

Today's Webinar Presentation:

Bond Market Update: Charter School Sector

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Headlines Impact Tax-Exempt Interest Rates



'Today's mortgage rates rise for 30-year terms'



'Ukraine ends year disappointed by stalemate with Russia'



'Markets 'complacent' about the risks of a Trump win, strategist says'

Bloomberg

'Markets Want Rate Cuts Faster and Sooner. But Fed Is Pushing Back'



'Investors temper US rate cut bets as fed meeting looms'

Bond Market Overview & Interest Rate Discussion

Home Mortgage Rates: Last Four Months

Weekly national mortgage interest rate trends

Mortgages

Refinance

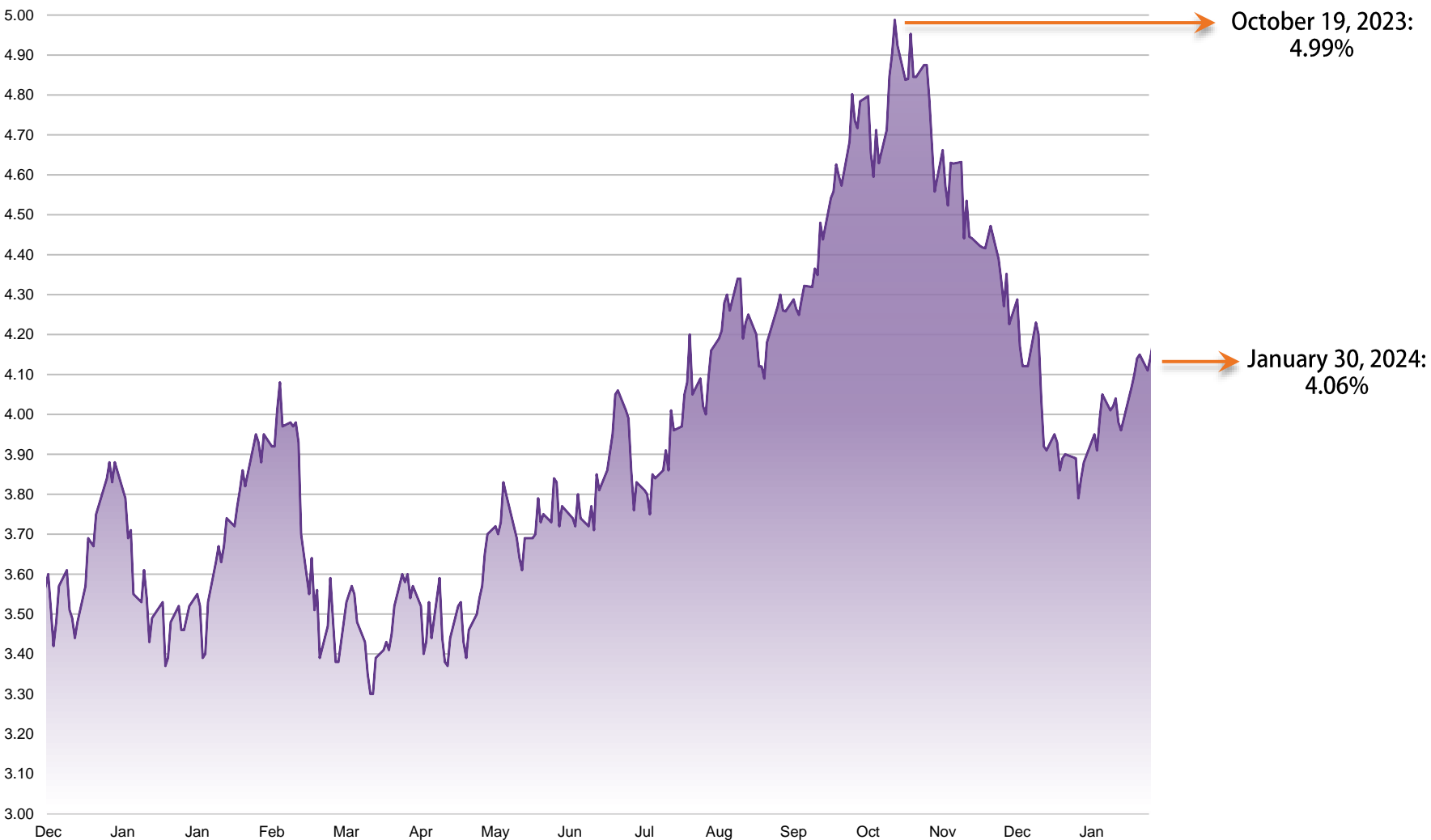


Current mortgage rates

● 30 year fixed	7.03%
● 15 year fixed	6.47%
● 10 year fixed	6.23%
● 5/1 ARM	6.13%

