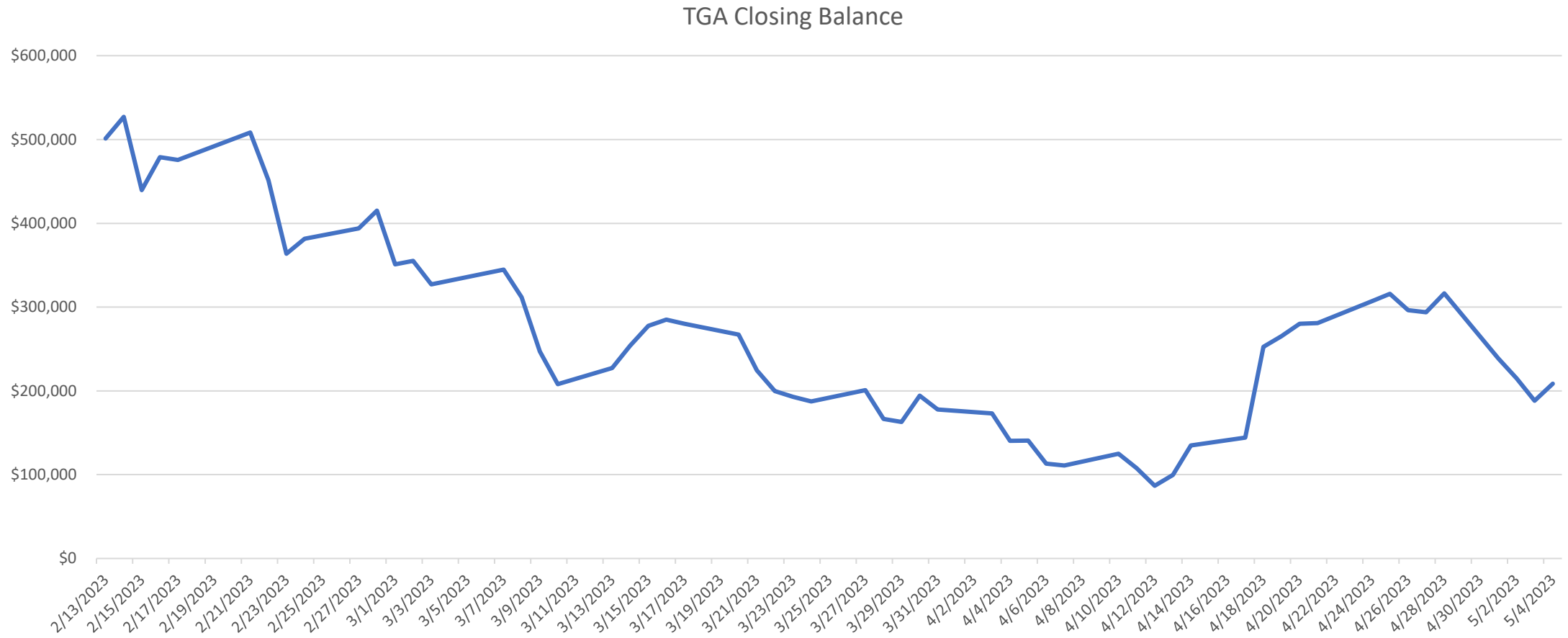
Raising the US debt ceiling

In USD trillions



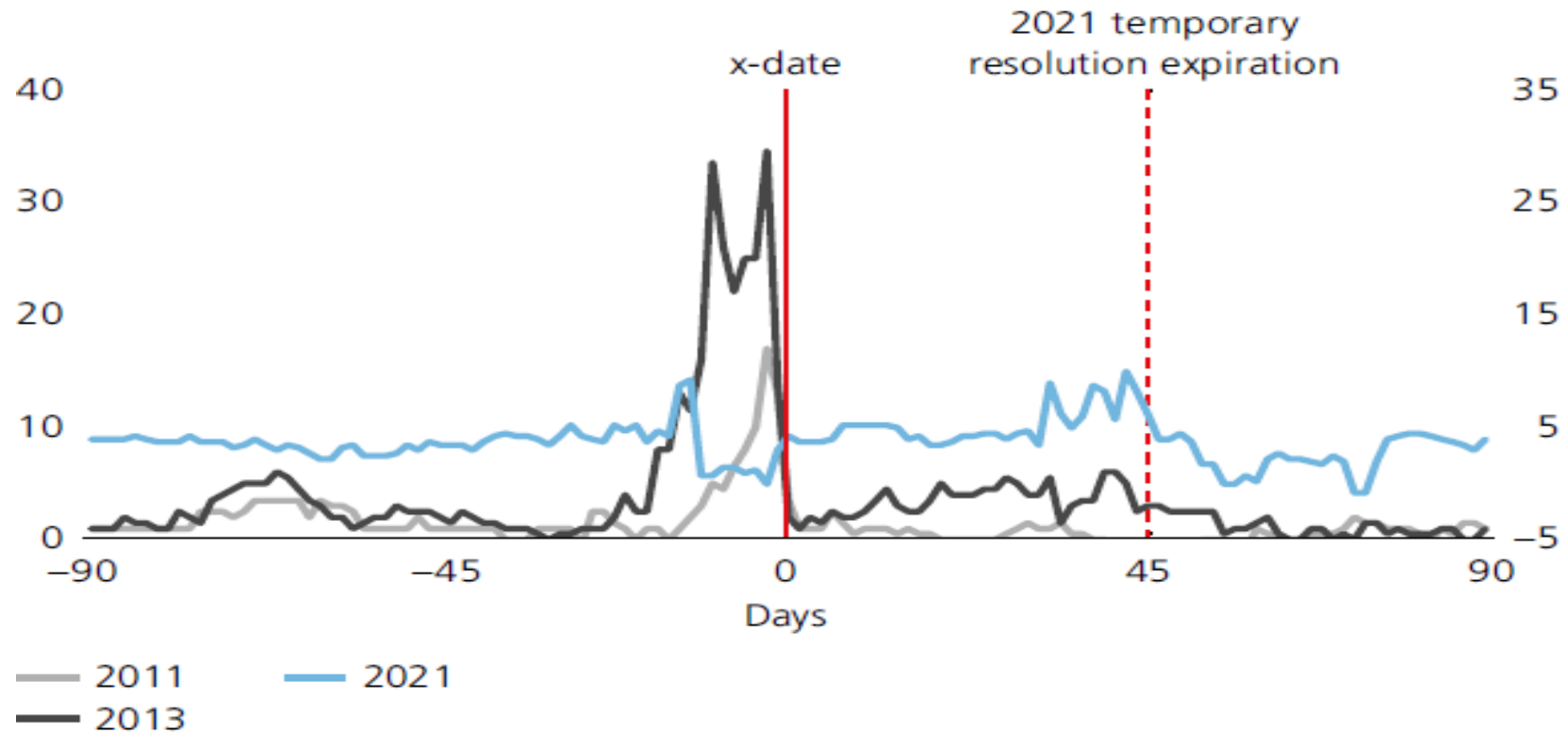
Source: Bloomberg, UBS, 17 January 2023

April income tax receipts weaker than expected



