ARROWROOT
Family Office

Global Credit Markets

3Q 2025 Update

As of July 1, 2025

www.arrowrootfamilyoffice.com

Table of Content

Robert Santos
CEO

ARROWROOT Family Office

Quarterly Credit Class Performance

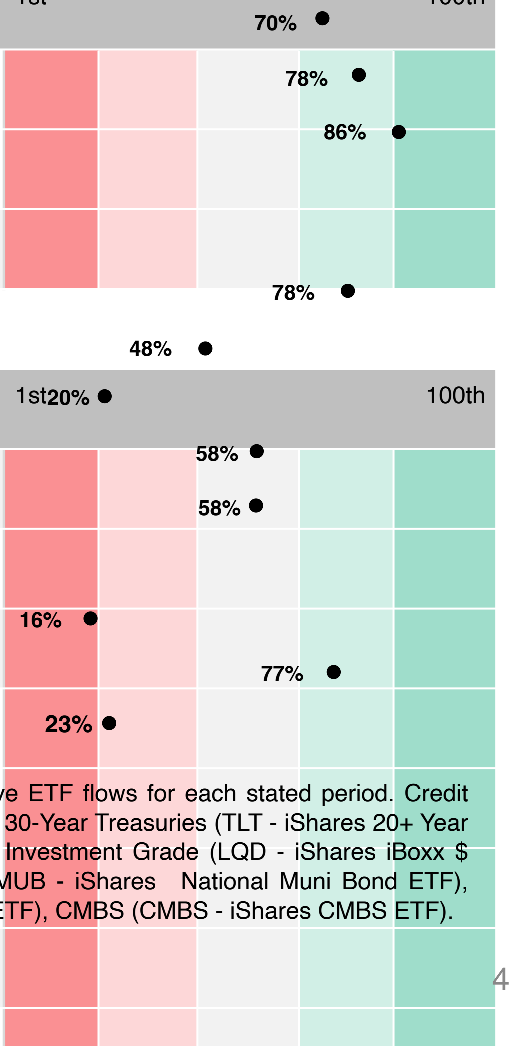
3Q 2025

3Q 2022	4Q 2022	1Q 2023	2Q 2023	3Q 2023	4Q 2023	1Q 2024	2Q 2024	3Q 2024	4Q 2024	1Q 2025	2Q 2025	YTD	1 year
Convertibles -1.5%	EM Svgn 8.4%	Trsy (30Y) 7.4%	Convertibles 4.7%	Trsy (2Y) 0.6%	Trsy (30Y) 12.8%	Preferreds 4.4%	Trsy (2Y) 0.8%	EM Svgn 7.9%	Convertibles 2.5%	Trsy (30Y) 4.9%	Convertibles 8.4%	EM Svgn 11.9%	Convertibles 16.9%
Trsy (2Y) -1.6%	Corp HY 5.0%	Corp IG 4.6%	EM Svgn 2.7%	Corp HY -0.3%	Corp IG 10.0%	Convertibles 1.5%	TIPS 0.8%	Trsy (30Y) 7.9%	Trsy (2Y) -0.1%	TIPS 4.3%	EM Svgn 7.8%	Convertibles 7.0%	EM Svgn 13.3%
Corp HY -1.7%	Corp IG 4.2%	Convertibles 4.6%	Preferreds 0.7%	Preferreds -1.0%	Convertibles 7.3%	Corp HY 1.5%	Corp HY 0.7%	Preferreds 6.9%	Corp HY -0.1%	EM Svgn 3.8%	Corp HY 3.7%	Trsy (10Y) 5.2%	Corp HY 10.6%
Preferreds -2.3%	Municipals 3.7%	Trsy (10Y) 3.9%	Corp HY 0.7%	CMBS -1.0%	MBS 7.2%	CMBS 1.2%	CMBS 0.5%	Convertibles 6.7%	Municipals -0.9%	Trsy (10Y) 3.8%	CMBS 2.4%	Corp HY 5.0%	CMBS 7.3%
Municipals -3.0%	Convertibles 2.7%	EM Svgn 3.9%	CMBS 0.0%	Convertibles -2.6%	Corp HY 7.0%	Trsy (2Y) 0.3%	MBS 0.3%	Corp IG 6.6%	CMBS -2.4%	MBS 3.0%	Corp IG 2.0%	TIPS 4.7%	Corp IG 6.8%
CMBS -4.1%	MBS 2.2%	Corp HY 3.7%	Municipals -0.3%	TIPS -2.7%	EM Svgn 6.8%	TIPS -0.1%	Trsy (10Y) -0.2%	Trsy (10Y) 5.7%	MBS -3.0%	Corp IG 2.5%	Preferreds 1.5%	CMBS 4.7%	MBS 6.4%
TIPS -5.1%	TIPS 1.9%	TIPS 3.6%	Corp IG -0.4%	Municipals -3.3%	Municipals 6.7%	Municipals -0.3%	Municipals -0.2%	Corp HY 5.6%	TIPS -3.0%	CMBS 2.3%	Trsy (10Y) 1.4%	Corp IG 4.5%	Trsy (10Y) 6.0%
EM Svgn -5.4%	CMBS 1.1%	Preferreds 3.5%	Trsy (2Y) -0.6%	MBS -3.9%	Trsy (10Y) 6.4%	Corp IG -0.9%	Corp IG -0.5%	MBS 5.4%	Preferreds -3.4%	Trsy (2Y) 1.6%	MBS 1.2%	MBS 4.2%	TIPS 5.6%
MBS -5.5%	Trsy (2Y) 0.7%	MBS 2.7%	MBS -0.7%	Trsy (10Y) -4.4%	Preferreds 5.8%	MBS -1.1%	Preferreds -0.6%	CMBS 5.1%	Corp IG -4.0%	Corp HY 1.2%	Trsy (2Y) 1.1%	Trsy (30Y) 2.9%	Trsy (2Y) 5.5%
Trsy (10Y) -5.7%	Trsy (10Y) 0.6%	Municipals 2.5%	TIPS -1.5%	Corp IG -4.6%	CMBS 5.0%	Trsy (10Y) -1.3%	Convertibles -0.9%	TIPS 4.1%	Trsy (10Y) -4.6%	Municipals -0.5%	TIPS 0.4%	Trsy (2Y) 2.7%	Preferreds 3.7%
Corp IG -6.1%	Preferreds -1.2%	Trsy (2Y) 1.6%	Trsy (10Y) -1.9%	EM Svgn -5.9%	TIPS 4.5%	EM Svgn -1.8%	EM Svgn -1.2%	Trsy (2Y) 2.9%	EM Svgn -6.2%	Preferreds -1.1%	Municipals -0.1%	Preferreds 0.3%	Municipals 1.1%
Trsy (30Y) -10.2%	Trsy (30Y) -1.9%	CMBS 1.1%	Trsy (30Y) -2.5%	Trsy (30Y) -13.0%	Trsy (2Y) 2.5%	Trsy (30Y) -3.7%	Trsy (30Y) -2.0%	Municipals 2.7%	Trsy (30Y) -9.7%	Convertibles -1.3%	Trsy (30Y) -2.0%	Municipals -0.6%	Trsy (30Y) 0.3%

Disclosure: Past performance is no guarantee of future results. All performance data represents total returns for the stated period. Credit types represented by the following ETFs: 2Y Treasury Bond (SHY - iShares 1-3 Year Treasury Bond ETF), 10Y Treasury Bond (IEF - iShares 7-10 Year Treasury Bond ETF), 30Y Treasury Bond (TLT - iShares 20+ Year Treasury Bond ETF), EM Svgn (LEMB - iShares J.P. Morgan EM Local Currency Bond ETF), Corp IG (LQD - iShares iBoxx $ Investment Grade Corporate Bond ETF), Corp HY (HYG - iShares iBoxx $ High Yield Corporate Bond ETF), TIPS (TIP - iShares TIPS Bond ETF), Municipals (MUB - iShares National Muni Bond ETF), Convertibles (CWB - SPDR Bloomberg Barclays Convertible Securities ETF), Preferreds (PFF - iShares Preferred & Income Securities ETF), MBS (MBB - iShares MBS ETF), CMBS (CMBS - iShares CMBS ETF).