- Average 30-year rate of 7.03% @ week ending January 26, 2024
- Recent High was 8.09% @ week ending October 27, 2023

10-Year Treasury: Last 12 Months



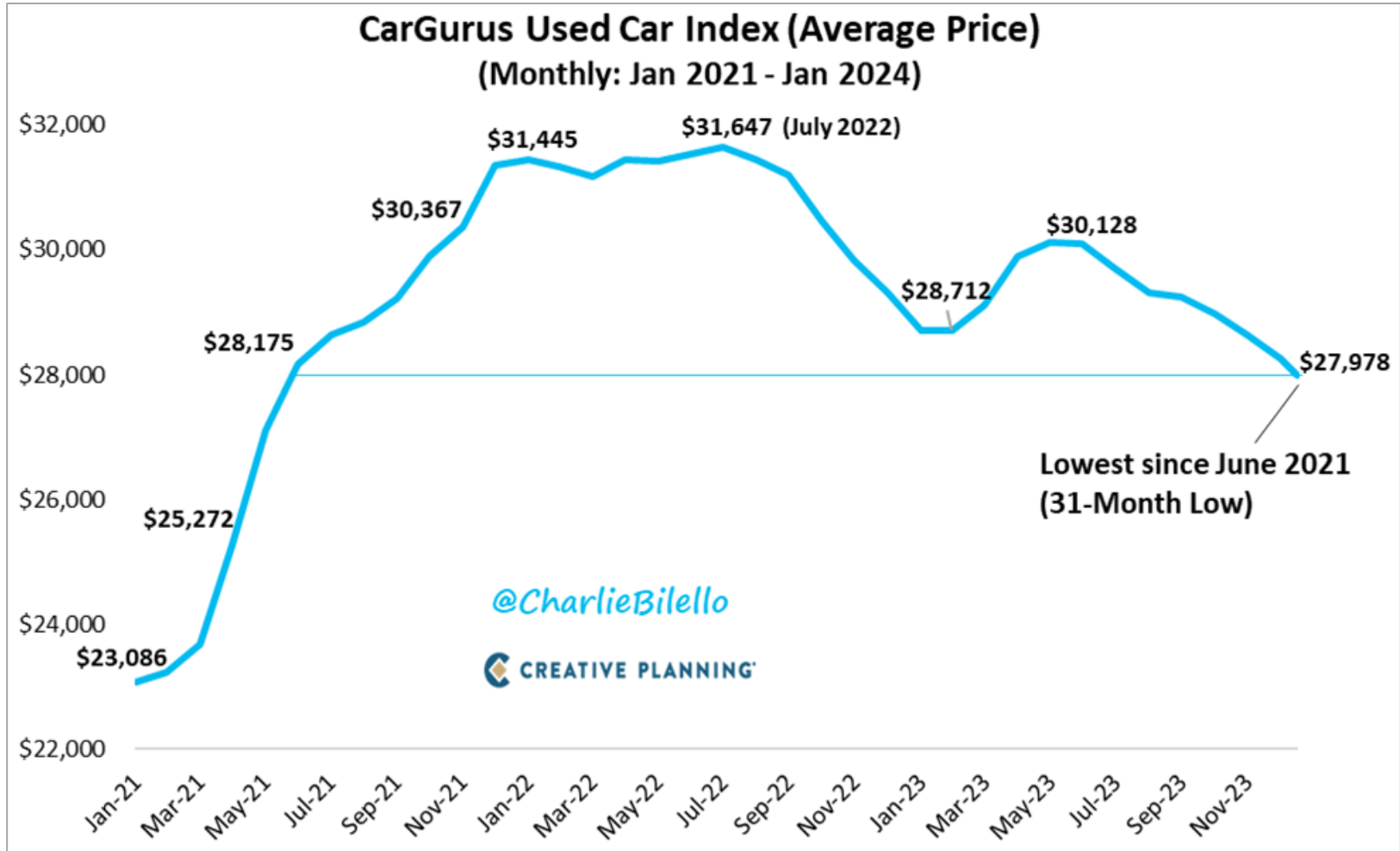
Source: Federal Reserve

United States M2 Money Supply

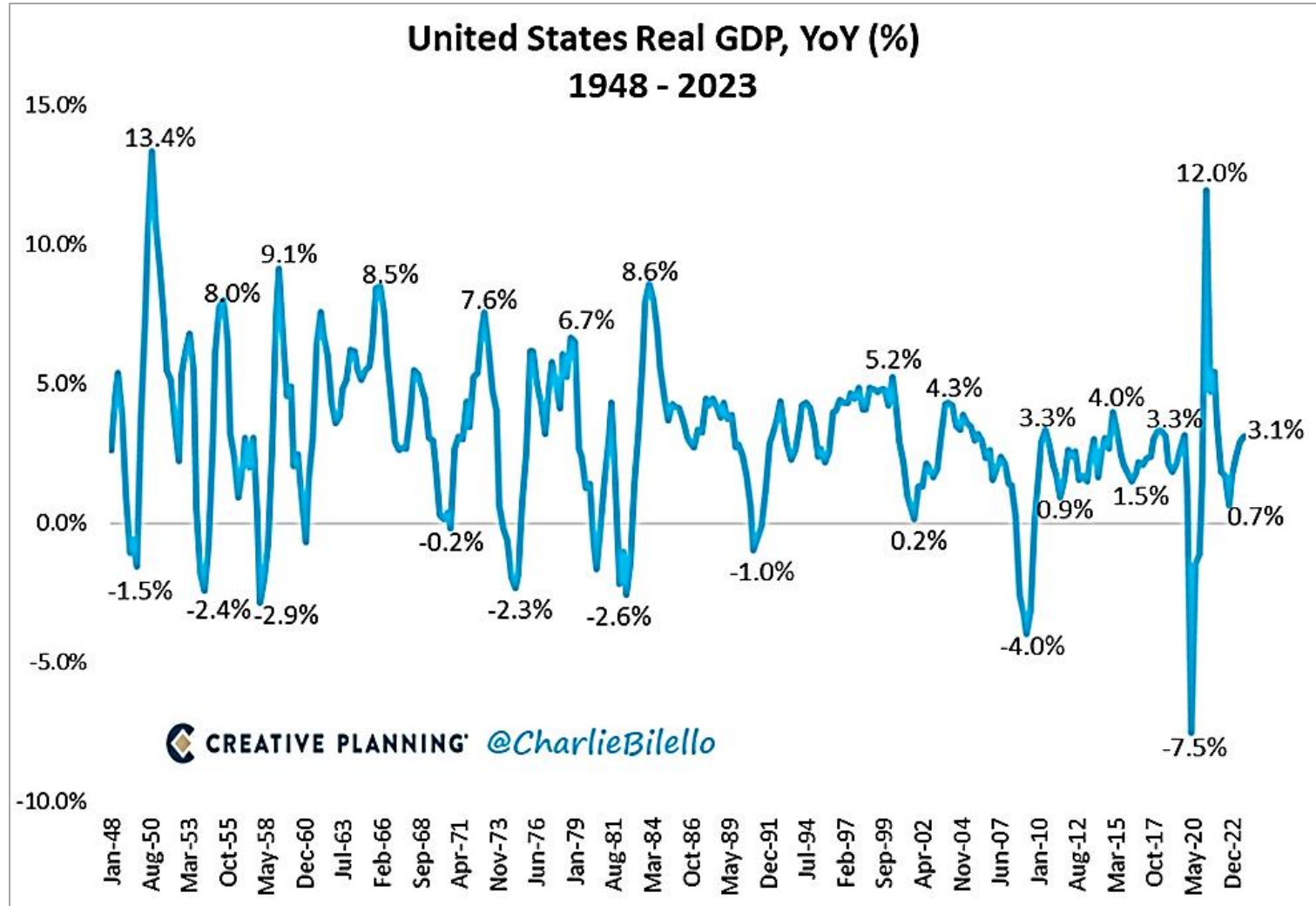
- M2 is the U.S. Federal Reserve's estimate of the total money supply including all of the cash people have on hand plus all of the money deposited in checking accounts, savings accounts, and other short-term saving vehicles such as certificates of deposit (CDs).
- Retirement account balances and time deposits above \$100,000 are omitted from M2.

US M2 Money Supply (1959 - 2023)								
Year	M2 (\$Bil)	% Change	Year	M2 (\$Bil)	% Change	Year	M2 (\$Bil)	% Change
1959	298		1981	1,756	10%	2003	6,067	5%
1960	312	5%	1982	1,906	9%	2004	6,418	6%
