
# Quarterly Report: US Fixed Income, 3Q25

## Outstanding Statistics for US Treasuries, Corporate Bonds, Agency Securities, Municipal Bonds, Commercial Paper and Repo

**Published: January 2026**

### Key Takeaways for 3Q25

Fixed income outstanding totaled $48.9T this quarter, an increase of +2.3% Q/Q and +5.6% Y/Y. Three of the five analyzed asset classes (US Treasuries, Corporate Bonds, Agency Securities, Municipal Bonds and Commercial Paper) recorded slight quarterly growth.

The leading asset class by both amount outstanding and quarterly growth was Treasuries (UST) which increased to $29.7T (+3.7% Q/Q and +7.2% Y/Y). The share of Treasury Bills outstanding increased to 21.5% of the total UST outstanding this quarter, up from 20.2% in 2Q25 but below 21.7% in 3Q24.

The second largest asset class based on securities outstanding was corporate bonds at $11.5T (+0.7% Q/Q and +2.2% Y/Y).

Commercial paper with $1.3T outstanding as of 3Q25 saw the lowest quarterly growth (-2.6% Q/Q but +8.8% Y/Y).

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# Executive Summary

## Quarter & Annual Highlights

In this report, we utilized SIFMA Research's comprehensive fixed income and securitized products databases (www.sifma.org/statistics) to recap statistics for the total U.S. fixed income market, which includes U.S. Treasuries (UST), corporate bonds (corporates), municipal securities (munis), federal agency securities (agency), commercial paper (CP), repurchase agreements (repos) and the secured overnight financing rate (SOFR).

**Table 1: US Fixed Income Outstanding ($B)**

| | 3Q25 | 2Q25 | 3Q24 | Q/Q | Y/Y | 2024 | 2023 | Y/Y |
|---|---|---|---|---|---|---|---|---|
| **Outstanding ($B)** | | | | | | | | |
| **Total** | **48,909.2** | **47,799.2** | **46,323.0** | **2.3%** | **5.6%** | **46,824.2** | **44,338.7** | **5.6%** |
| UST | 29,710.6 | 28,653.2 | 27,723.8 | 3.7% | 7.2% | 28,276.2 | 26,366.2 | 7.2% |
| Corporates | 11,489.3 | 11,407.9 | 11,237.3 | 0.7% | 2.2% | 11,139.6 | 10,728.7 | 3.8% |
| Munis | 4,364.2 | 4,320.1 | 4,200.5 | 1.0% | 3.9% | 4,213.2 | 4,093.5 | 2.9% |
| Agency | 2,034.2 | 2,072.3 | 1,956.8 | -1.8% | 4.0% | 2,021.5 | 1,968.3 | 2.7% |
| CP | 1,310.8 | 1,345.6 | 1,204.6 | -2.6% | 8.8% | 1,173.8 | 1,182.0 | -0.7% |

Source: The Federal Reserve, The Federal Reserve Bank of New York, US Agencies, US Treasury, SIFMA estimates
Note: UST = US Treasury securities, Corporates = corporate bonds, Munis = municipal bonds, Agency = federal agency securities, CP = commercial paper

# Total US Fixed Income

- 3Q25 Outstanding: $48.9T; +2.3% Q/Q, +5.6% Y/Y

**Chart 1: Total US FI Outstanding by Asset Class, 3Q25**

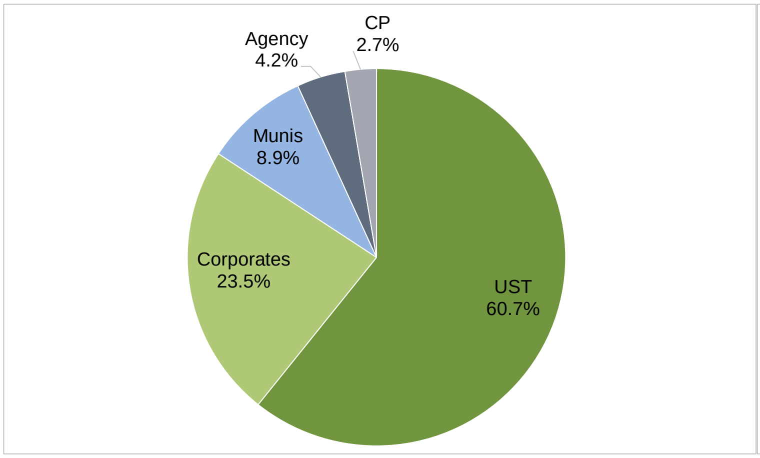
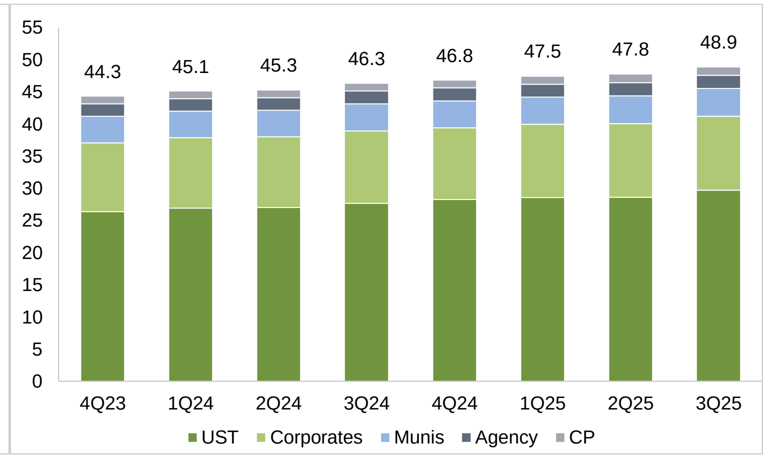
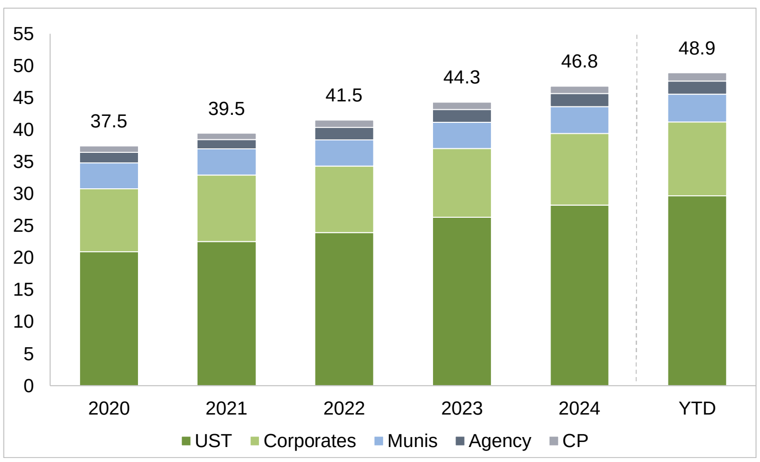



**Chart 2: Total US FI Outstanding by Quarter ($T)**




Source: The Federal Reserve, The Federal Reserve Bank of New York, US Agencies, US Treasury, SIFMA estimates
Note: UST = US Treasury securities, Corporates = corporate bonds, Agency = federal agency securities, Munis = municipal bonds, CP = commercial paper