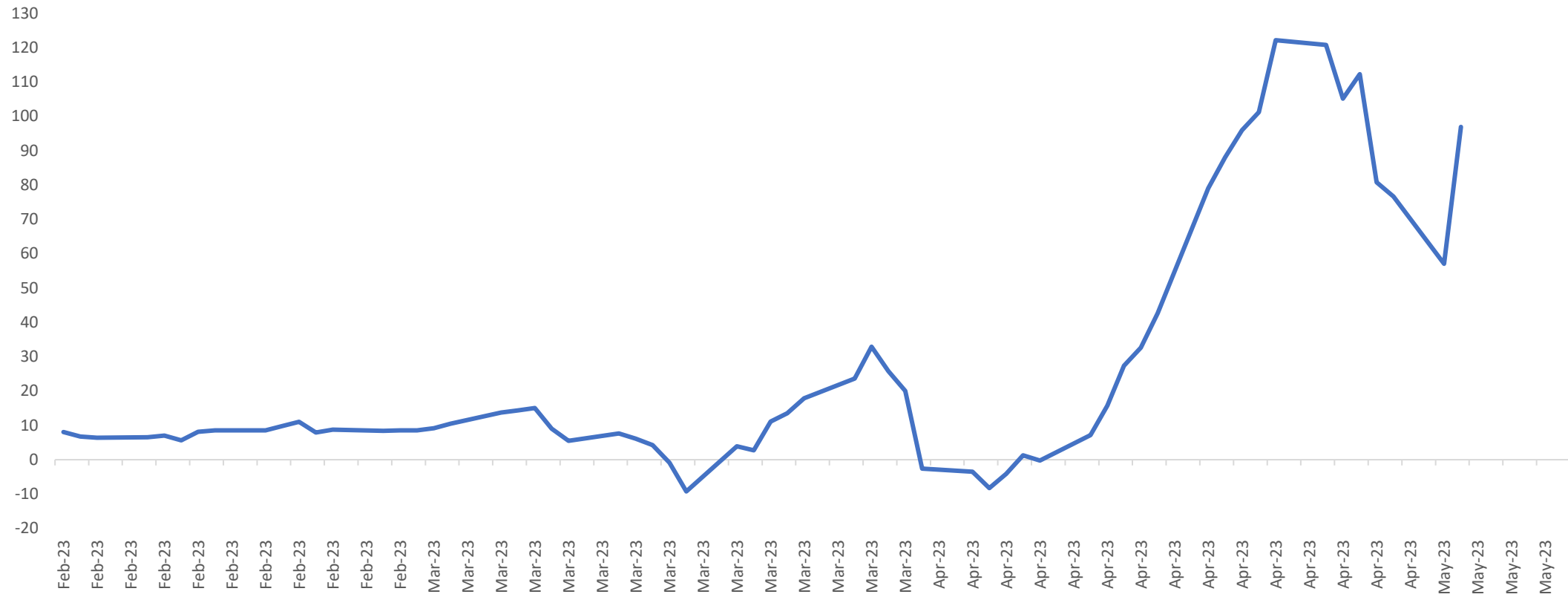
Source: US Treasury through 4 May 2023

Short-term Treasury rates spike near x-dates



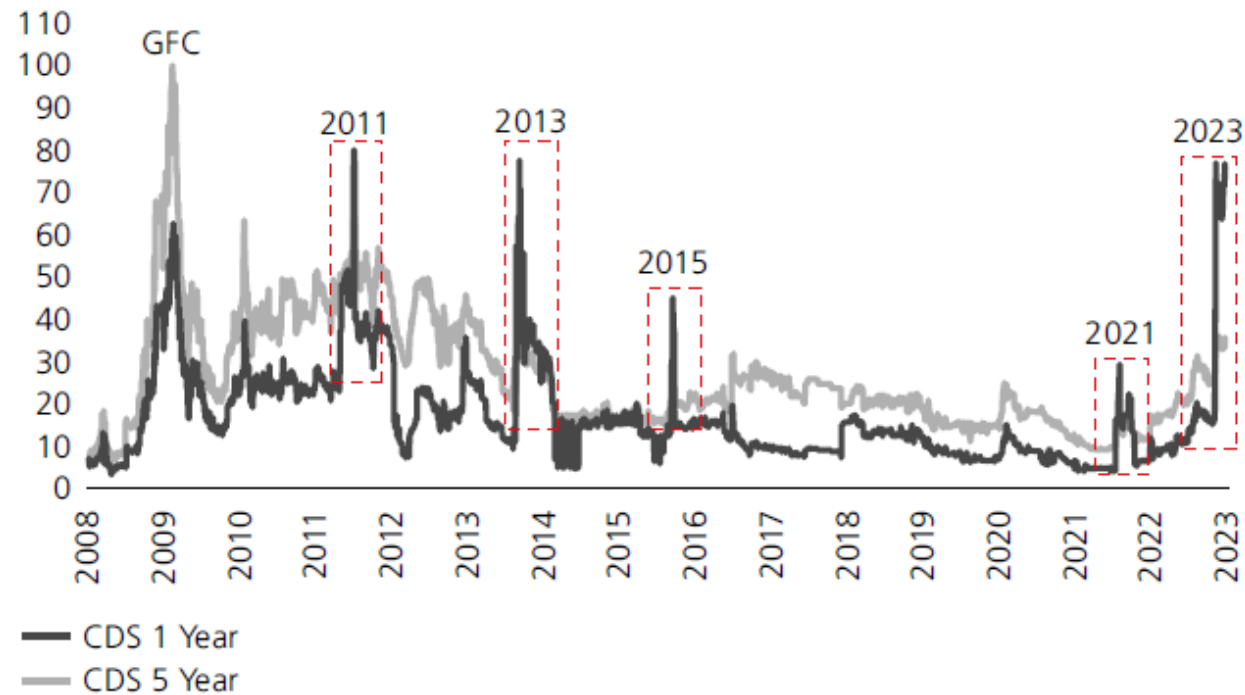