1961	336	7%	1983	2,124	11%	2005	6,682	4%
1962	363	8%	1984	2,306	9%	2006	7,072	6%
1963	393	8%	1985	2,492	8%	2007	7,472	6%
1964	425	8%	1986	2,728	9%	2008	8,192	10%
1965	459	8%	1987	2,826	4%	2009	8,496	4%
1966	480	5%	1988	2,988	6%	2010	8,802	4%
1967	525	9%	1989	3,153	5%	2011	9,660	10%
1968	567	8%	1990	3,272	4%	2012	10,460	8%
1969	588	4%	1991	3,372	3%	2013	11,035	5%
1970	627	7%	1992	3,425	2%	2014	11,685	6%
1971	710	13%	1993	3,475	1%	2015	12,347	6%
1972	802	13%	1994	3,486	0.3%	2016	13,213	7%
1973	856	7%	1995	3,630	4%	2017	13,858	5%
1974	902	5%	1996	3,819	5%	2018	14,363	4%
1975	1,016	13%	1997	4,033	6%	2019	15,321	7%
1976	1,152	13%	1998	4,375	8%	2020	19,114	25%
1977	1,270	10%	1999	4,638	6%	2021	21,550	12%
1978	1,366	8%	2000	4,925	6%	2022	21,358	-1%
1979	1,474	8%	2001	5,434	10%	2023	20,865	-2%
1980	1,600	9%	2002	5,772	6%			