**Chart 3: Total US FI Outstanding by Year ($T)**

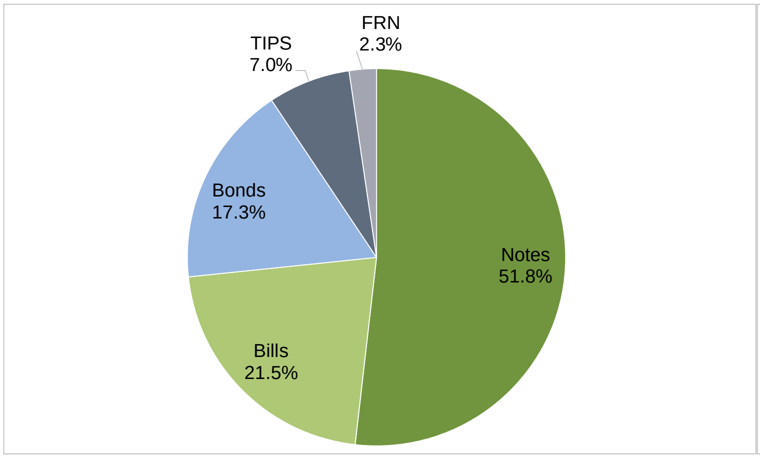



Source: The Federal Reserve, The Federal Reserve Bank of New York, US Agencies, US Treasury, SIFMA estimates
Note: YTD through 3Q25. UST = US Treasury securities, Corporates = corporate bonds, Agency = federal agency securities, Munis = municipal bonds, CP = commercial paper

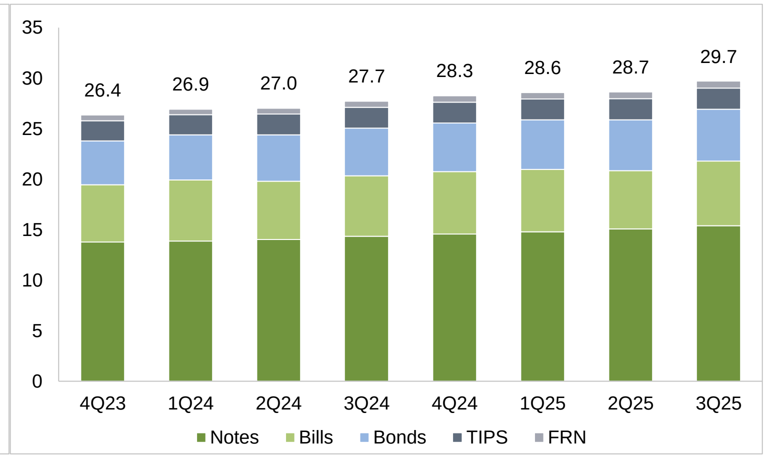
# US Treasury Securities (UST)

- 3Q25 Outstanding: $29.7T; +3.7% Q/Q, +7.2% Y/Y

### Chart 4: UST Outstanding by Type, 3Q25

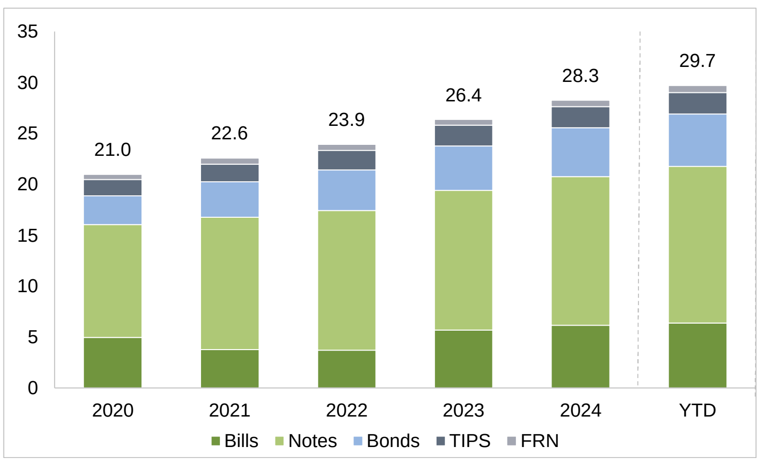



### Chart 5: UST Outstanding by Quarter ($T)




Source: US Treasury, SIFMA estimates
Note: FRN = floating rate note, TIPS = Treasury inflation-protected securities

### Chart 6: UST Outstanding by Year ($T)




Source: US Treasury, SIFMA estimates
Note: YTD through 3Q25. FRN = floating rate note, TIPS = Treasury inflation-protected securities

**Chart 7: UST Holdings by Institution Type, 3Q25**

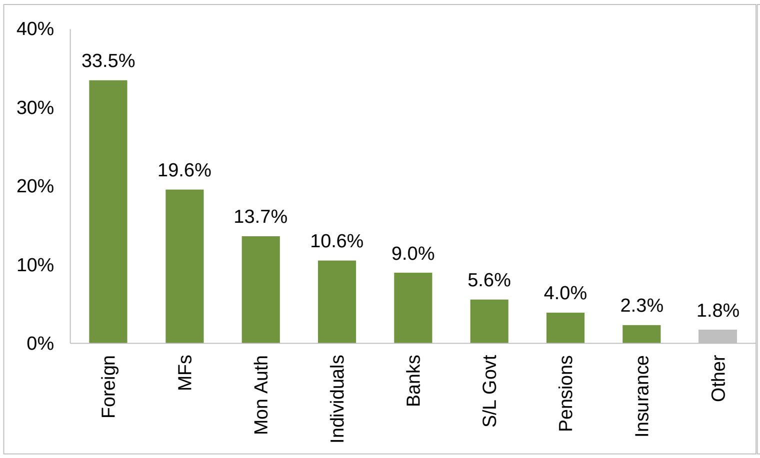
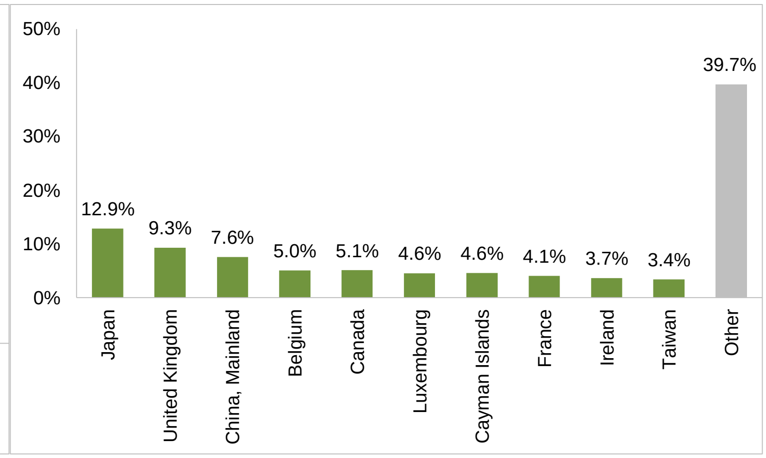



**Chart 8: UST Foreign Holdings by Country, 3Q25**




Source: The Federal Reserve, US Treasury, SIFMA estimates
Note: Holdings by institution type includes marketable securities only. Holdings by country include both marketable and non-marketable securities.