Source: Federal Reserve Bank of Kansas City, Bloomberg, UBS, 3 March 2023

Yield differential: 30 May & 13 June bills spiked higher



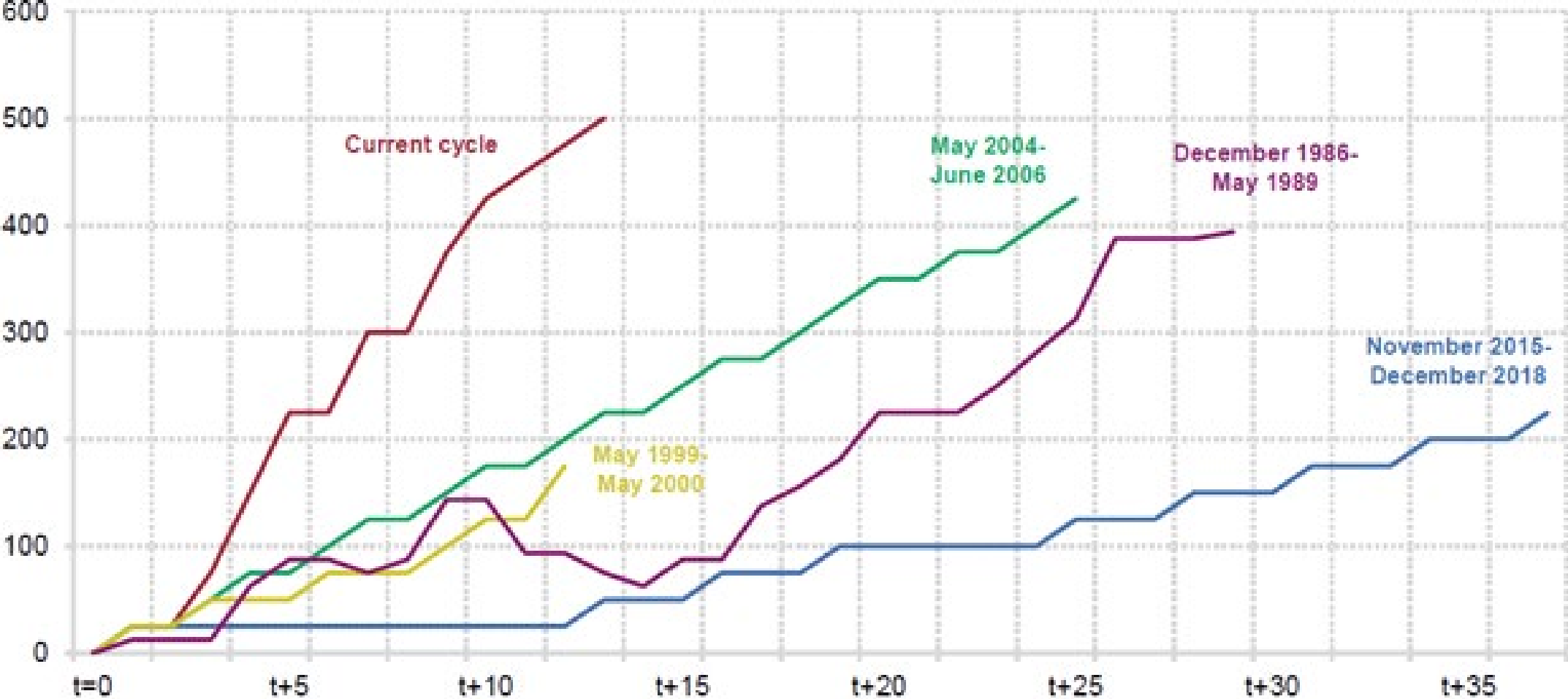
Source: Refinitiv Eikon, UBS, 4 May 2023