Credit Market Overview

Credit Markets	Total Returns (%)			Asset Flows (%)			Spread vs 10Y UST			Yield to Maturity	Duration (Years)	Current Yield vs 20 Year Range	
	3M	6M	1Y	3M	6M	1Y	3M	6M	1Y			Percentile	Range
U.S. Treasuries													1st 100th
Short-Term (1-3 yrs)	1.1	2.7	5.5	2.6	4.8	7.6	-0.5%	-0.3%	0.3%	3.7%	-	70%	
Intermediate (7-10 yrs)	1.4	5.2	6.0	3.1	7.3	19.1	0.0%	0.0%	0.0%	4.2%	-	78%	
Long-Term (+20 yrs)	-2.0	2.9	0.3	1.7	3.1	-3.7	0.6%	0.2%	0.2%	4.8%	-	86%	
U.S. Credit													1st 100th
Cash (3-Month Treasury)	1.0	2.0	4.5	5.0	15.8	22.3	0.1%	-0.3%	1.0%	4.3%	-	78%	
Investment Grade	2.0	4.5	6.8	1.9	4.1	6.3	0.7%	0.6%	1.0%	4.9%	6.6	48%	
High Yield	3.7	5.0	10.6	3.9	8.1	21.8	2.4%	2.6%	2.7%	6.6%	3.6	20%	
TIPS	0.4	4.7	5.6	4.0	11.2	12.9	-2.6%	-2.5%	-2.1%	1.6%	6.7	58%	
Municipals	-0.1	-0.6	1.1	1.4	0.8	2.9	0.0%	-0.5%	-0.3%	4.2%	[illegible]	58%	
Convertibles	8.4	7.0	16.9	-8.0	-13.4	6.1	-	-	-	-	-		
Preferreds	1.5	0.3	3.7	-2.1	-2.1	1.2	2.4%	2.0%	2.2%	6.6%	8.7	16%	
MBS	1.2	4.2	6.4	-3.0	-1.7	11.1	0.7%	0.7%	0.8%	5.0%	5.9	77%	



Disclosures: Past performance is no guarantee of future results. All performance data represents total returns for the stated period. Flows calculated using cumulative ETF flows for each stated period. Credit markets based on the following ETFs: 2-Year Treasuries (SHY - iShares 1-3 Year Treasury Bond ETF), 10-Year Treasuries (IEF - iShares 7-10 Year Treasury Bond ETF), 30-Year Treasuries (TLT - iShares 20+ Year Treasury Bond ETF), EM Sovereign (LEMB - iShares J.P. Morgan EM Local Currency Bond ETF), Cash (BIL - SPDR Bloomberg Barclays 1-3 Month T-Bill ETF), Investment Grade (LQD - iShares iBoxx $ Investment Grade Corporate Bond ETF), High Yield (HYG - iShares iBoxx $ High Yield Corporate Bond ETF), TIPS (TIP - iShares TIPS Bond ETF), Municipals (MUB - iShares National Muni Bond ETF), Convertibles (CWB - SPDR Bloomberg Barclays Convertible Securities ETF), Preferreds (PFF - iShares Preferred & Income Securities ETF), MBS (MBB - iShares MBS ETF), CMBS (CMBS - iShares CMBS ETF).

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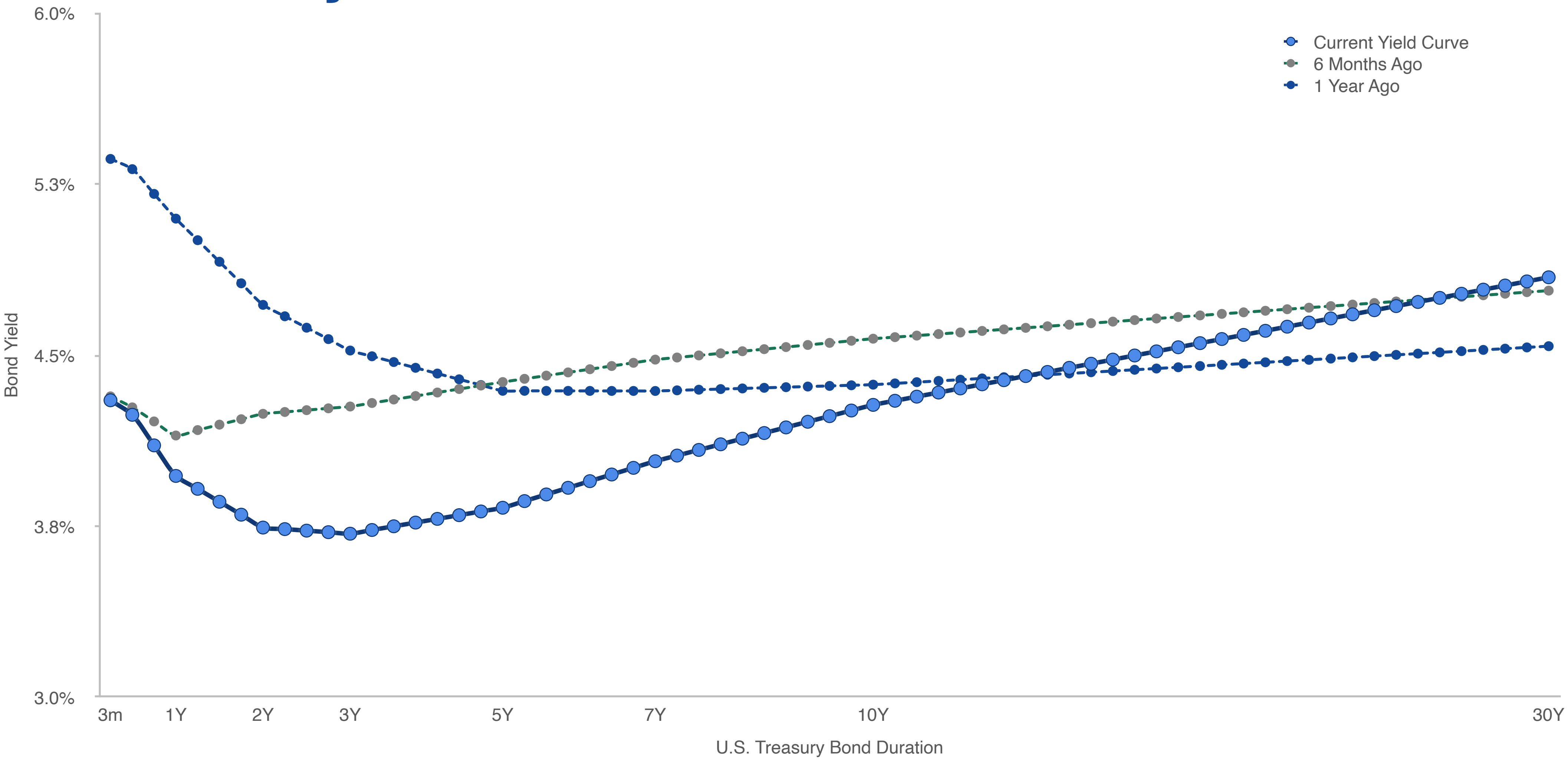
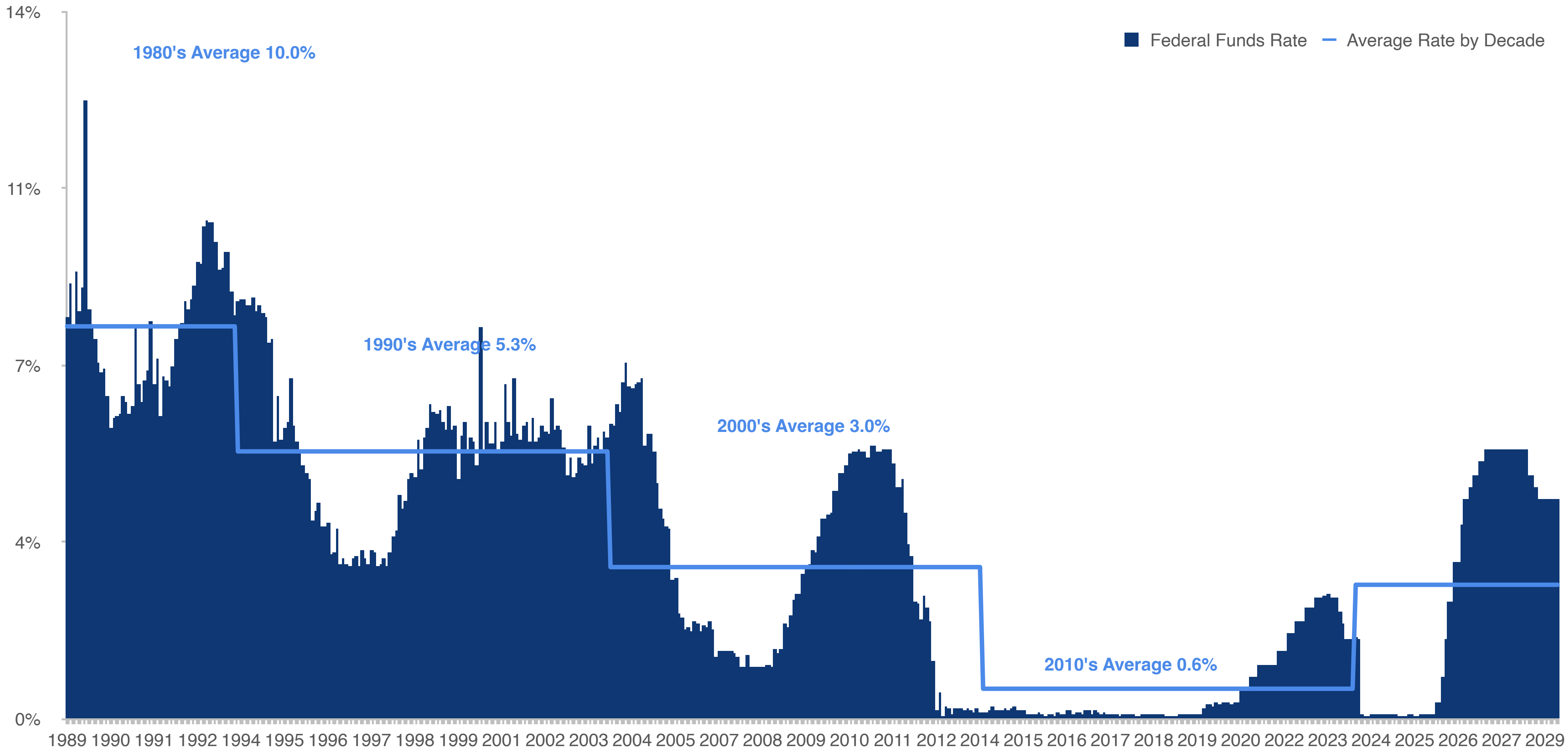
U.S. Treasury Yield Curve