# Corporate Bonds (Corporates)

- Outstanding: $11.5T; +0.7% Q/Q, +2.2% Y/Y

**Chart 9: US Corporate Outstanding ($T) by Quarter**

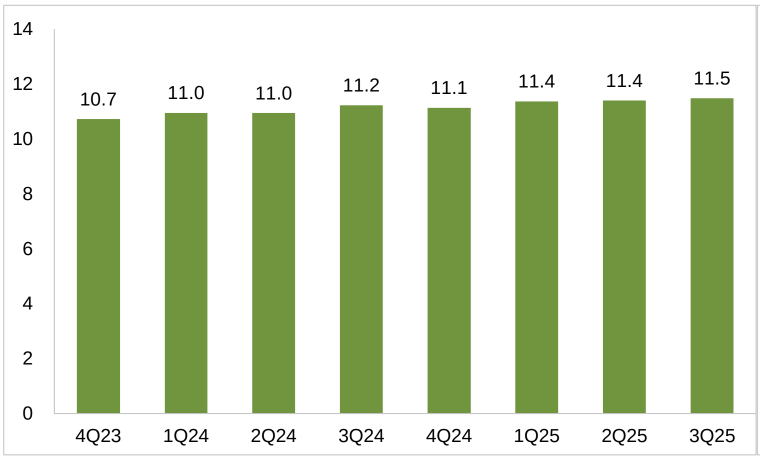
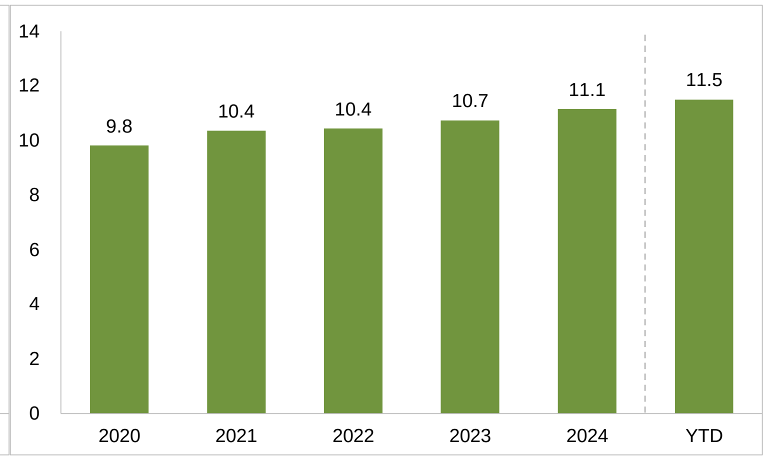



**Chart 10: US Corporate Outstanding by Year ($T)**




Source: The Federal Reserve, SIFMA estimates
Note: YTD through 3Q25. IG = investment grade, HY = high yield

**Chart 11: US Corp Weighted Avg Maturity (# Years)**

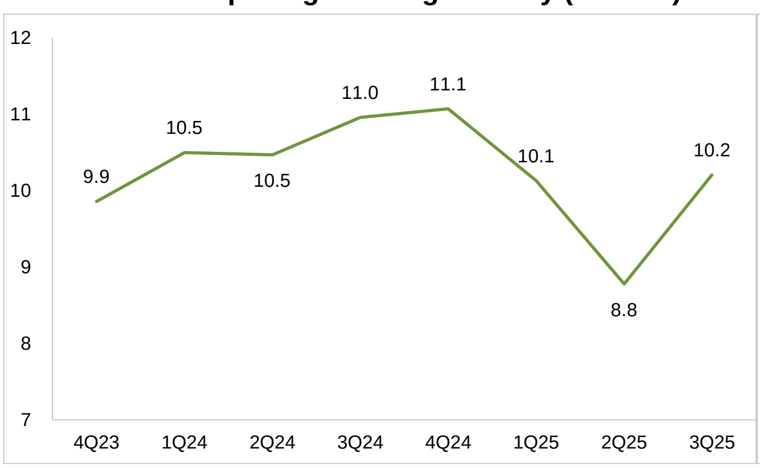
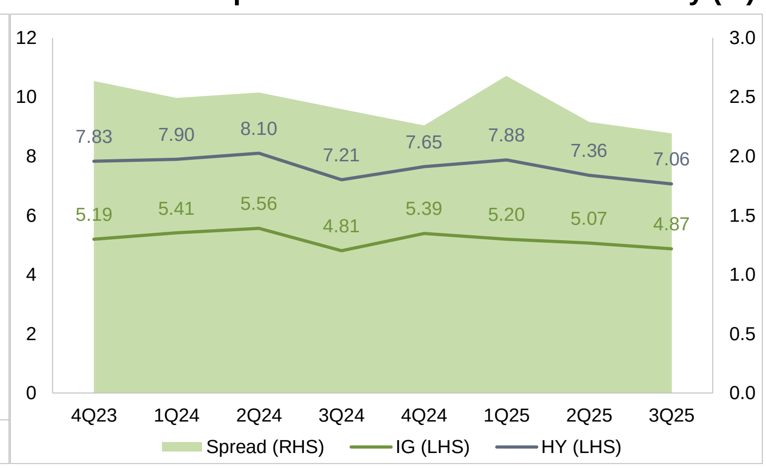



**Chart 12: US Corporate Bond Index Yield to Maturity (%)**

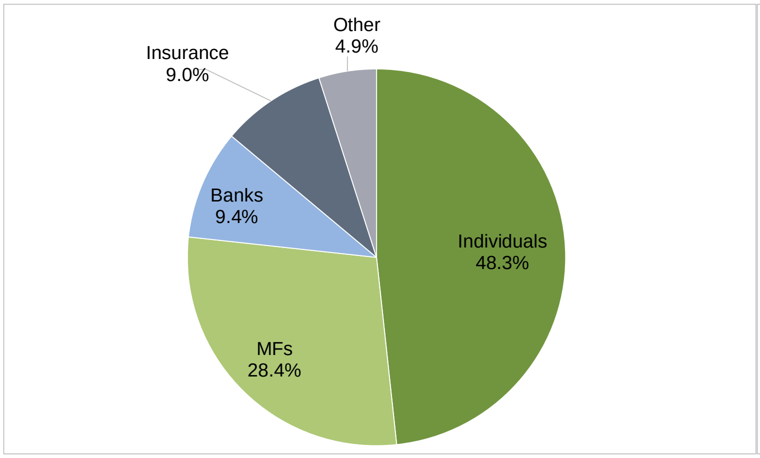



Source: ICE Data Indices, Refinitiv, SIFMA estimates
Note: Average maturity of debt issued during quarter shown, IG = investment grade, HY = high yield

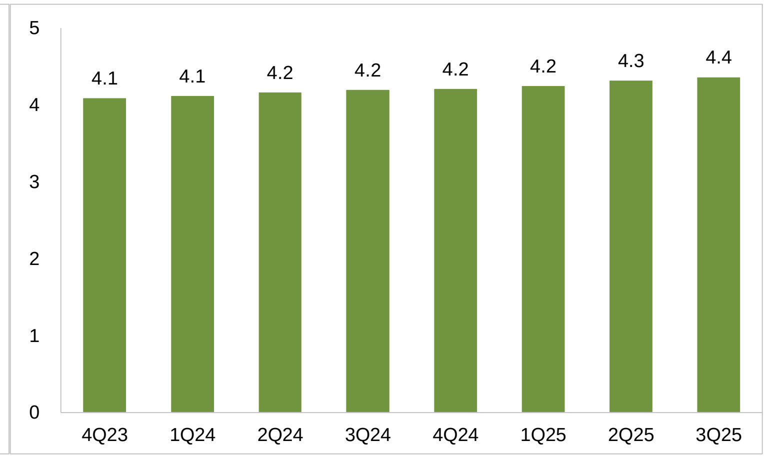
# Municipal Bonds (Munis)