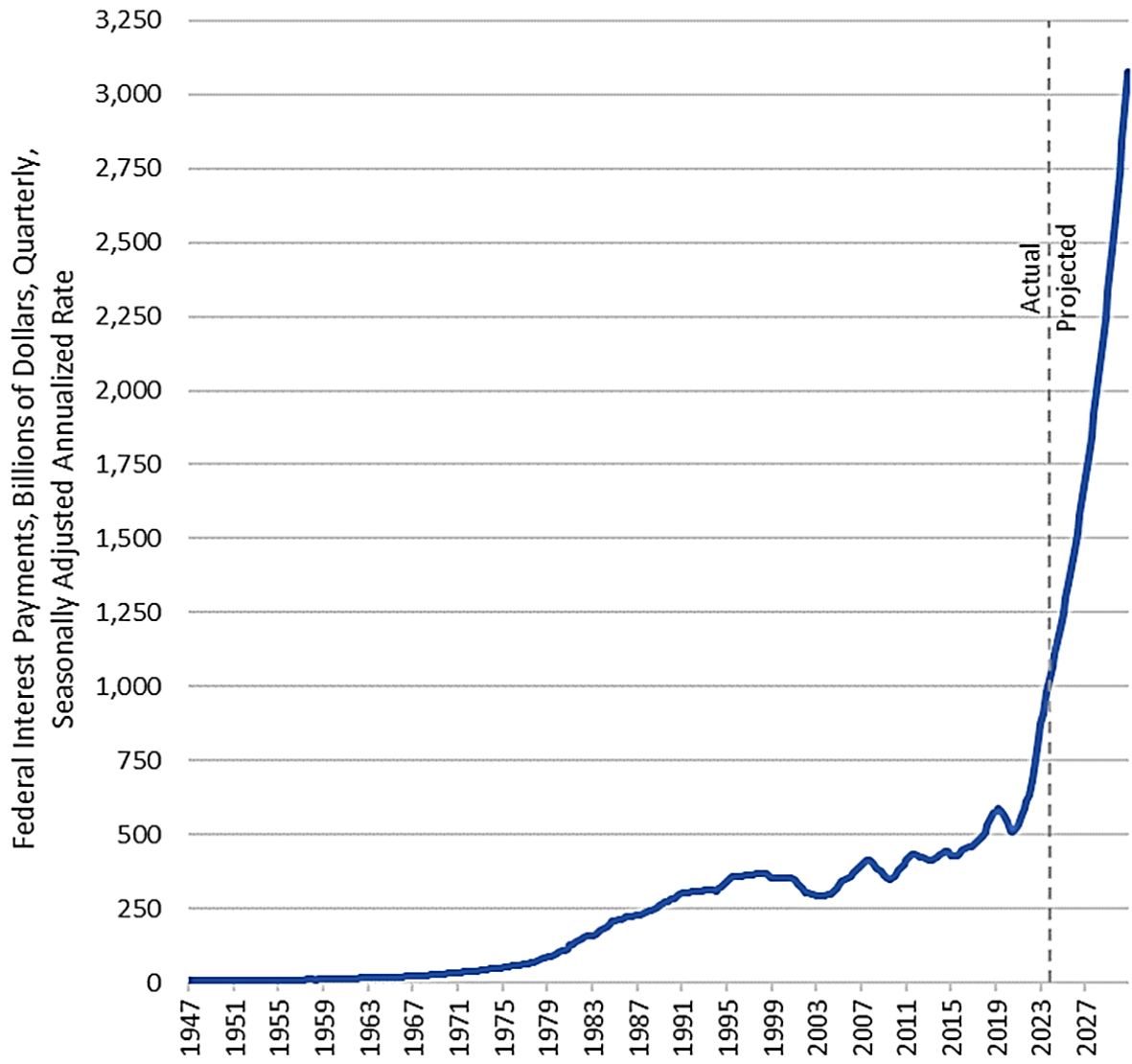
Used Car Prices: 2021 - 2023



United States GDP: Grew at 3.1% Rate in Q4



The Federal Debt Interest Payments: Actual & Projected