Disclosures: Data based on latest available data sourced from Federal Reserve. The yield curve shows the relationship between interest rates and time-to-maturity.

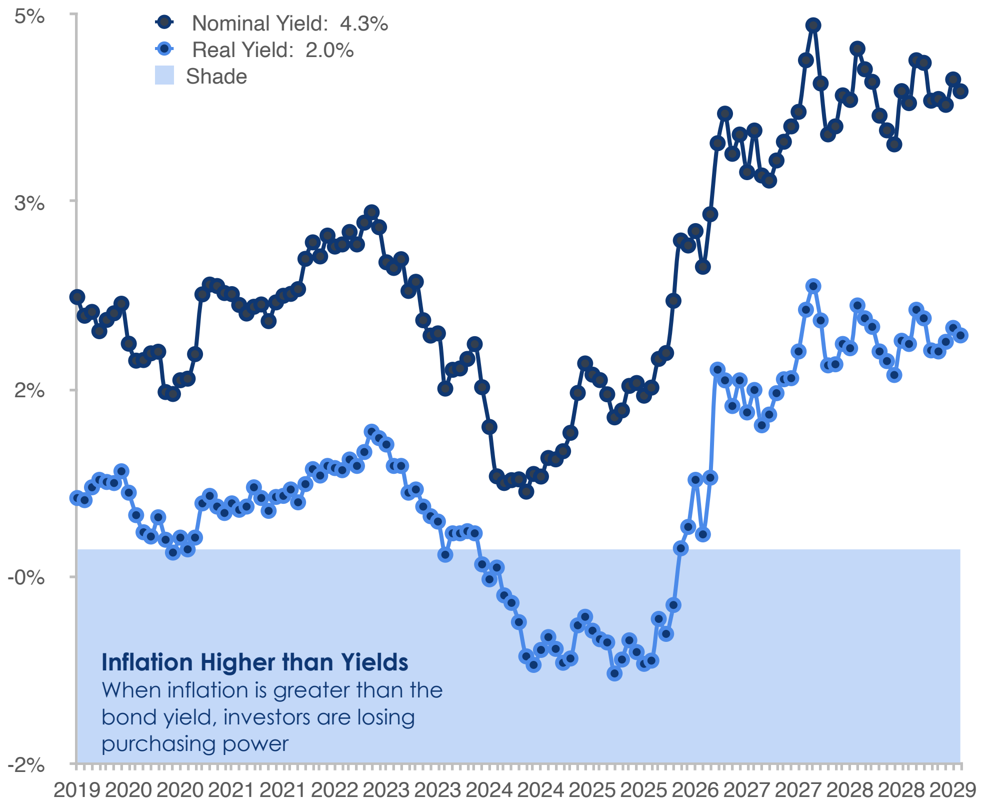
Federal Funds Rate



Disclosures: Monthly datapoints from the Federal Reserve since the 1980s. The Federal Funds Rate is the target interest rate set by the Federal Reserve at which commercial banks borrow and lend excess reserves overnight.

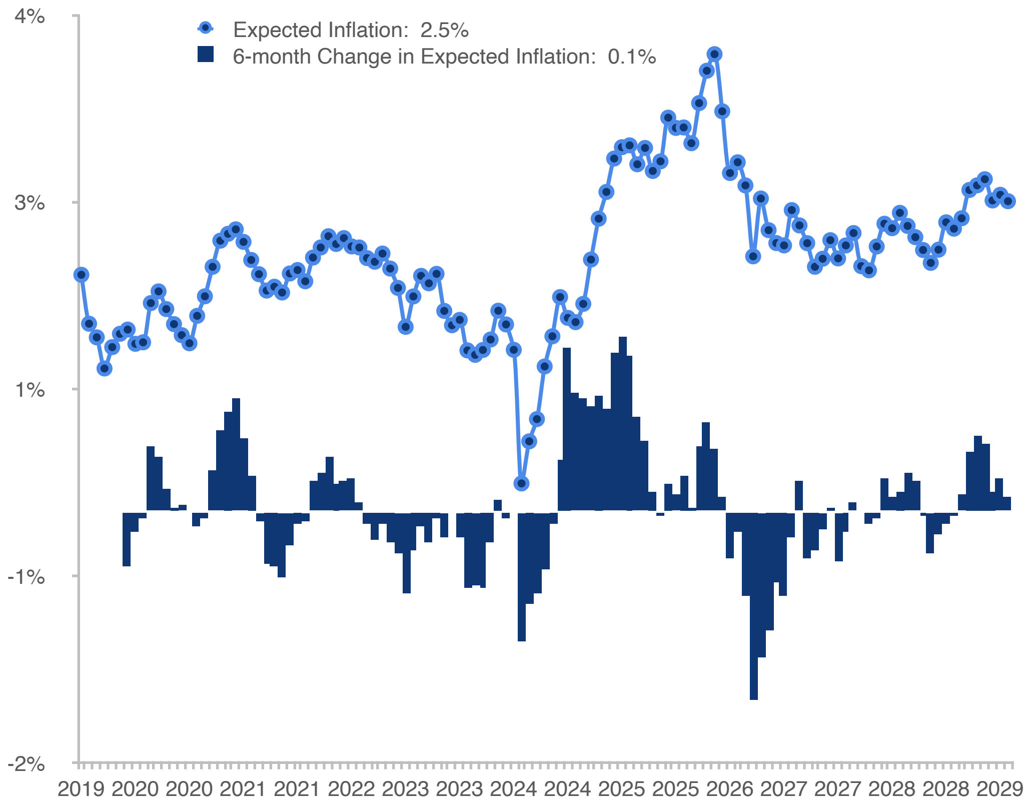
Real Yields & Inflation Expectations

Nominal vs Real Yield (10-Year U.S. Treasury)
Real Yield = Nominal Yield – Current Inflation Rate