Monthly Sovereign US CDS spreads



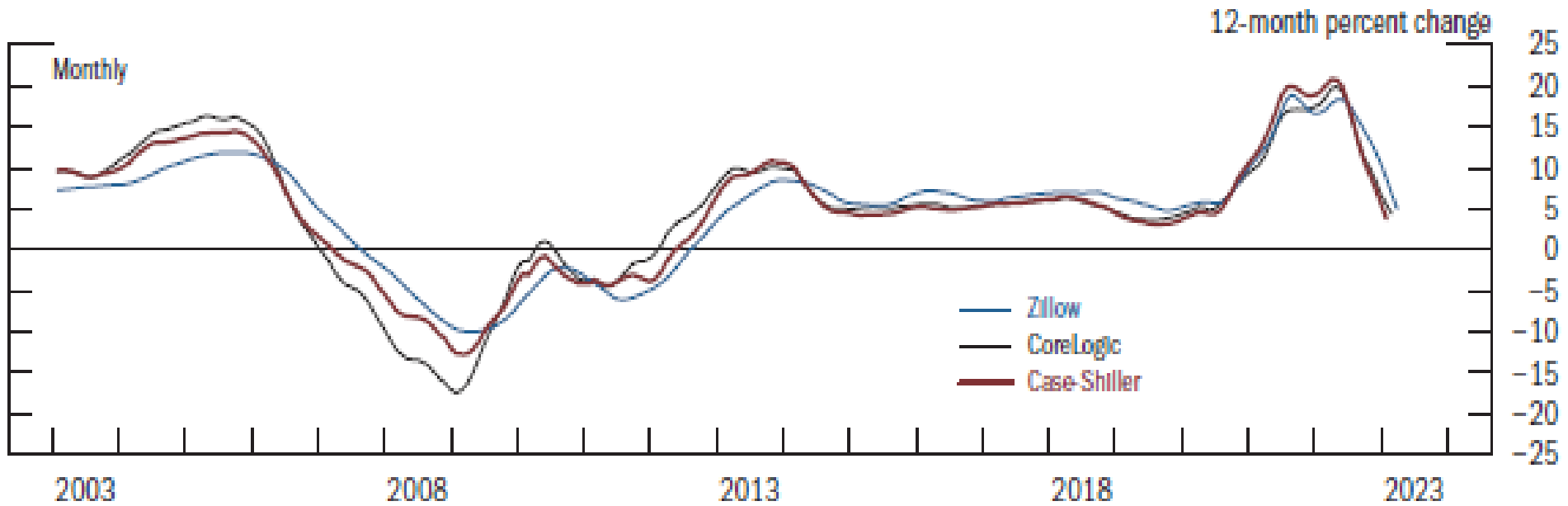
Source: Goldman Sachs, Bloomberg, UBS, as of 3 March 2023

Cumulative Change in Federal Funds Rate Since First Hike (basis points)



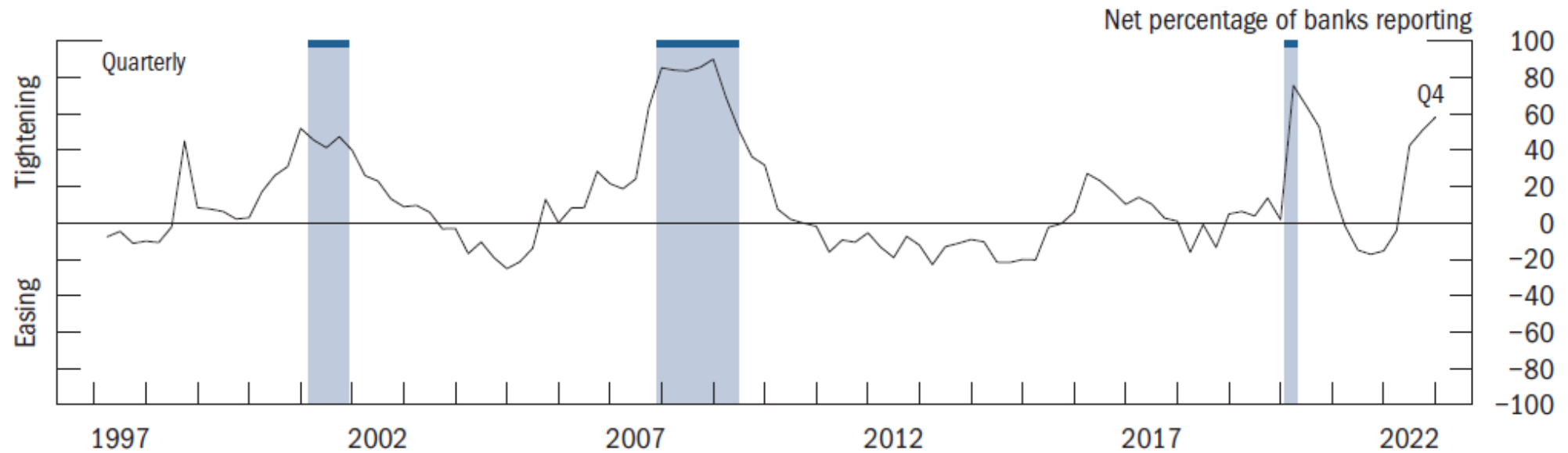
Source: Haver Analytics, Rosenberg Research