- Outstanding: $4.4T; +1.0% Q/Q, +3.9% Y/Y

### Chart 13: US Municipal Holders by Type, 3Q25

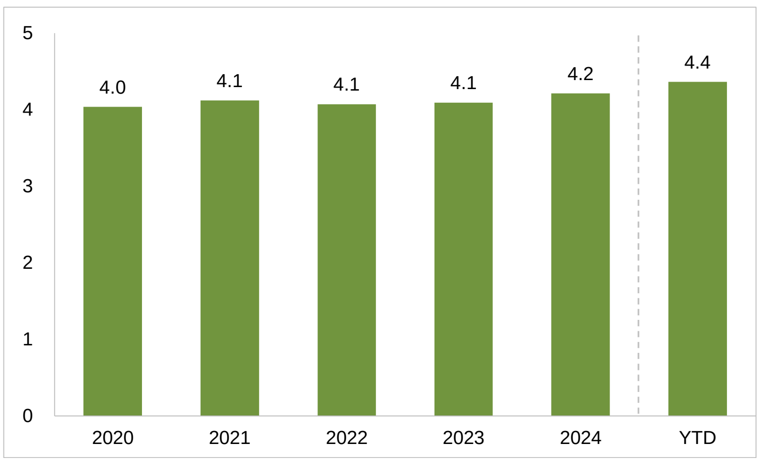



### Chart 14: US Municipal Outstanding by Quarter ($T)




Source: The Federal Reserve, SIFMA estimates
Note: MFs = Mutual Funds

### Chart 15: US Municipal Outstanding by Year ($T)




Source: The Federal Reserve, SIFMA estimates
Note: YTD through 3Q25

**Chart 16: US Muni Weighted Avg Maturity (# Years)**

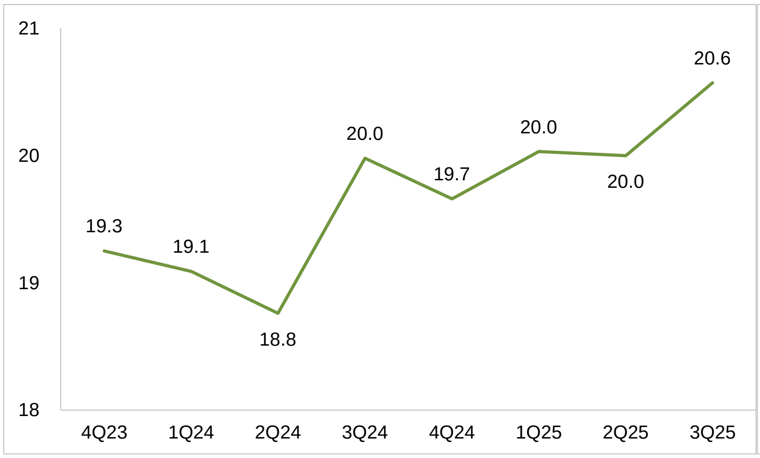
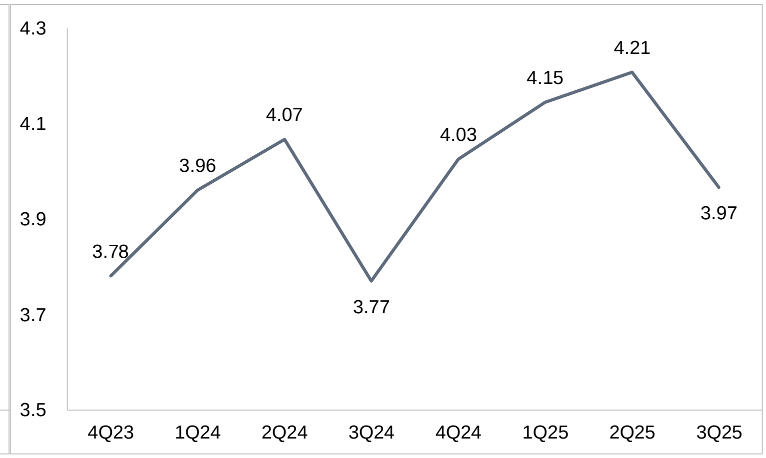



**Chart 17: US Municipal Bond Index Yield to Maturity (%)**

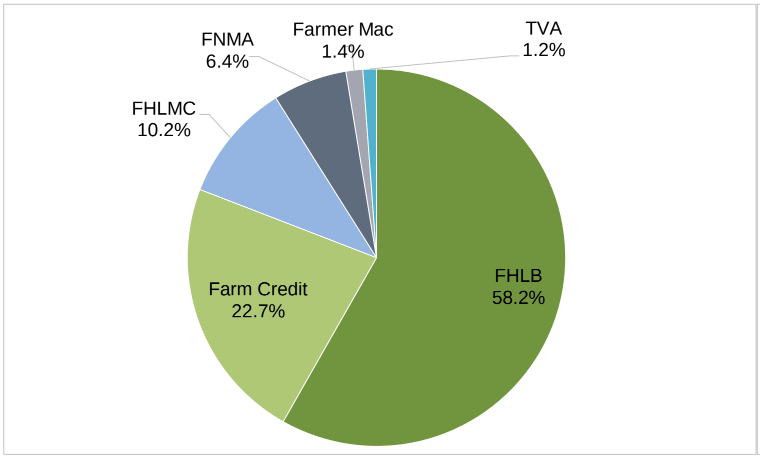



Source: ICE Data Indices, Refinitiv, SIFMA estimates
Note: Average maturity of debt issued during quarter shown,

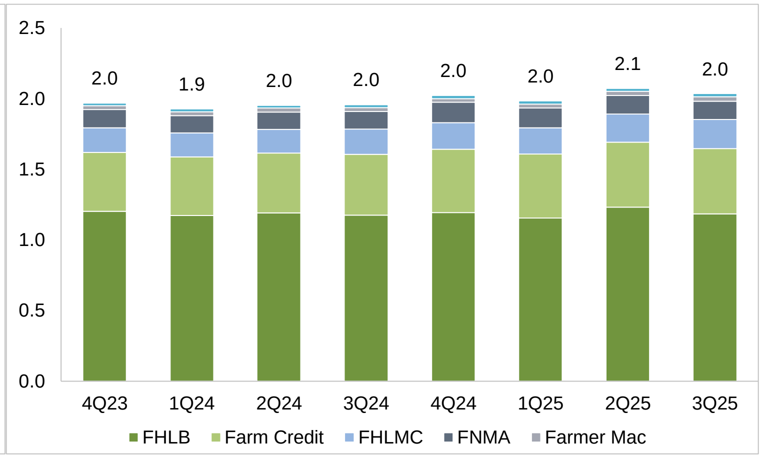
# Federal Agency Securities (Agency)

- Outstanding: $2.0T; -1.8% Q/Q, +4.0% Y/Y

### Chart 18: US Agency Outstanding by Agency, 3Q25

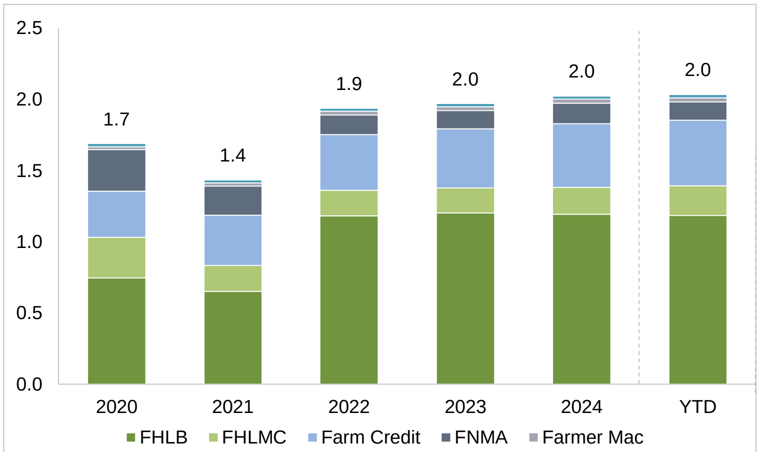



### Chart 19: US Agency Outstanding by Quarter ($T)




Source: US Agencies, SIFMA estimates
Note: FHLB = The Federal Home Loan Banks, FHLMC = The Federal Home Loan Mortgage Corporation (Freddie Mac), FNMA = The Federal National Mortgage Association (Fannie Mae), TVA = The Tennessee Valley Authority