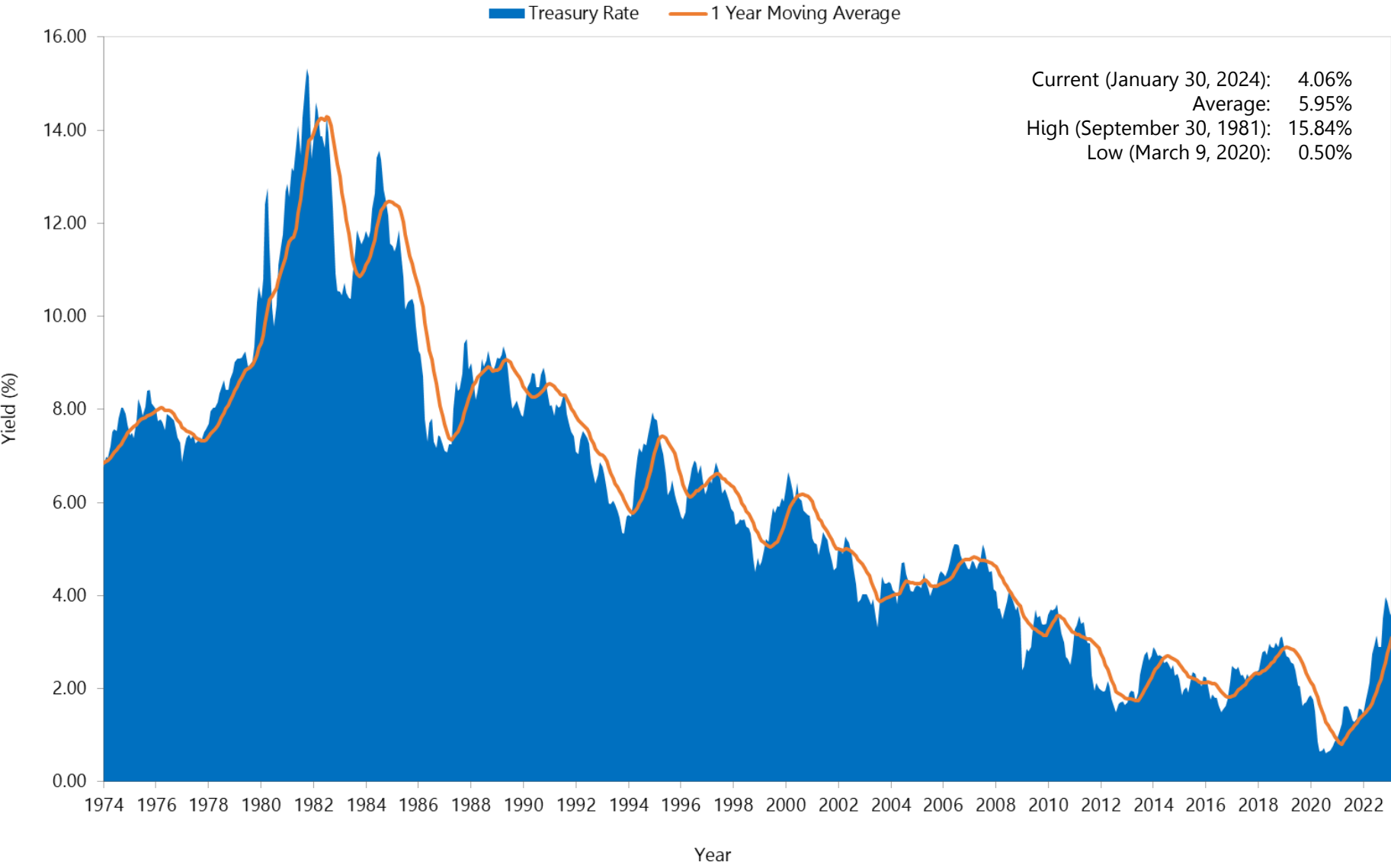


Source: E.J. Antoni, Ph.D January 25, 2024 Twitter. Source information from Bureau of Economic Analysis

30-Year MMD (Last 12 Months)



10-Year Treasury (1974-2024)