Housing prices decelerating sharply



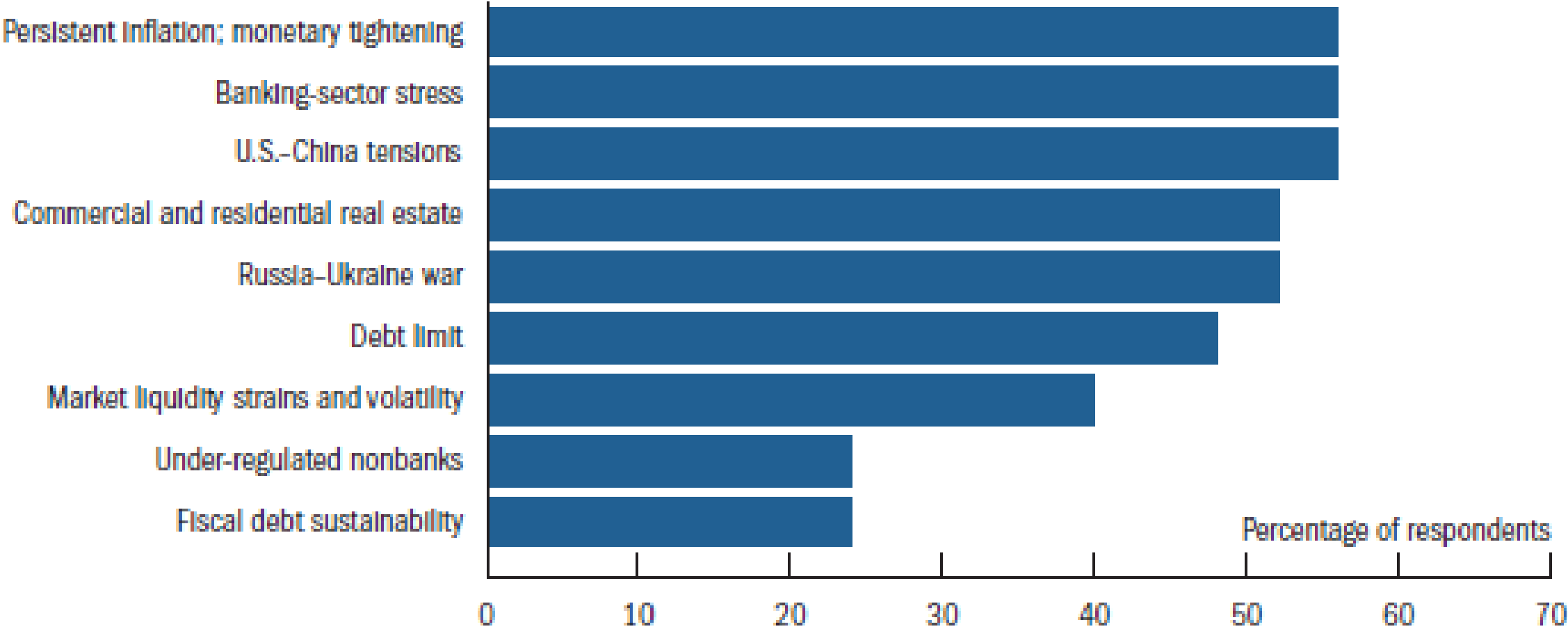
Sources: CoreLogic, Inc, Zillow, S&P Case Schiller, May 2023

Banks report tighter lending standards for CRE



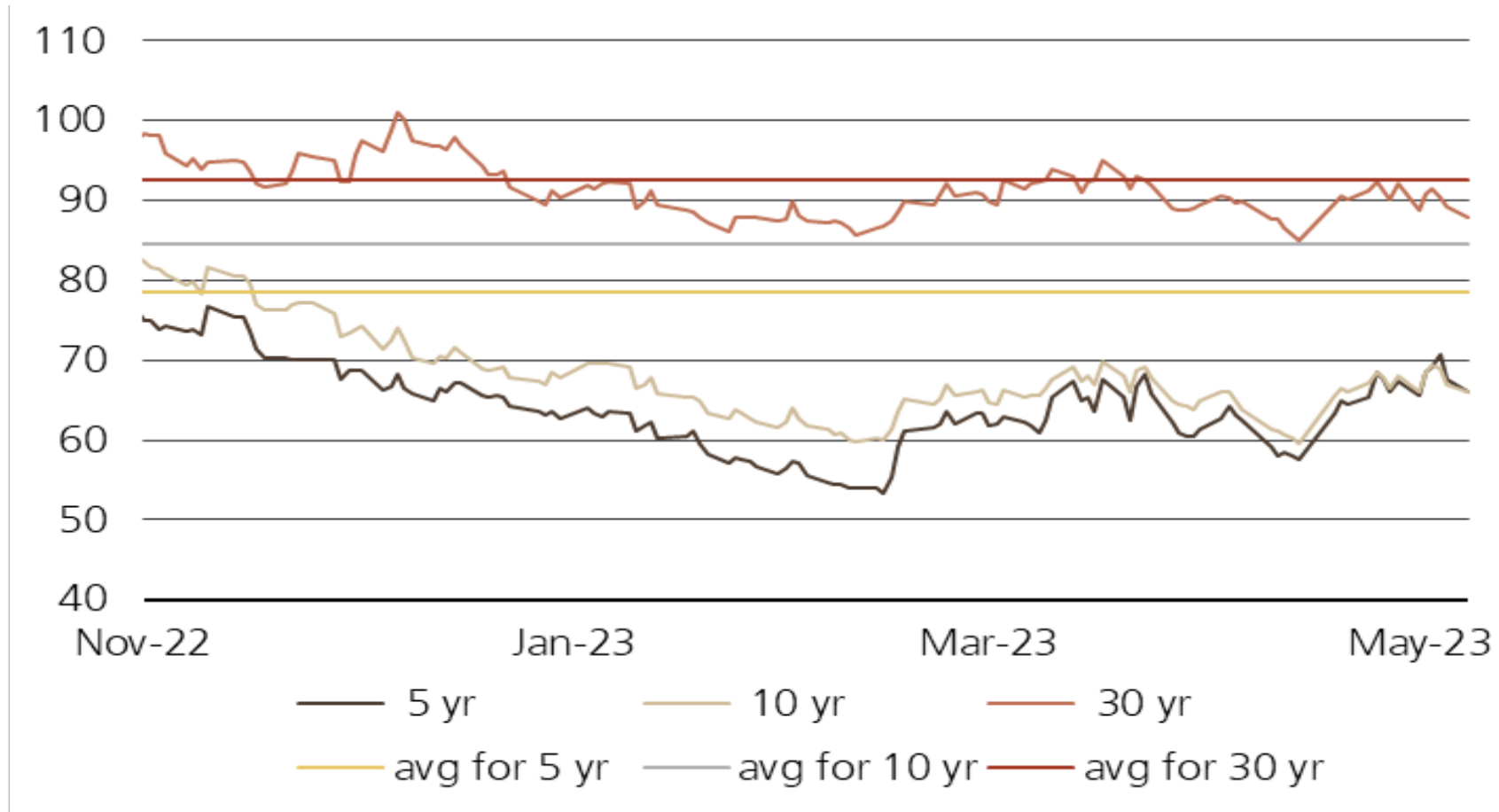
Source: Federal Research Board, May 2023