### Chart 20: US Agency Outstanding by Year ($T)

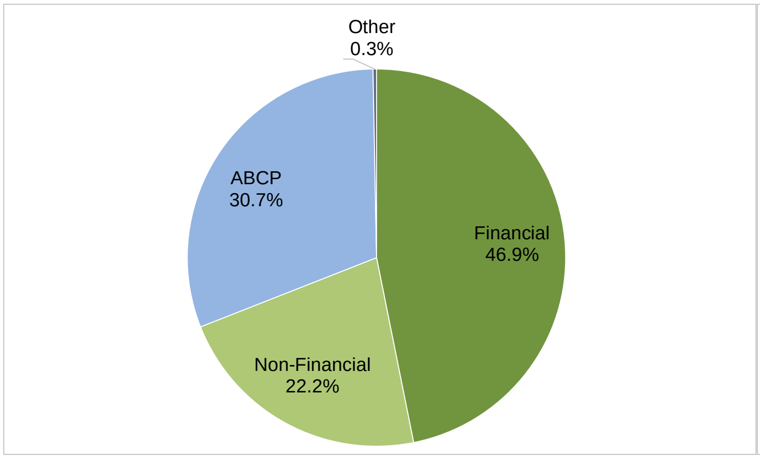



Source: US Agencies, SIFMA estimates
Note: YTD through 3Q25. FHLB = The Federal Home Loan Banks, FHLMC = The Federal Home Loan Mortgage Corporation (Freddie Mac), FNMA = The Federal National Mortgage Association (Fannie Mae), TVA = The Tennessee Valley Authority

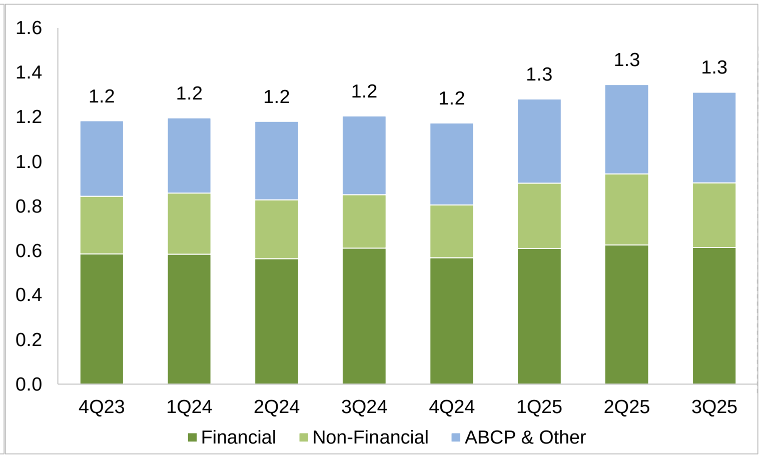
# Commercial Paper (CP)

- Outstanding: $1.3T; -2.6% Q/Q, +8.8% Y/Y

### Chart 21: US CP Outstanding by Type, 3Q25

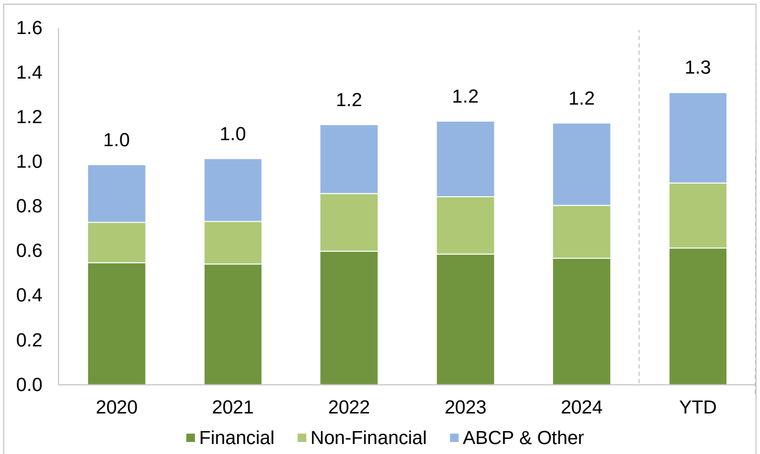



### Chart 22: US CP Outstanding by Quarter ($T)




Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: CP = commercial paper, ABCP = asset-backed commercial paper

### Chart 23: US CP Outstanding by Year ($T)




Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: YTD through 3Q25. CP = commercial paper, ABCP = asset-backed commercial paper

# Repurchase Agreement (Repo)

- Primary dealer repo and reverse repo average daily outstanding: $7.5T; +3.6% Q/Q, +20.5% Y/Y

**Chart 24: Total Repo Avg Outstanding by Quarter ($T)**

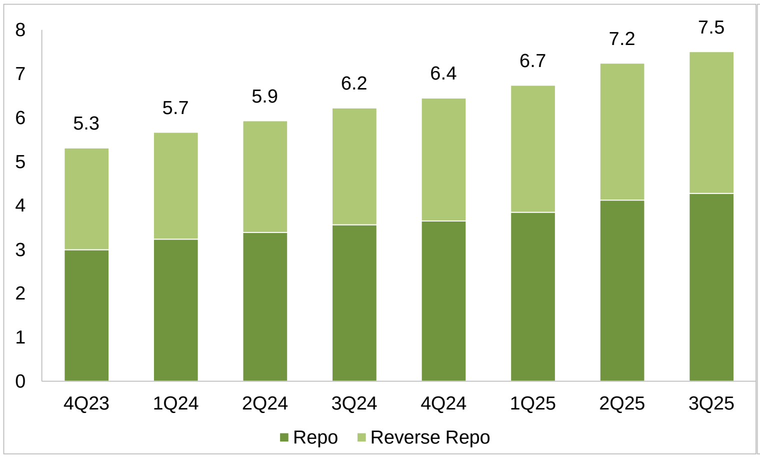
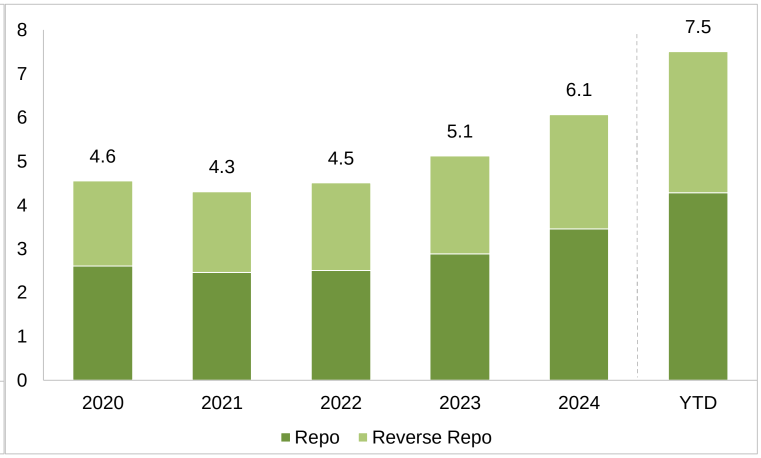



**Chart 25: Total Repo Avg Outstanding by Year ($T)**




Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: YTD through 3Q25. Data based on primary dealer reporting