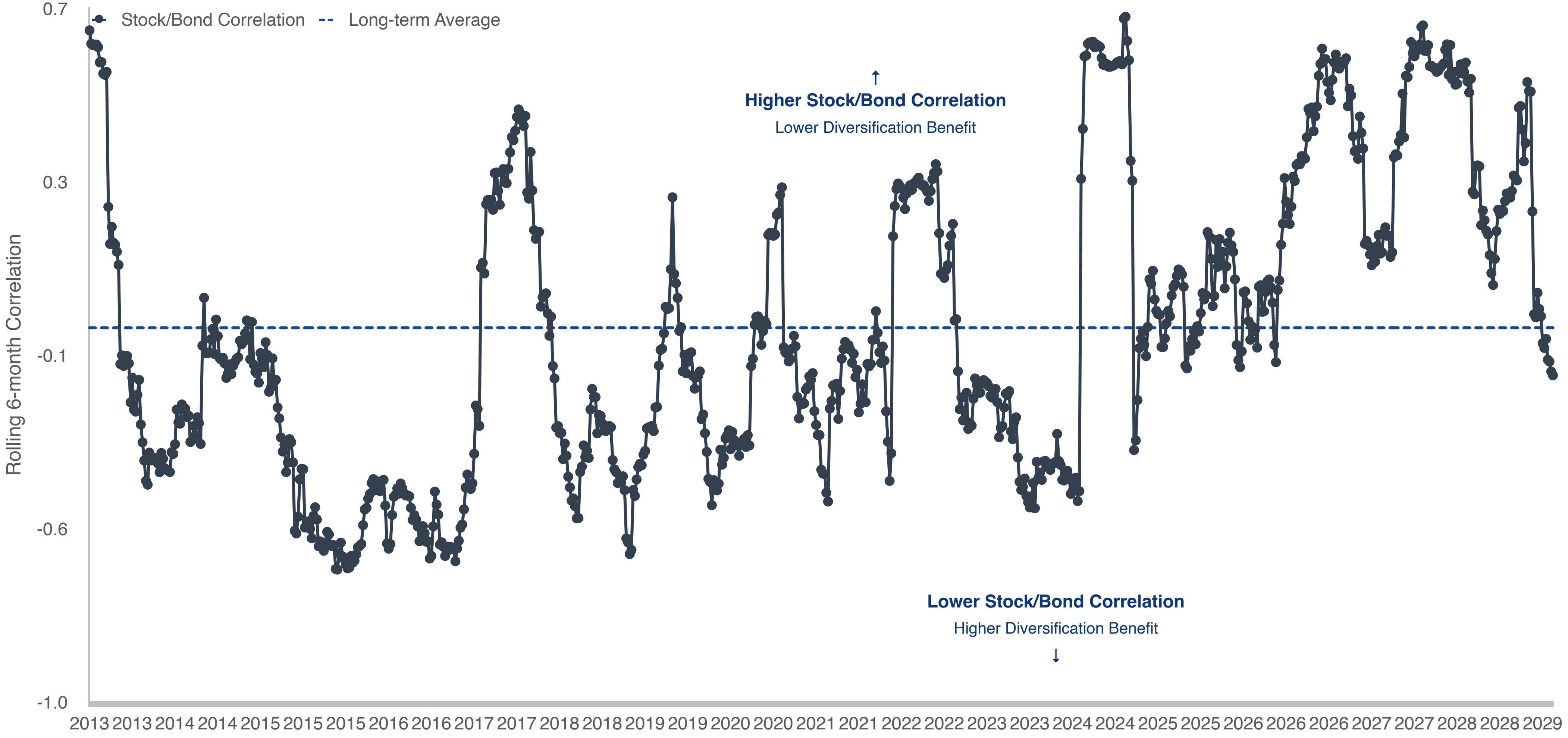
Disclosures: The Nominal Yield is the interest rated earned on a fixed income investment. The Nominal Yield is based on the 10-Year Treasury bond yield. The Real Yield is based on the 10-Year Treasury Inflation-Indexed Security, Constant Maturity from the St. Louis Federal Reserve Bank.

Investors' Inflation Expectations
Inflation Expectations = 5Y Treasury Yield – 5Y TIPS



Disclosures: Treasury Inflation-Protected Securities, or TIPS, provide investors protection against inflation. The principal of a TIPS increases with inflation and decreases with deflation (measured by CPI). Expected Inflation is calculated as the yield of the 5-year Treasury minus 3-5 year TIPs. Data from St. Louis Federal Reserve Bank.

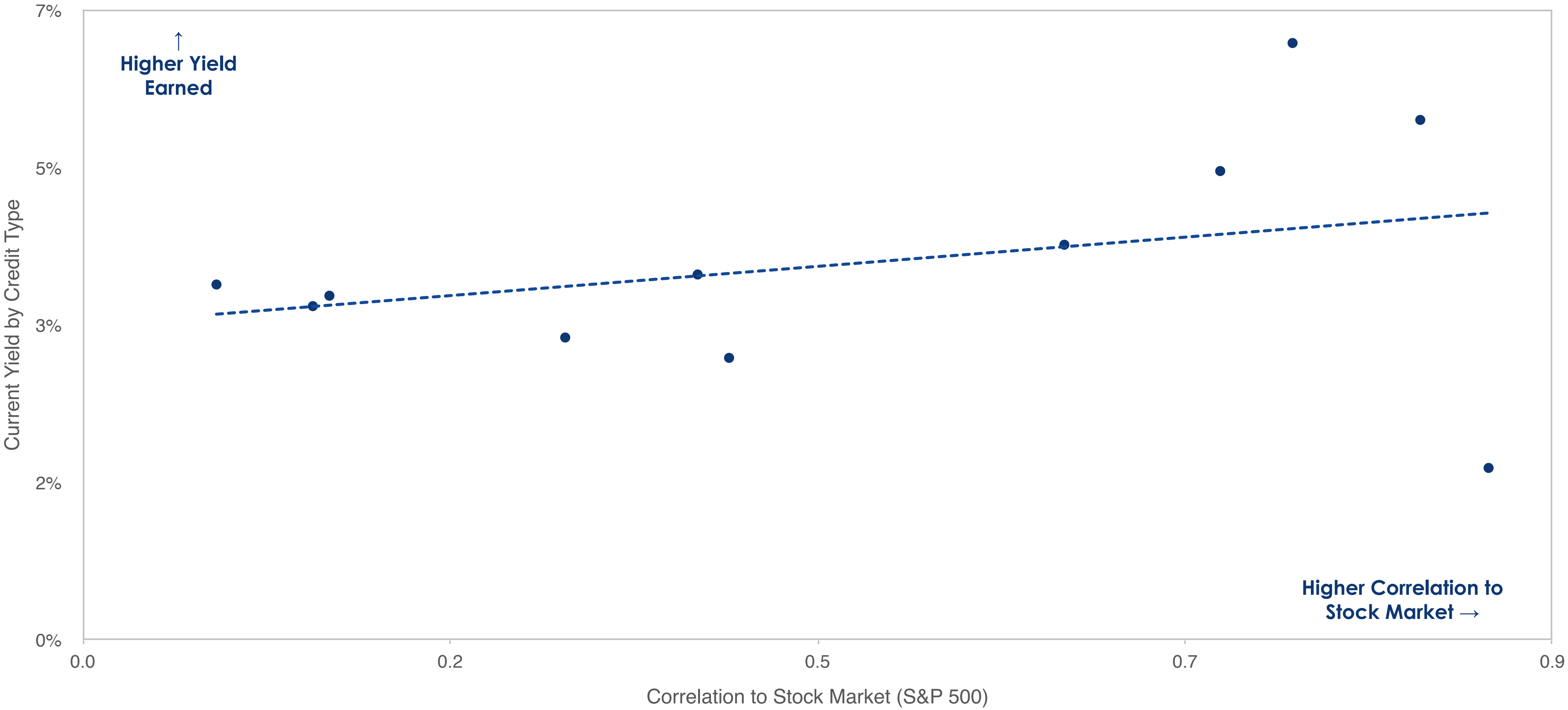
Bond's Diversification Benefit



Disclosures: Past performance is no guarantee of future results. Correlation is calculated as the correlation of weekly price returns over the past rolling 6-month period. Stocks are represented by the State Street SPDR S&P 500 ETF (SPY) and bonds by the iShares Core U.S. Aggregate ETF (AGG). The long-term average is calculated as the average correlation over the past 15 years.

Correlation to S&P 500 by Credit Class

3Q 2025



Disclosures: Correlations are calculated based on 10 years of monthly price returns. Credit classes represented by the following ETFs: 2-Year US Treasuries (SHY - iShares 1-3 Year Treasury Bond ETF), 10-Year UST (IEF - iShares 7-10 Year Treasury Bond ETF), 30-Year UST (TLT - iShares 20+ Year Treasury Bond ETF), EM Sovereign (LEMB- iShares J.P. Morgan EM Local Currency Bond ETF), Cash (BIL - SPDR Bloomberg Barclays 1-3 Month T-Bill ETF), Investment Grade (LQD - iShares iBoxx $ Investment Grade Corporate Bond ETF), High Yield (HYG - iShares iBoxx $ High Yield Corporate Bond ETF), TIPS (TIP - iShares TIPS Bond ETF), Municipals (MUB - iShares National Muni Bond ETF), Convertibles (CWB - SPDR Bloomberg Barclays Convertible Securities ETF), Preferreds (PFF - iShares Preferred & Income Securities ETF), MBS (MBB - iShares MBS ETF), CMBS (CMBS - iShares CMBS ETF).