Most frequently cited potential risks: next 12 - 18 months



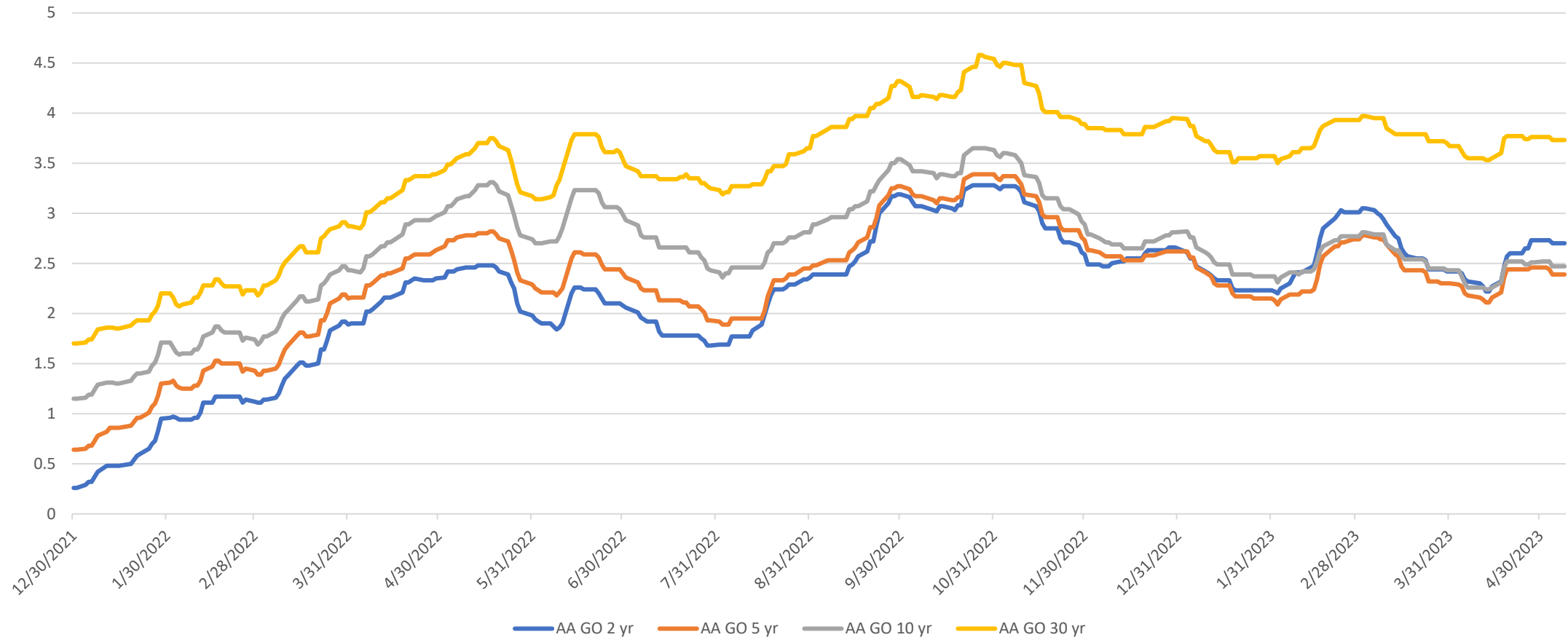
Source: Federal reserve Bank of New York Survey, February-April 2023.