- Primary dealer repo average daily outstanding: $4.3T; +3.8% Q/Q, +20.1% Y/Y

**Chart 26: Repo Avg Outstanding by Maturity, 3Q25**

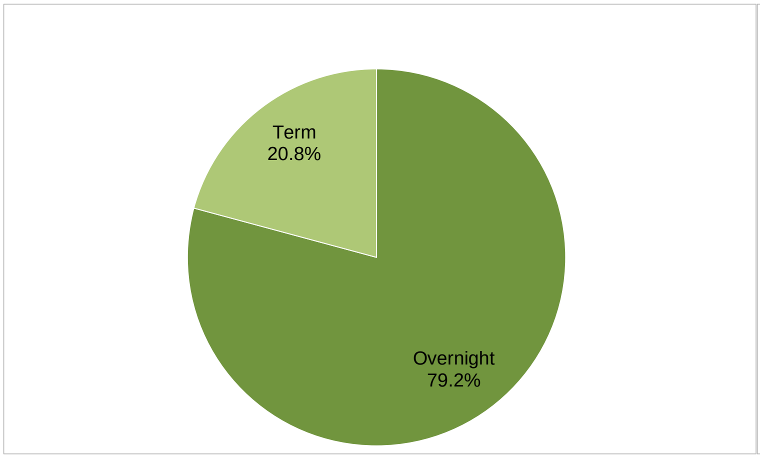
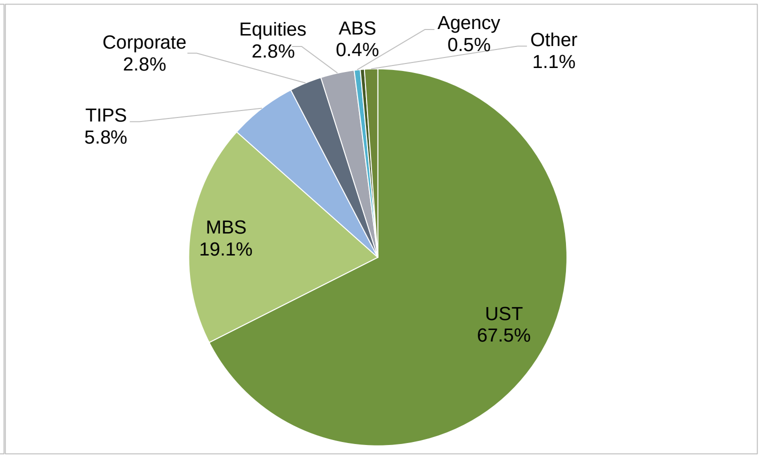



**Chart 27: Repo Avg Outstanding by Collateral, 3Q25**




Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: Data based on primary dealer reporting

**Chart 28: Repo Avg Outstanding by Quarter ($T)**

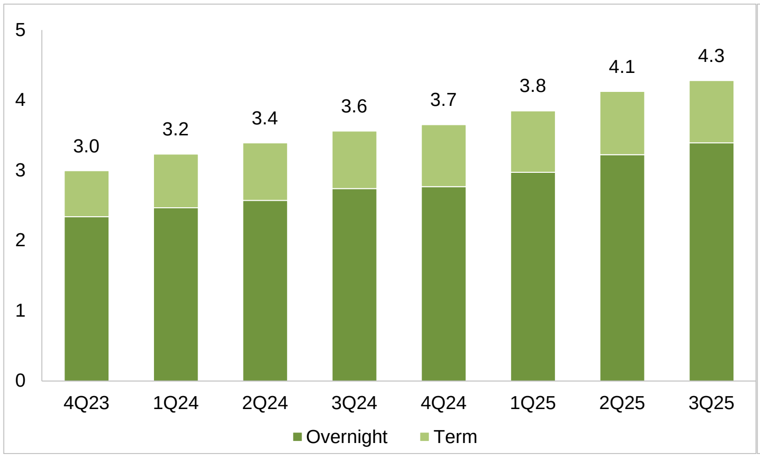
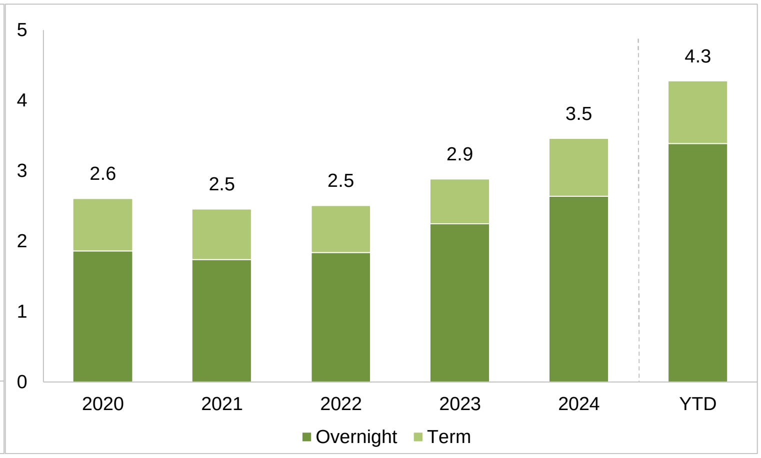



**Chart 29: Repo Avg Outstanding by Year ($T)**




Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: YTD through 3Q25. Data based on primary dealer reporting

- Primary dealer reverse repo average daily outstanding: $3.2T; +3.4% Q/Q, +21.0% Y/Y

**Chart 30: Reverse Repo Avg Outst. by Maturity, 3Q25**

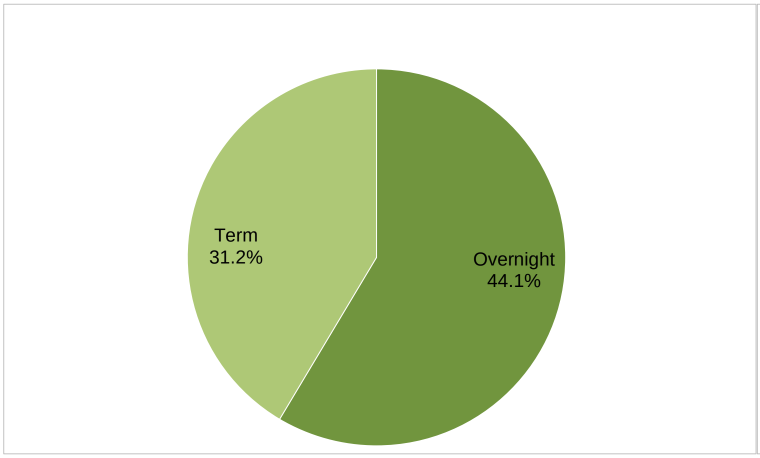
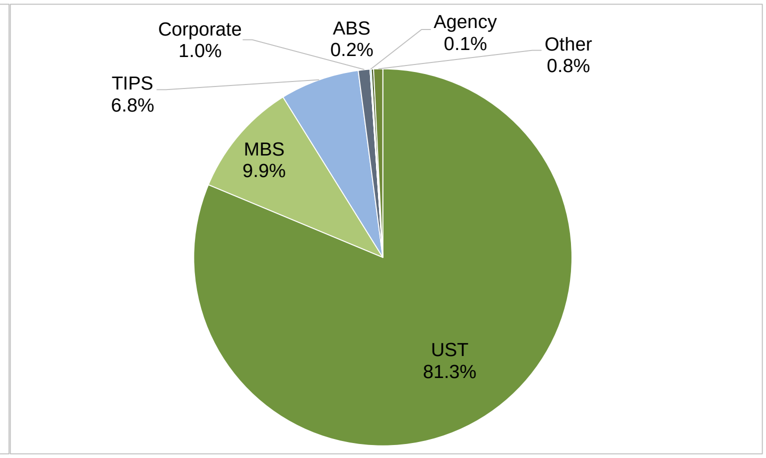