Source: LipperFM data service

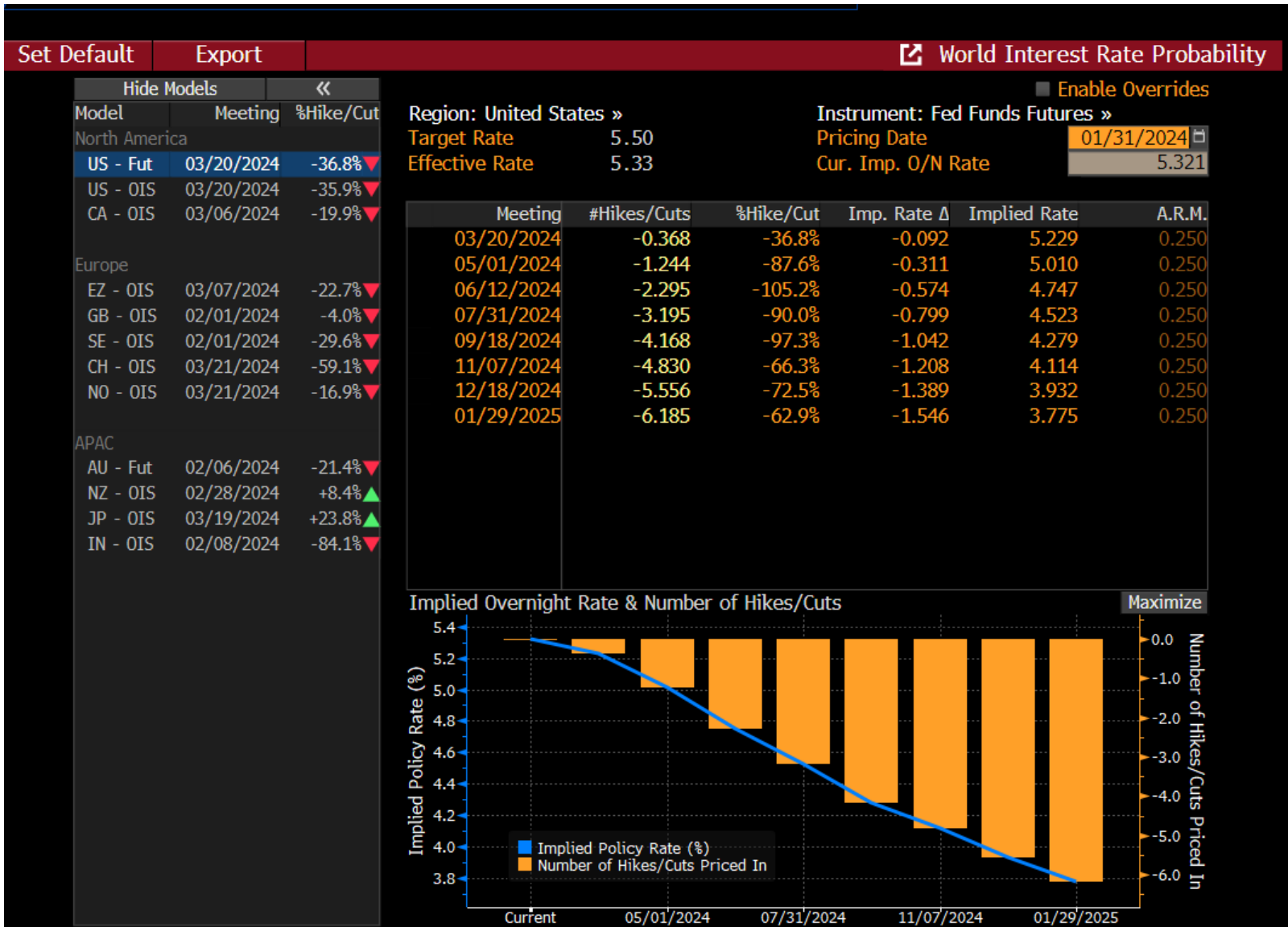
Powell Speaks After First U.S. Fed Policy Meeting of 2024

“Based on the meeting today, I would tell you that I don’t think it’s likely that the committee will reach a level of confidence by the time of the March meeting to identify March as the time to [cut interest rates]. But that’s to be seen.”

“We need some confirmation that inflation is in fact coming down... we’re encouraged by the progress, but we’re not declaring victory at this point. We think we have a ways to go.”

“We do expect growth to moderate as supply chain and labor market stabilization runs its course. The labor market is rebalancing.”