AAA muni-to-Treasury yield ratios

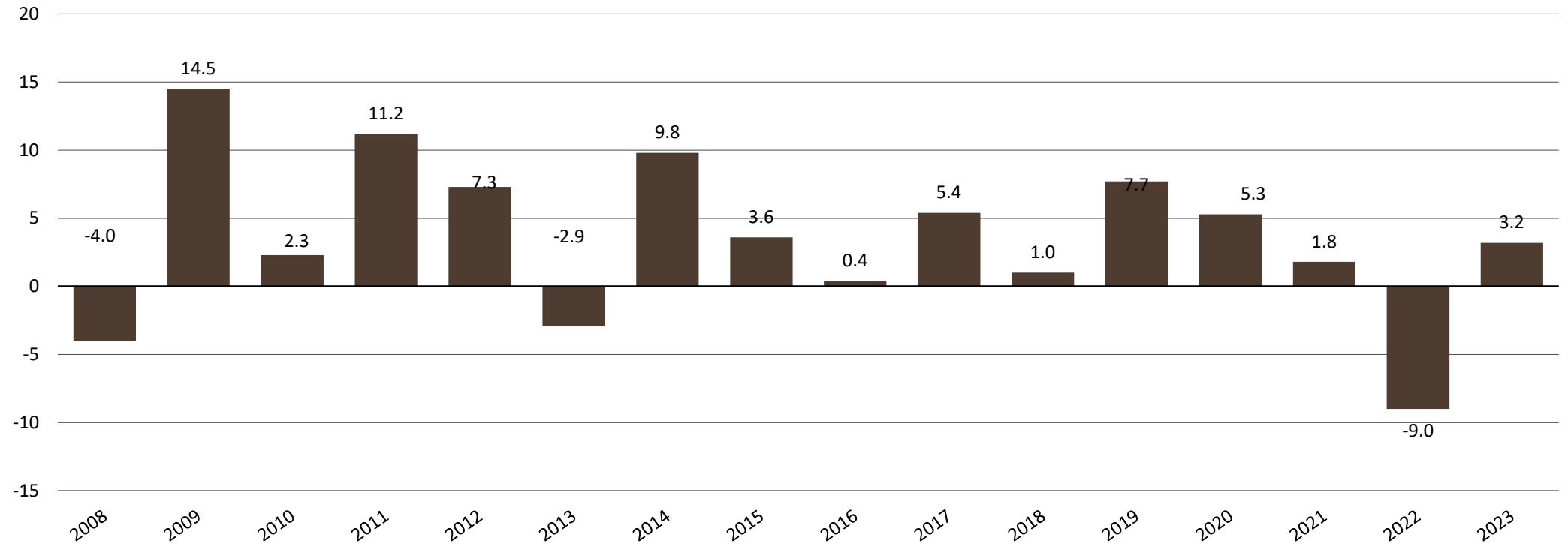


Source: UBS, May 2023

AA Muni yields, January 2022 - present

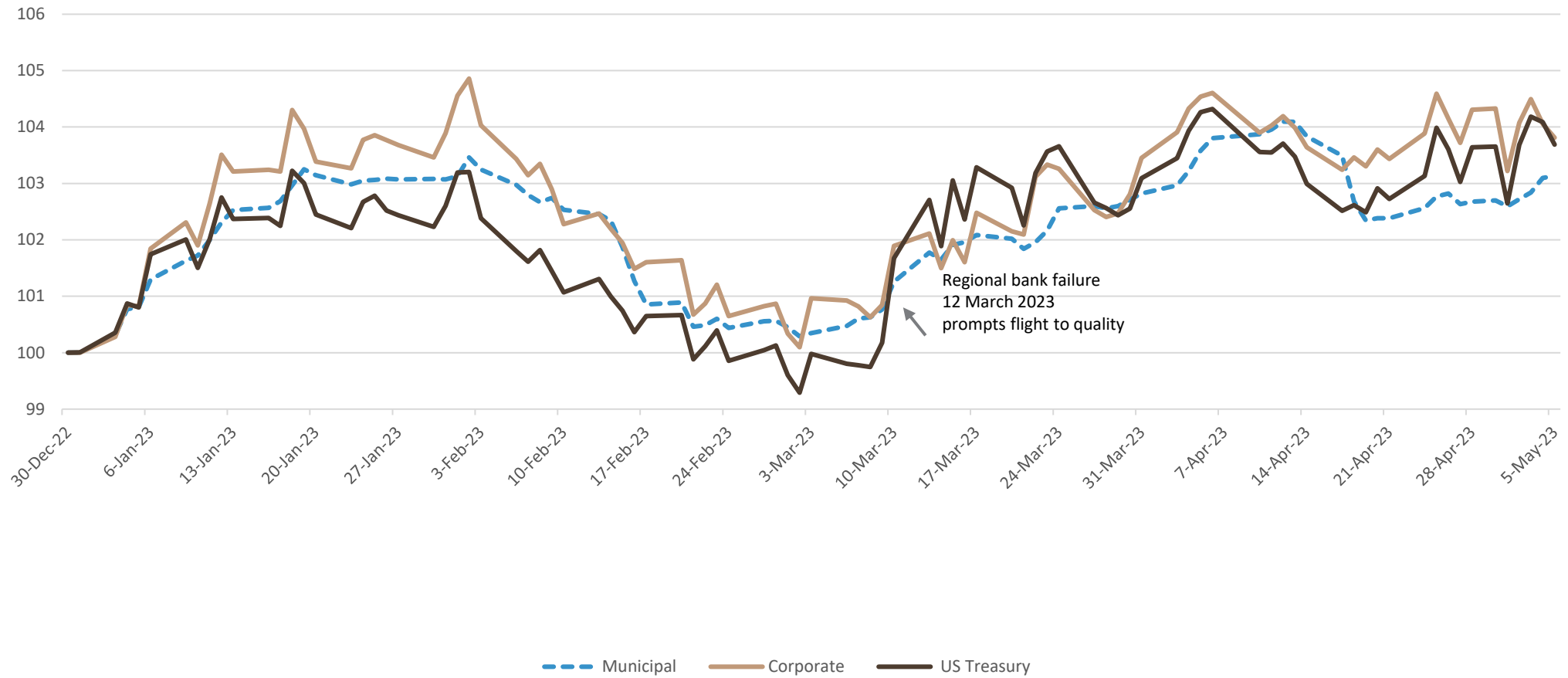


Historical municipal total returns, 2008—2023 YTD

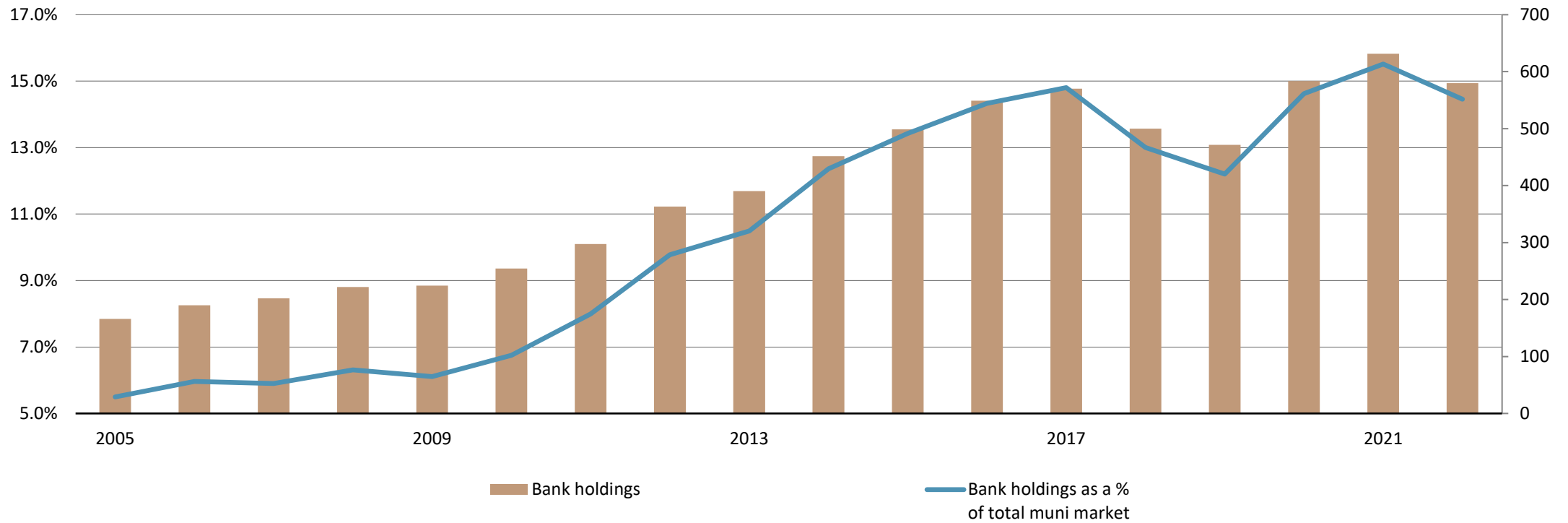


Source: UBS, April 2023

Munis and taxable fixed income performance YTD



Change in bank ownership of munis - 2005 - 2022

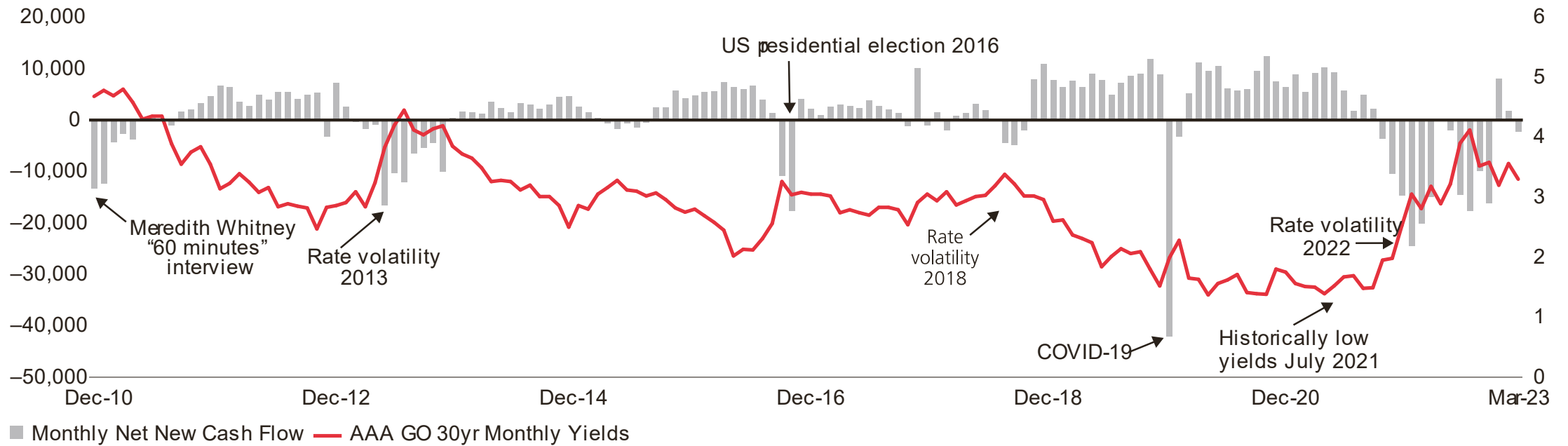


Source: Federal Reserve Flow of Funds

Market flows respond to yields on offer

Municipal mutual fund flows and long-term yields

Fund flows in USD millions (lhs), yields in % (rhs)



Note: March flows are MTD as of 29 March 2023

Source: Investment Company Institute, MMD, UBS, as of 14 April 2023

Capital Gains Distribution Frequency

Municipal ETFs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
# of ETFs	19	21	23	24	32	40	52	55	64	70
# paid capital gains	2	0	2	4	2	2	8	7	10	0
% paid capital gains	10.5	0.0	8.7	16.7	6.3	5.0	15.4	12.7	15.6	0.0

Source: Morningstar Direct, UBS, as of 5 May 2023. Historical data does not include funds that have been liquidated.

Fig. 2: Actively managed municipal ETFs vs. municipal MFs capital gains distribution frequency

Active municipal ETFs	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
# of ETFs	2	3	4	5	12	17	19	21	30	35
# paid capital gains	0	0	1	1	1	1	5	2	6	0
% paid capital gains	0.0	0.0	25.0	20.0	8.3	5.9	26.3	9.5	20.0	0.0

Municipal mutual funds	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
# of MFs	451	460	477	482	493	503	512	516	520	532
# paid capital gains	142	109	134	158	118	118	150	169	201	67
% paid capital gains	31.5	23.7	28.1	32.8	23.9	23.5	29.3	32.8	38.7	12.6

Source: Morningstar Direct, UBS, as of 5 May 2023. Historical data does not include funds that have been liquidated. Municipal mutual fund data based on a fund's oldest share class.

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