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Credit Conditions

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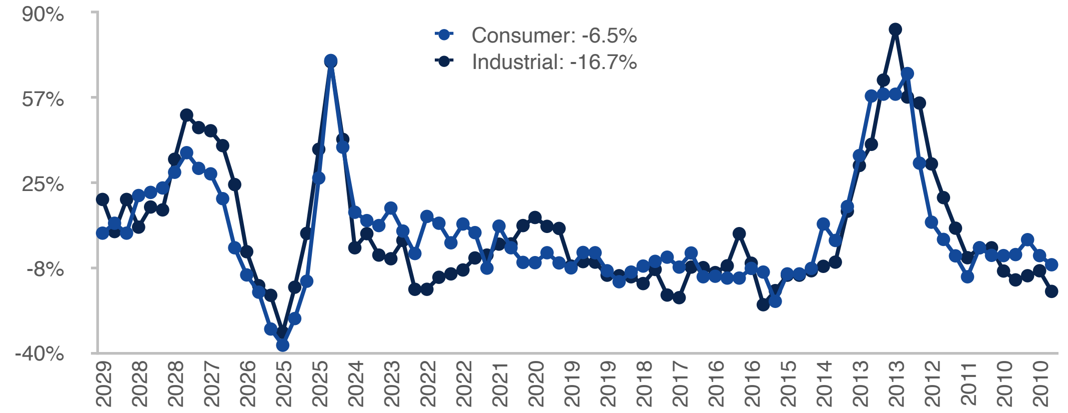
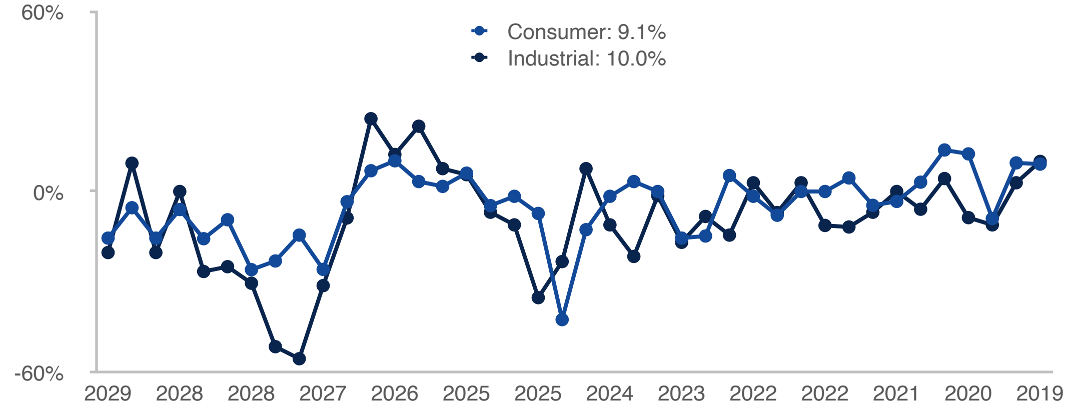
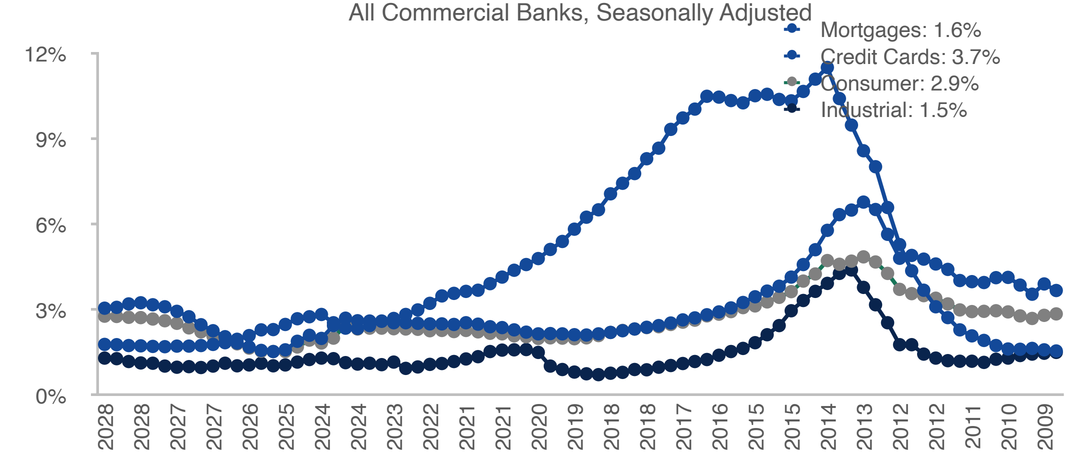
Bank Loan Lending Standards
Net percent of banks reporting tighter lending standards



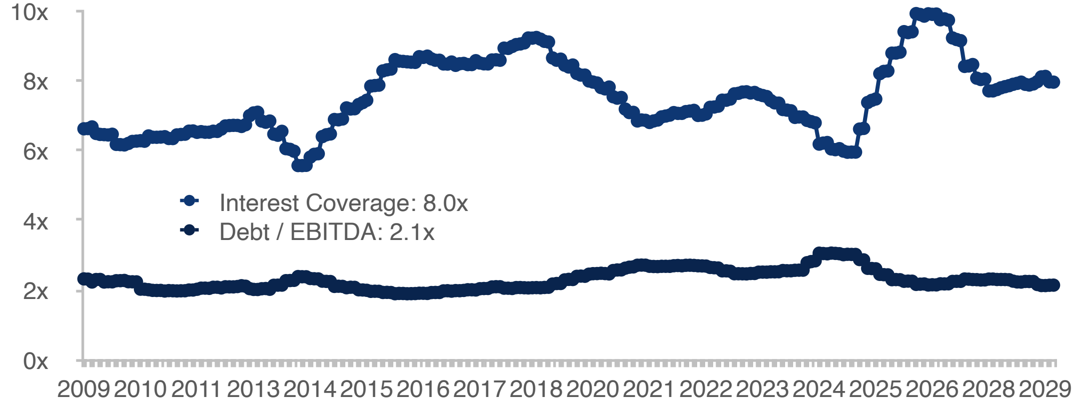
Bank Loan Demand
Net percent of banks reporting stronger demand



Bank Loan Delinquency Rates
All Commercial Banks, Seasonally Adjusted

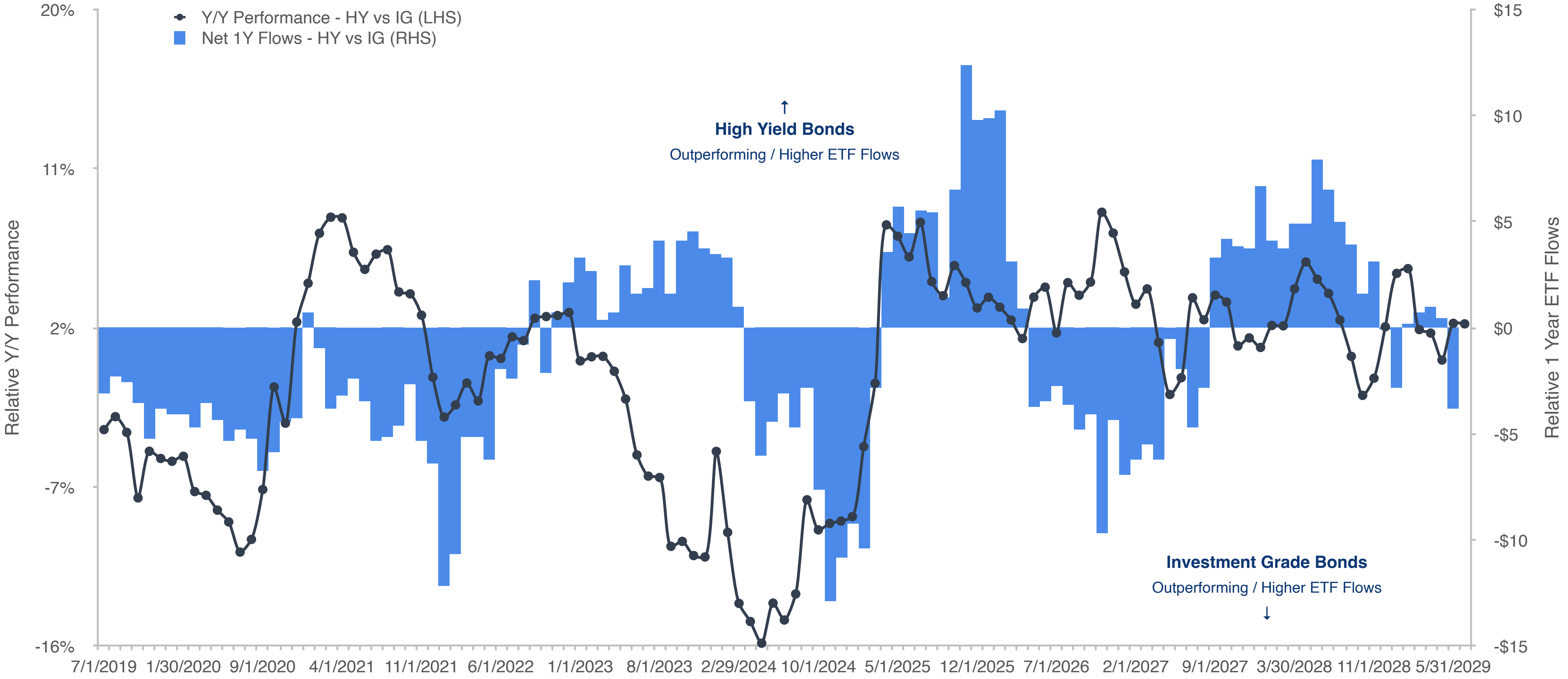


S&P 500 Credit Metrics
Last 12 months reported Interest Coverage Ratio & Leverage