Fed Meeting: January 31, 2024



Charter School Bond Market Update

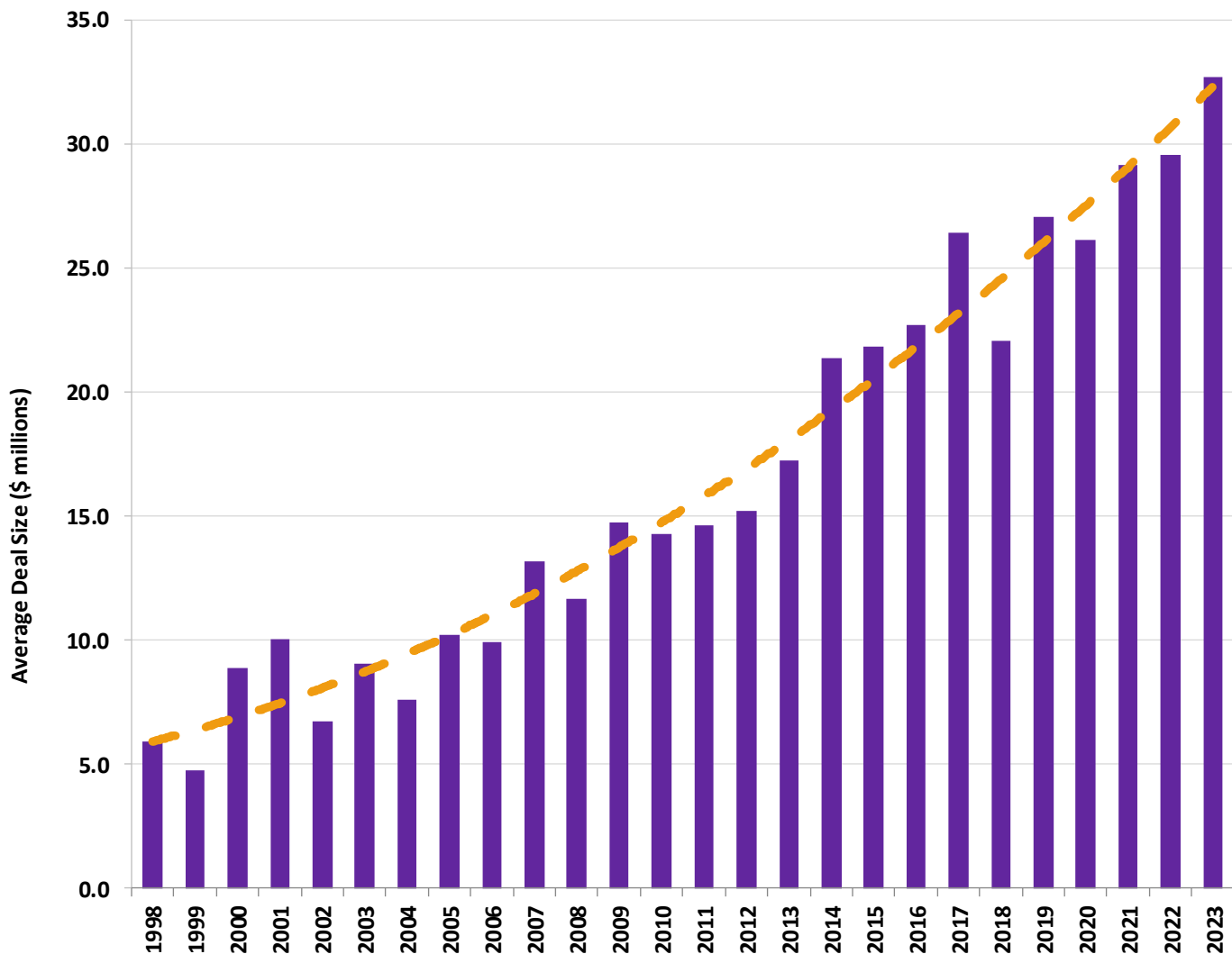
Charter School Bond Financings By Year

Year	Par \$ million	# Bond Issues	Investment Grade Par \$ million	Investment Grade Par as % Total	Total Borrowers
1998	35.40	6	20.10	56.70%	6
1999	104.30	22	28.20	27.00%	22
2000	204.60	23	150.90	73.70%	23
2001	291.90	29	120.20	41.20%	28
2002	174.90	26	81.80	46.80%	26
2003	281.10	31	176.10	62.70%	31
2004	303.70	40	195.80	64.50%	40
2005	418.00	41	198.00	47.40%	41
2006	555.30	56	258.60	46.60%	56
2007	1,014.60	77	533.80	52.60%	76
2008	420.50	36	181.10	43.10%	36
2009	325.00	22	252.00	77.50%	22
2010	1,000.40	70	787.90	78.80%	69
2011	806.00	55	498.70	61.90%	55
2012	1,097.20	72	523.20	47.70%	70
2013	1,256.80	73	493.70	39.30%	72
2014	1,792.40	84	817.30	45.60%	82
2015	1,899.10	87	714.30	37.60%	84
2016	2,607.90	115	903.00	34.60%	112
2017	3,059.20	116	953.20	31.20%	111
2018	2,140.50	98	398.90	18.60%	95
2019	3,411.43	116	1,325.90	38.87%	115
2020	3,659.82	140	1,200.96	32.81%	138
2021	5,420.12	186	2,117.35	39.06%	182
2022	4,813.44	163	2,217.21	46.06%	157
2023	3,009.02	92	755.51	25.11%	91
TOTAL	\$40,102.63	1,876	\$15,903.72	39.66%	1,840