**Chart 31: Reverse Repo Avg Outst. by Collateral, 3Q25**




Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: Data based on primary dealer reporting

**Chart 32: Reverse Repo Avg Outst. by Quarter ($T)**

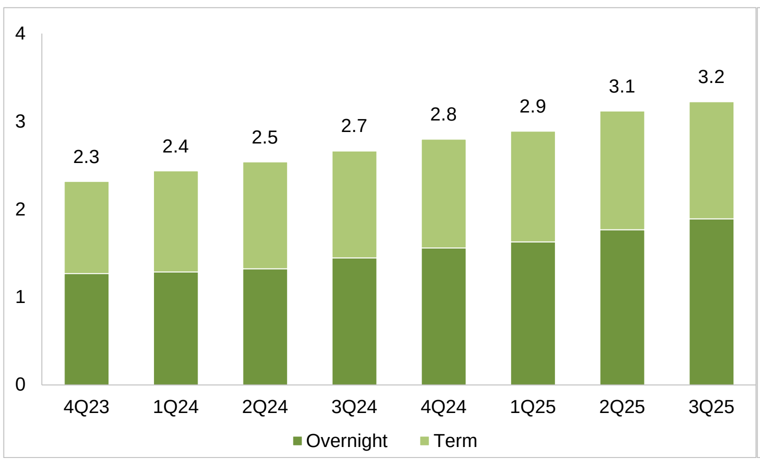
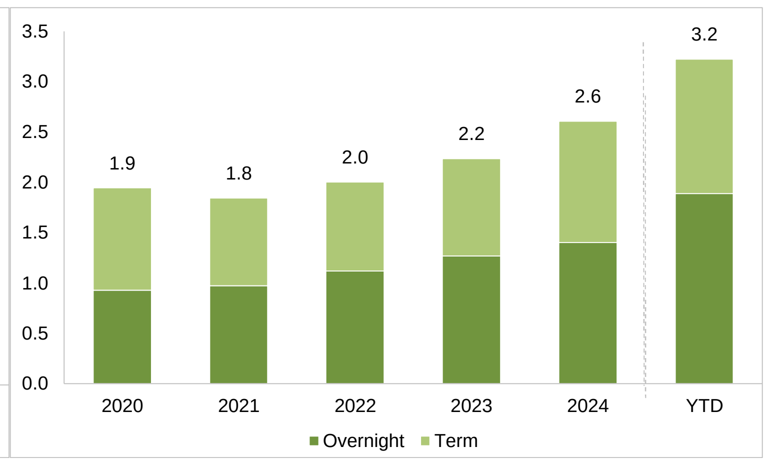



**Chart 33: Reverse Repo Avg Outstanding by Year ($T)**

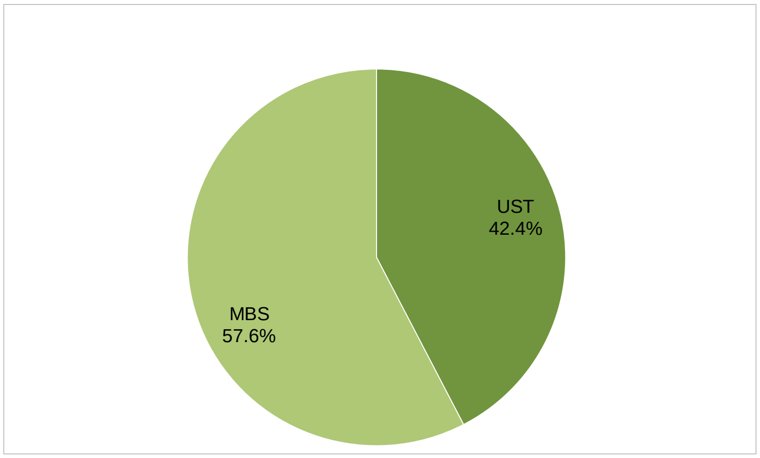



Source: The Federal Reserve Bank of New York, SIFMA estimates
Note: YTD through 3Q25. Data based on primary dealer reporting

## General Collateral Financing (GCF) Repo

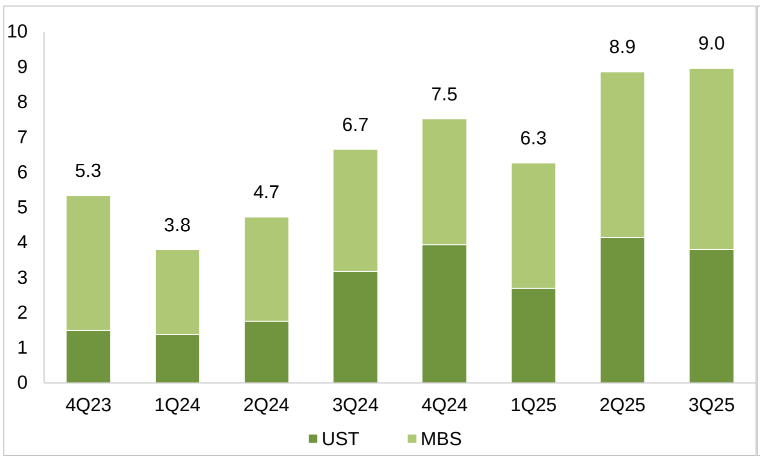
- GCF repo par amount:
  - Total: $9.0T; +1.1% Q/Q, +34.8% Y/Y
  - Average: $140.1B; -2.0% Q/Q, +34.8% Y/Y

### Chart 34: GCF Repo Par Amount by Collateral, 3Q25

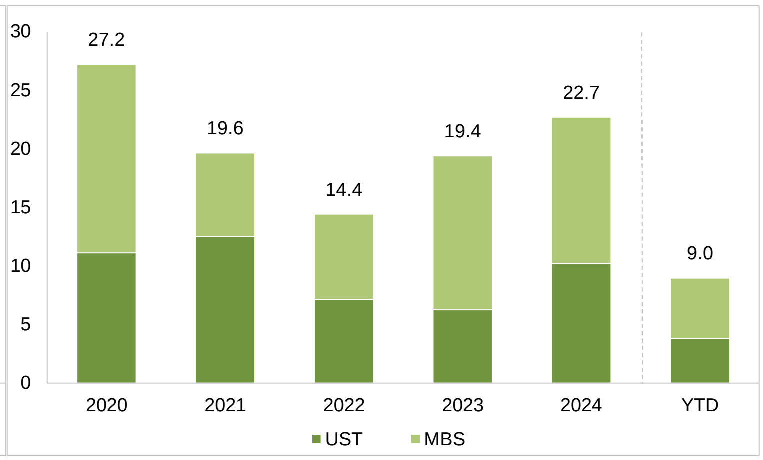



Source: The Depository Trust and Clearing Corporation (DTCC), SIFMA estimates
Note: UST = US Treasury securities, MBS = mortgage-backed securities. The volume is reflective of the repo and reverse transactions that are dealer executed and does not include the inter-dealer broker portion of the transactions.