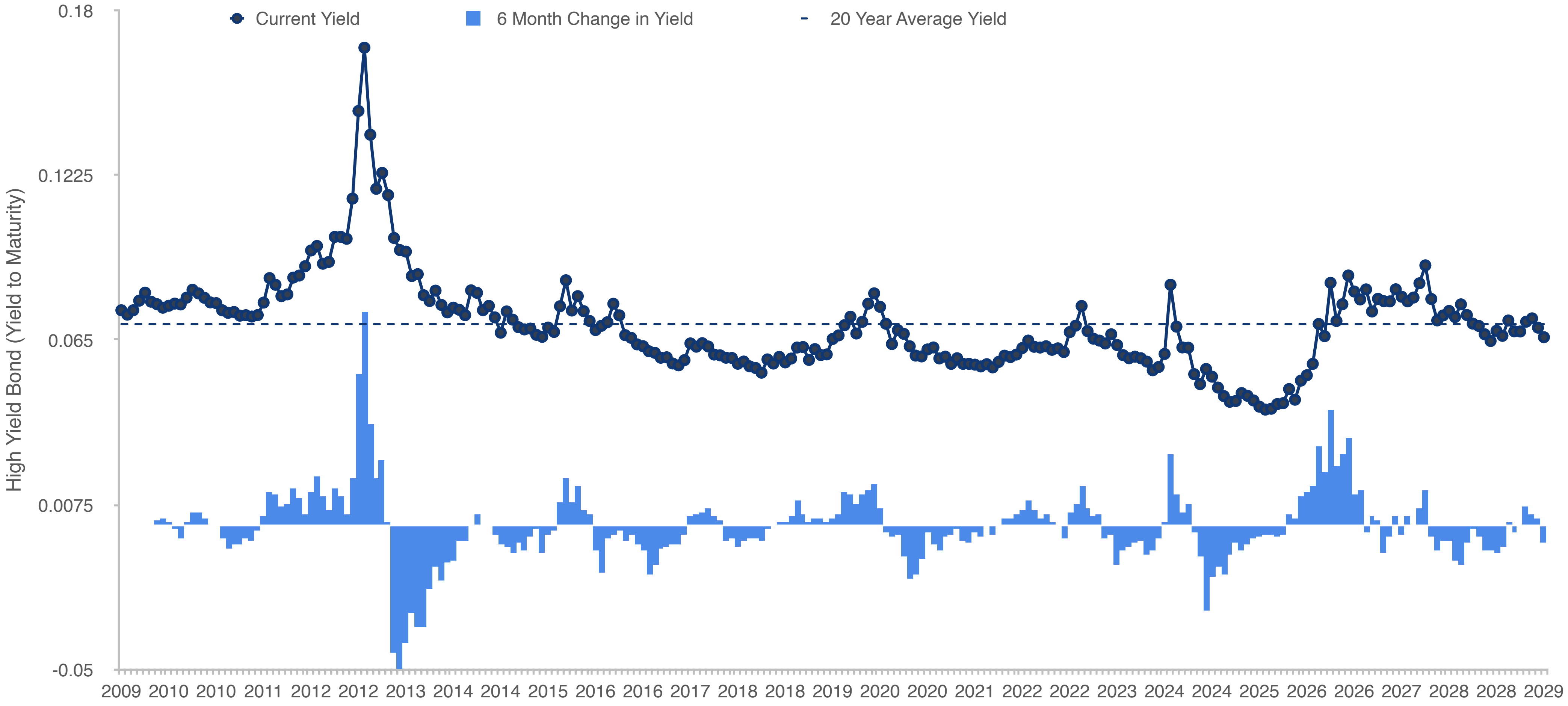
Disclosures: Based on latest available data sourced from the Federal Reserve. S&P 500 credit metrics based on last 12 month reported results using the State Street SPDR S&P 500 ETF (SPY).

Corporate Bonds - Flows & Performance



Disclosures: Past performance is no guarantee of future results. All performance data represents price returns for the stated period. High Yield Corporate Bonds are represented by the iShares iBoxx $ High Yield Corporate Bond ETF (HYG) and Investment Grade Corporate Bonds by the iShares iBoxx $ Investment Grade Corporate Bond ETF (LQD). Flows are based on the rolling last 12-month ETF Flows for HYG and LQD.

High Yield Bond Market



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Disclosure: Past performance is no guarantee of future results. The current yield is based on the ICE BofA U.S. High Yield 100 index. The average yield is based on 20 years of monthly datapoints.

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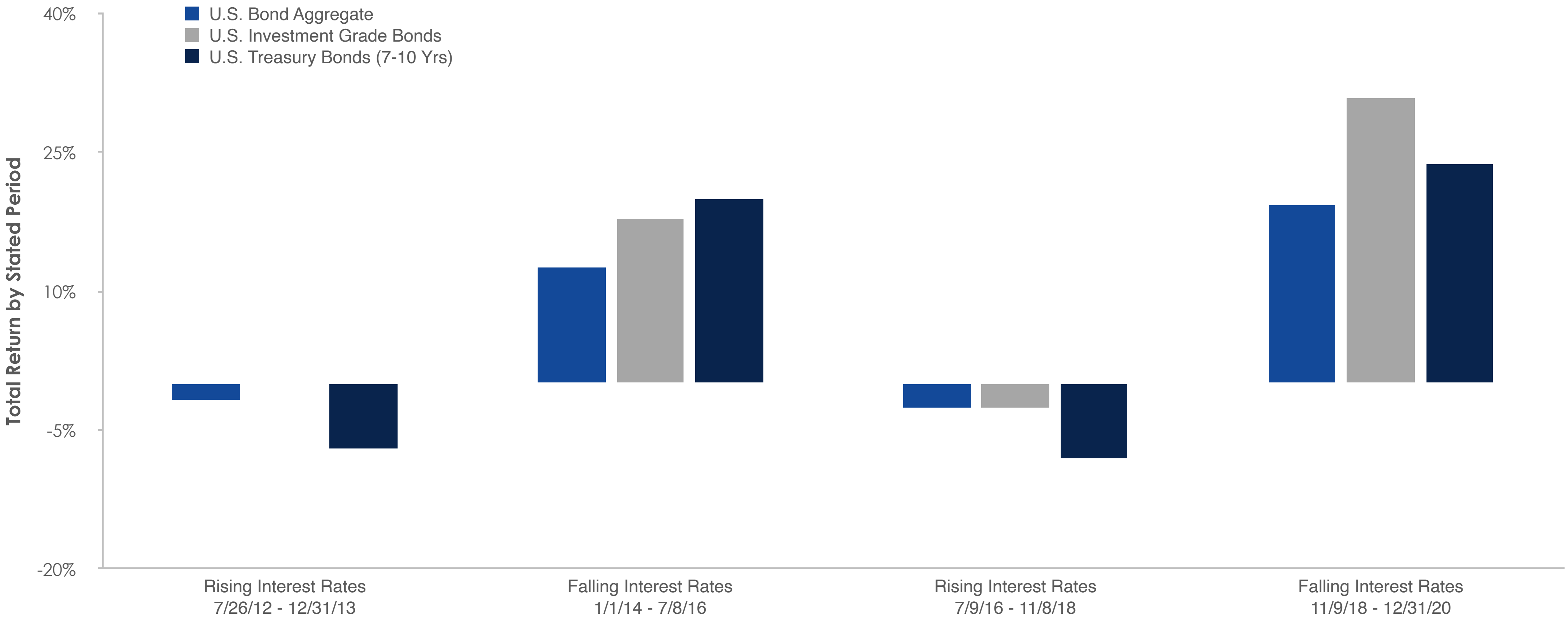
Bond Returns in Rising & Falling Interest Rate Environments



Change in U.S. 10-Year Interest Rate	↑ 1.53%	↓ -1.64%	↑ 1.87%	↓ -2.27%

Disclosures: Past performance is no guarantee of future results. Data sourced from the Federal Reserve. All performance is based on total returns. Credit types are represented by the following ETFs: U.S. Bond Aggregate (AGG - iShares Core U.S. Aggregate Bond ETF), U.S. Investment Grade Bonds (LQD - iShares iBoxx $ Investment Grade Corporate Bond ETF), and U.S. Treasury Bonds (IEF - iShares 7-10 Year Treasury Bond ETF).