Charter School Average Transaction Size


Average Size of Financings by Year 1998 - 2023

Year	Average Deal Size \$ million
1998	\$5.9
1999	\$4.7
2000	\$8.9
2001	\$10.1
2002	\$6.7
2003	\$9.1
2004	\$7.6
2005	\$10.2
2006	\$9.9
2007	\$13.2
2008	\$11.7
2009	\$14.8
2010	\$14.3
2011	\$14.7
2012	\$15.2
2013	\$17.2
2014	\$21.3
2015	\$21.8
2016	\$22.7
2017	\$26.4
2018	\$22.1
2019	\$27.0
2020	\$26.1
2021	\$29.1
2022	\$29.5
2023	\$32.7
AVG (All Years)	\$21.2




Recent Ziegler Pricings


Sale Date	ST	Borrower	Rating (M/S/F)	Issue Size (\$MM)	Final Coupon	Final Yield	Yield Spread to MMD	Par Call
12/19/23	MI	Ivywood Classical Academy	NR / NR / NR	\$24.400	6.250%	6.375%	2.875%	1/1/2031
11/15/23	NC	Unity Classical Charter School	NR / NR / NR	\$29.610	7.000%	6.940%	2.820%	7/1/2030
11/03/23	FL	Global Outreach Charter Academy	NR / NR / NR	\$24.455	7.500%	7.500%	4.180%	6/1/2031
10/26/23	FL	Optima Classical Academy at Gladiolus	NR / NR / NR	\$29.150	7.750%	7.750%	3.180%	12/1/2030
10/19/23	PA	Lehigh Valley Dual Language Charter School	Ba1 / NR / NR	\$8.300	7.000%	7.150%	2.620%	06/01/2030
08/24/23	SC	Global Academy of South Carolina	NR / NR / NR	\$30.370	7.500%	7.500%	4.550%	06/01/2031
08/15/23	AZ	American Leadership Academy Inc	NR / NR / NR	\$141.505	5.750%	6.000%	2.290%	06/15/2030



**IVYWOOD
CLASSICAL ACADEMY**
Ivywood Classical
Academy
Plymouth, Michigan
New Money
DECEMBER 2023
\$24,400,000




**UNITY
CLASSICAL
CHARTER SCHOOL**
A Challenge Frontiers® Academy
Unity Classical
Charter School
Steele Creek, North Carolina
New Money
NOVEMBER 2023
\$29,610,000



GLOBAL OUTREACH CHARTER ACADEMY
Global Outreach
Charter Academy
Jacksonville, Florida
New Money
NOVEMBER 2023
\$24,455,000




**OPTIMA CLASSICAL ACADEMY
GLADIOLUS**
Optima Classical
Academy at Gladiolus
Fort Meyers, Florida
New Money
OCTOBER 2023
\$29,150,000



**LEHIGH VALLEY DUAL LANGUAGE
CHARTER SCHOOL**
Lehigh Valley Dual Language
Charter
School
Bethlehem, Pennsylvania
Refunding
OCTOBER 2023
\$8,300,000



GLOBAL ACADEMY OF SOUTH CAROLINA
Global Academy of
South Carolina
Spartanburg, South Carolina
**New Money
Acquisition/Renovation**
AUGUST 2023
\$30,370,000



**AMERICAN LEADERSHIP
ACADEMY**
American Leadership
Academy
Mesa, Arizona
New Money/Refunding
AUGUST 2023
\$141,505,000

Case Study: Global Academy of South Carolina

\$30,370,000 Series 2023 Bonds | August 2023

- Acquired Upward Star Center Facilities to operate a new public charter school for K-8 students
- Commenced in the 2023-24 school year with 280 students in grades K-5; aims to expand to 1,260 students in grades K-8 by the 2024-25 school year
- Series 2023 bond proceeds used to acquire and retrofit the campus for use as a charter school; additional renovations will be completed to increase the facility capacity from 280 to 1,260 students
- Nonrated bonds, issued via South Carolina Jobs – Economic Development Authority, with a 10-year final maturity and a 32-year amortization
- Bonds placed with a specialty investor with credit enhancement from Building Hope Finance



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