Definitions

Correlation	A measure of the extent to which two variables are related.
Bank of Japan	The Bank of Japan, or BOJ, is Japan's central bank; it has been operational since 1885—when it first issued currency. The BOJ is responsible for determining monetary policy, setting interest rates, and issuing and monitoring currency and treasury securities.
European Central Bank	The European Central Bank (ECB) is the central bank responsible for monetary policy of those European Union (EU) member countries which have adopted the euro currency.
Federal Funds Rate	The target interest rate set by the Federal Reserve at which commercial banks borrow and lend excess reserves overnight.
Federal Reserve	The Federal Reserve System is the central bank of the United States. It was founded by Congress in 1913 to provide the nation with a safer, more flexible, and more stable monetary and financial system.
High Yield Corporate Bonds	In finance, a high-yield bond is a bond that is rated below investment grade by credit rating agencies. These bonds have a higher risk of default or other adverse credit events but offer higher yields than investment grade bonds in order to compensate for the increased risk.
Investment Grade Corporate Bonds	Investment grade refers to the quality of a company's credit. To be considered an investment grade issue, the company must be rated at 'BBB' or higher by Standard and Poor's or Moody's. Anything below this 'BBB' rating is considered non-investment grade.
Nominal Yield	The interest rated earned on a fixed income investment.
Price Return	The rate of return on an investment portfolio, where the return measure takes into account only the capital appreciation of the portfolio, not including income generated in the form of interest or dividends.
Real Yield	The interest rate earned on a fixed income investment after factoring in the impact of inflation as measured by the Consumer Price Index (CPI).
Treasury Bonds	Treasuries are debt obligations issued and backed by the full faith and credit of the U.S. government.
Treasury Inflation-Protected Securities (TIPs)	Provide investors protection against inflation. The principal of a TIPS increases with inflation and decreases with deflation as measured by the Consumer Price Index (CPI).
Total Return	The return on a portfolio of investments taking into account capital appreciation as well as any income received on the portfolio.
Yield Curve	Refers to the relationship between the remaining time-to-maturity of debt securities and the yield on those securities. Yield curves have many practical uses, including pricing of various fixed-income securities, and are closely watched by market participants for potential clues about the market's perception of the path of the policy rate and the macroeconomic outlook.
Yield to Maturity (YTM)	Total rate of return that will have been earned by a bond when it makes all interest payments and repays the original principal.

Disclosures and Legal Notice

Investing involves risk, including the possible loss of principal. Stock markets can be volatile. Investments in securities of small and medium capitalization companies may involve greater risk of loss and more abrupt fluctuations in market price than investments in larger companies. Investments in fixed-income instruments are subject to the possibility that interest rates could rise, causing their values to decline. High yield and unrated debt securities are at a greater risk of default than investment grade bonds and may be less liquid, which may increase volatility. Investors in asset-backed securities, including mortgage-backed securities and collateralized loan obligations ("CLOs"), generally receive payments that are part interest and part return of principal. These payments may vary based on the rate loans are repaid. Some asset-backed securities may have structures that make their reaction to interest rates and other factors difficult to predict, making their prices volatile and they are subject to liquidity and valuation risk. CLOs bear similar risks to investing in loans directly, such as credit, interest rate, counterparty, prepayment, liquidity, and valuation risks. Loans are often below investment grade, may be unrated, and typically offer a fixed or floating interest rate.

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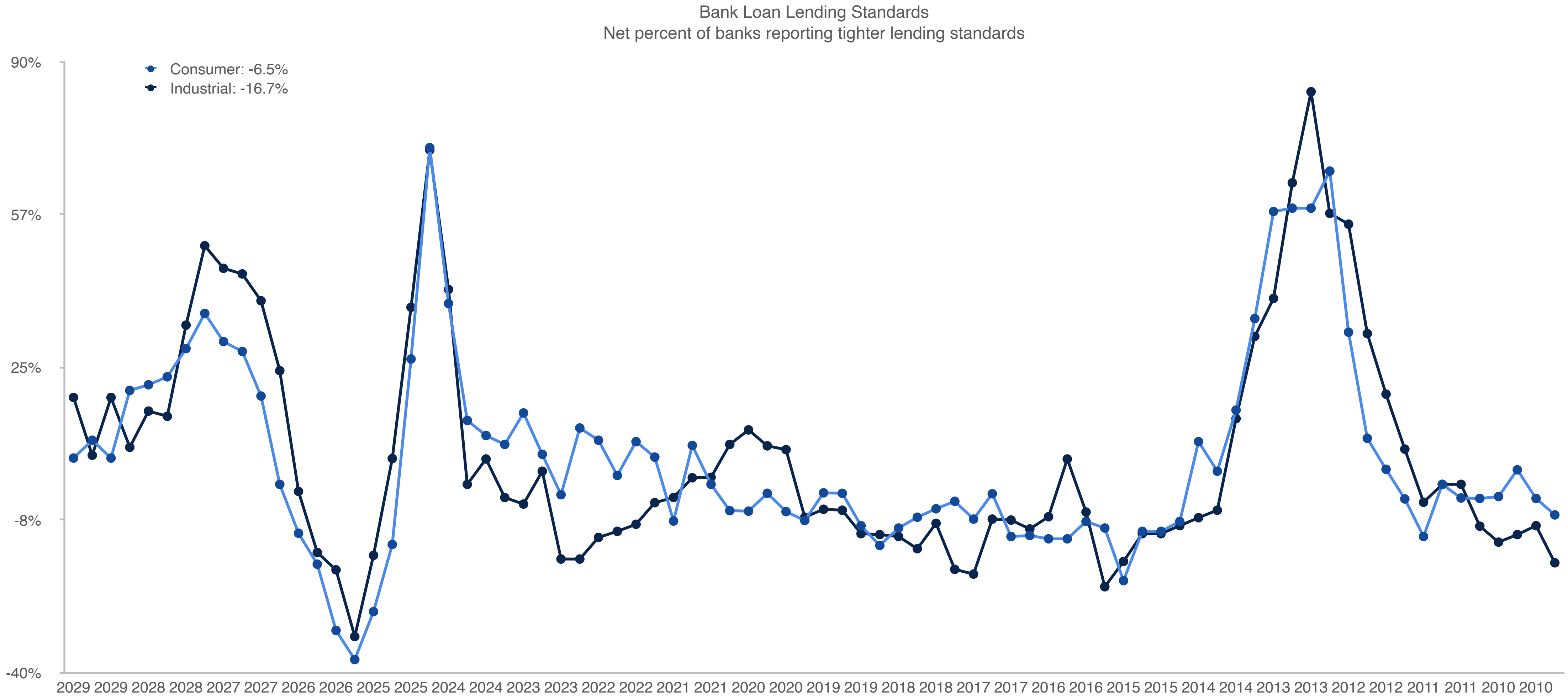
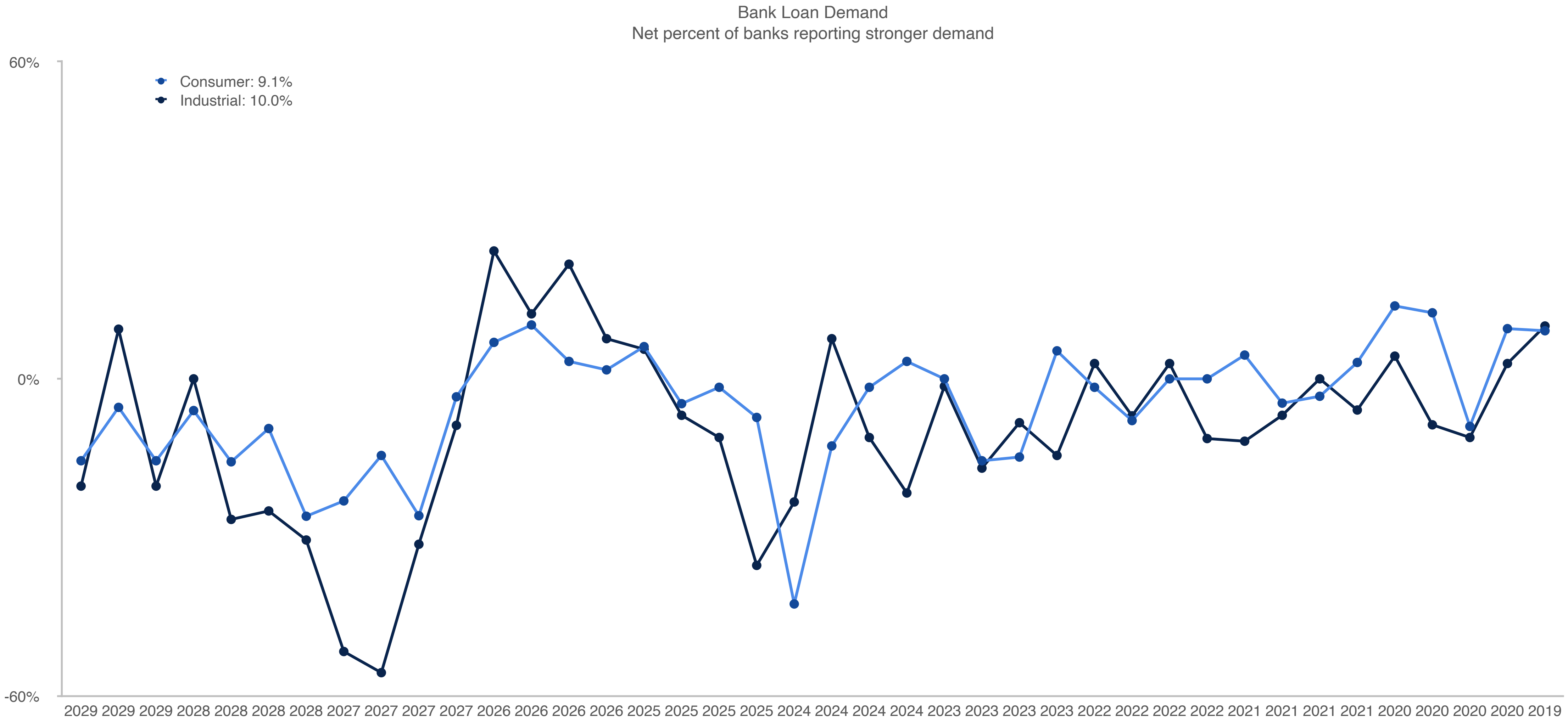
Larger Chart Versions

Credit Conditions – Lending Standards



Disclosures: Based on latest available data sourced from the Federal Reserve.

Credit Conditions – Loan Demand



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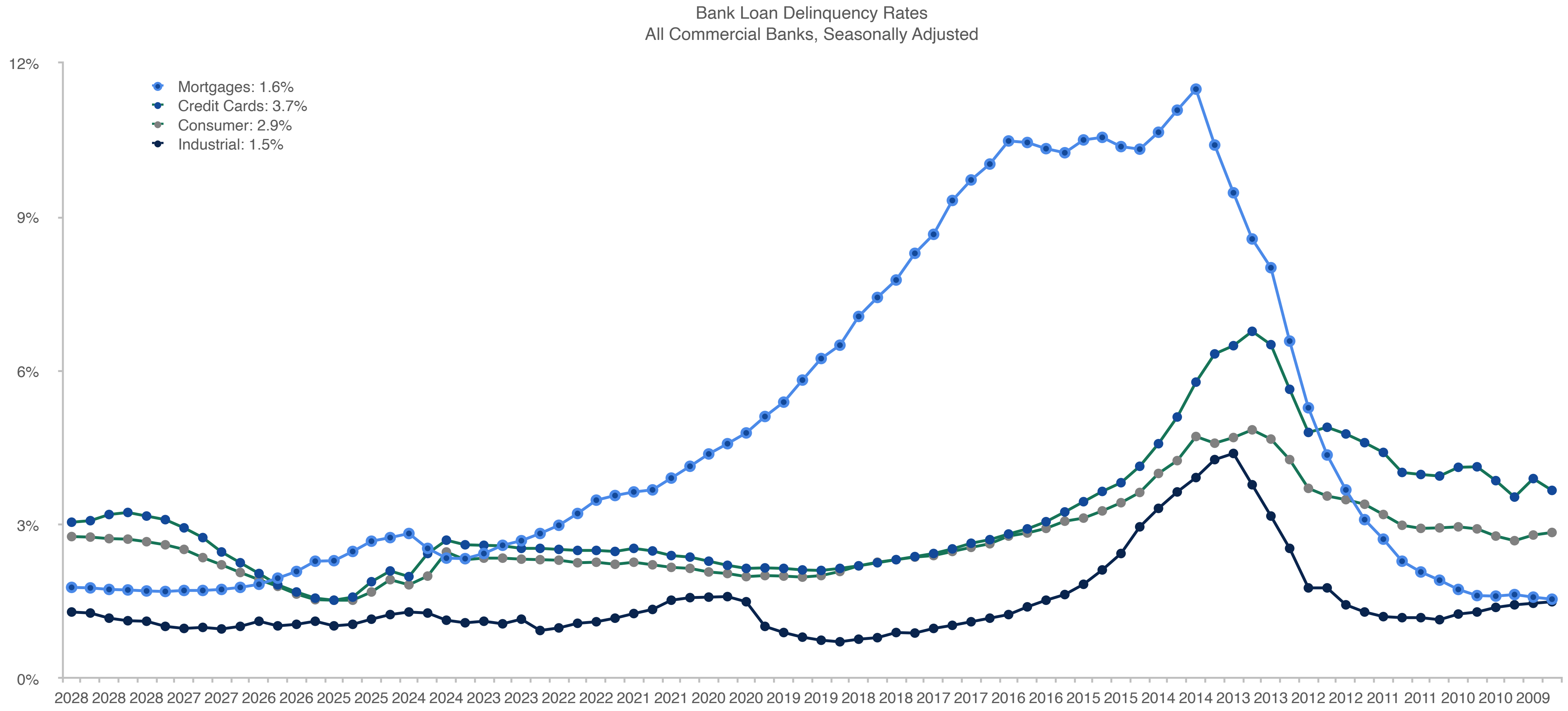
Disclosures: Based on latest available data sourced from the Federal Reserve.

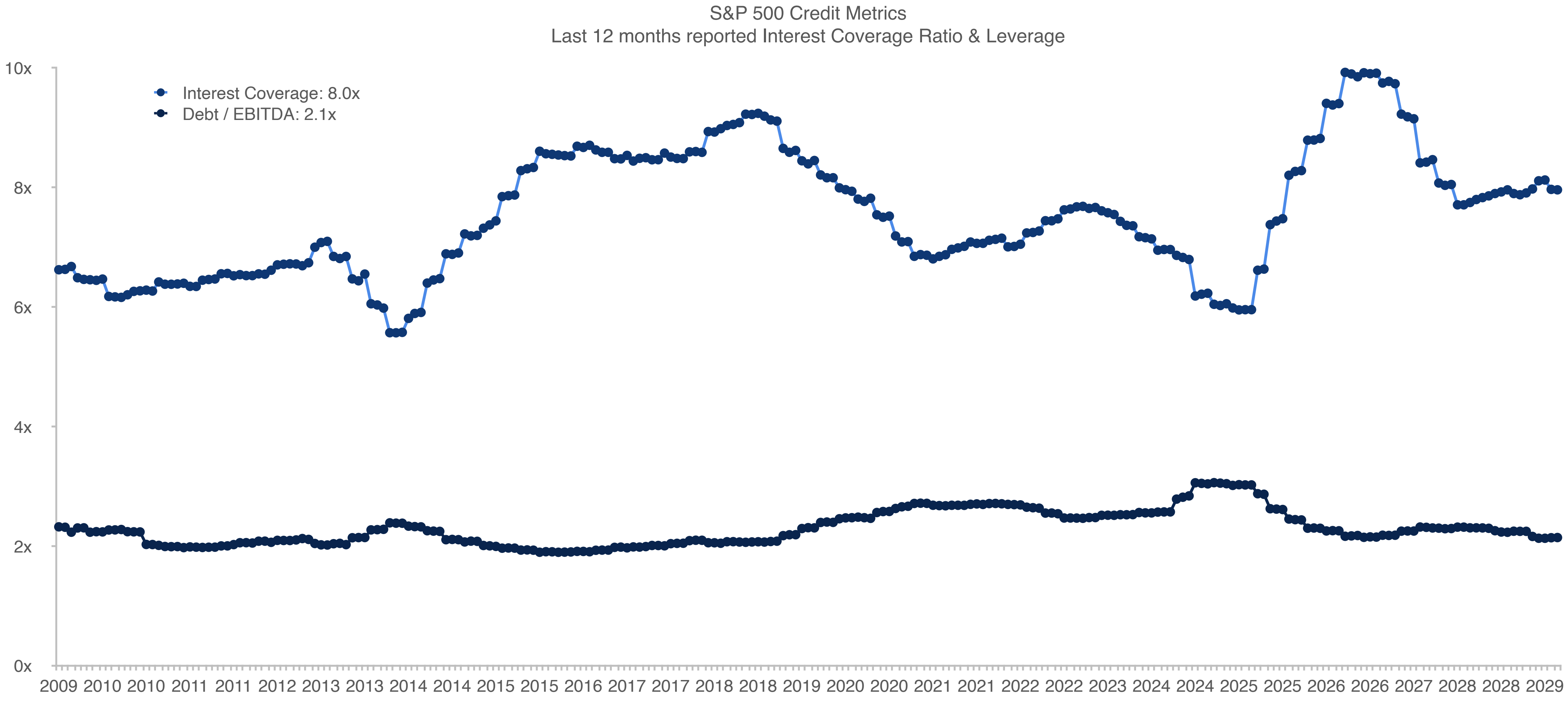
Credit Conditions – Delinquency Rates

3Q 2025



Disclosures: Based on latest available data sourced from the Federal Reserve.

Credit Conditions – S&P 500 Credit Metrics



Disclosures: Based on latest available data sourced from the Federal Reserve.

Thank You

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