### Chart 35: GCF Repo Total Par Amount by Quarter ($T)

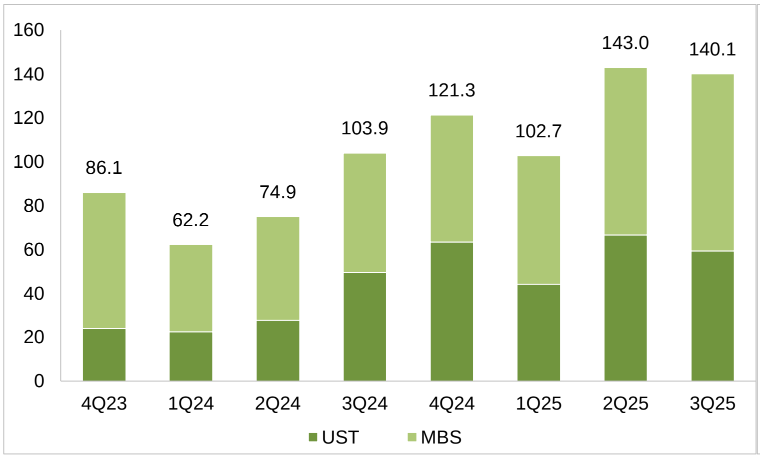



### Chart 36: GCF Repo Total Par Amount by Year ($T)

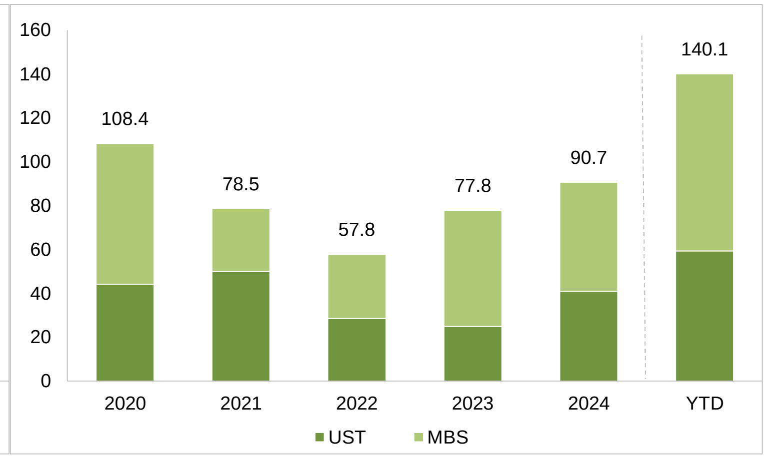



Source: The Depository Trust and Clearing Corporation (DTCC), SIFMA estimates
Note: YTD through 3Q25. Volume is reflective of the repo and reverse transactions that are dealer executed and does not include the inter-dealer broker portion of the transactions.

### Chart 37: GCF Repo Avg Par Amount by Quarter ($T)




### Chart 38: GCF Repo Avg Par Amount by Year($T)



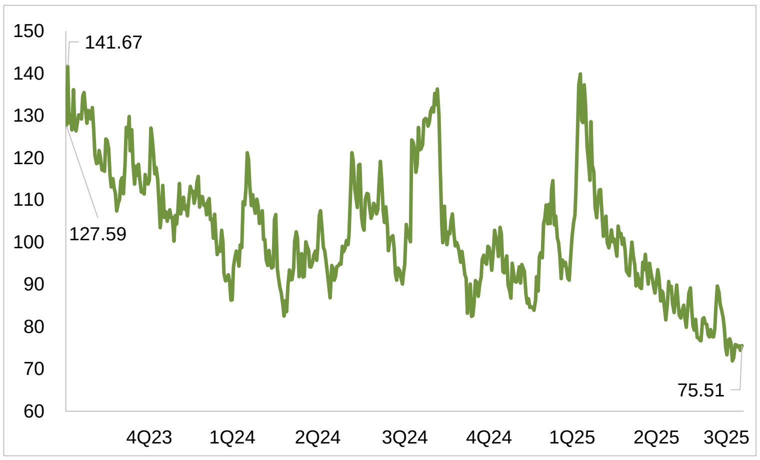

Source: The Depository Trust and Clearing Corporation (DTCC), SIFMA estimates
Note: YTD through 3Q25. UST = US Treasury securities, MBS = mortgage-backed securities. The volume is reflective of the repo and reverse transactions that are dealer executed and does not include the inter-dealer broker portion of the transactions.

# Quarterly Rates Review

## Volatility (MOVE Index)

- Quarter end: 75.51 bps
- Quarter average: 81.79 bps
- Quarter peak: 93.48 bps on 7/1/2025

**Chart 39: Volatility – MOVE Index**

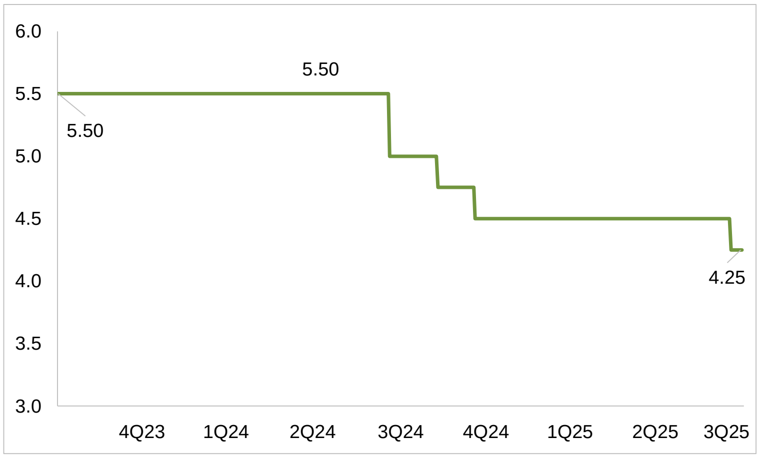



Source: Bloomberg, SIFMA estimates
Note: The MOVE Index (Merrill Option Volatility Estimate) measures expected volatility in the US Treasury market by calculating a weighted average of the implied volatility from 1-month OTC option prices for 2-year, 5-year, 10-year, and 30-year US Treasury futures.

## US Federal Funds Rate (Fed Funds)

- Current: 4.00% (Lower Bound) – 4.25% (Upper Bound, shown in the chart)
- Next FOMC meeting[1]: January 27-28, 2026

**Chart 40: Federal Funds Target Rate (%) - Upper Bound**

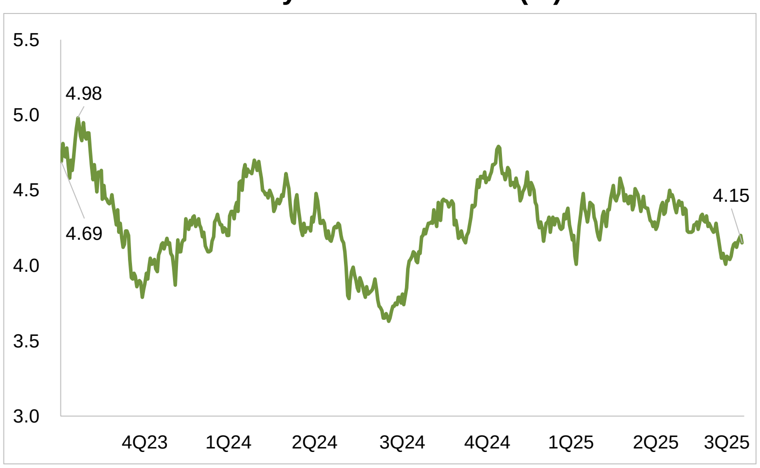



Source: Bloomberg, SIFMA estimates

## UST Rate: by Tenor

- 10-Year Benchmark
  - Quarter end: 4.15%
  - Quarter average: 4.26%
  - Quarter peak: 4.50% on 7/15/2025

**Chart 41: US Treasury Rate - 10Y Note (%)**




Source: Bloomberg, SIFMA estimates

[1] FOMC 2026 meeting schedule: January 27-28, March 17-18, April 28-29, June 16-17, July 28-29, September 15-16, October 27-28, and December 8-9

**Chart 42: US Treasury Rate – 3M T-Bill (%)**

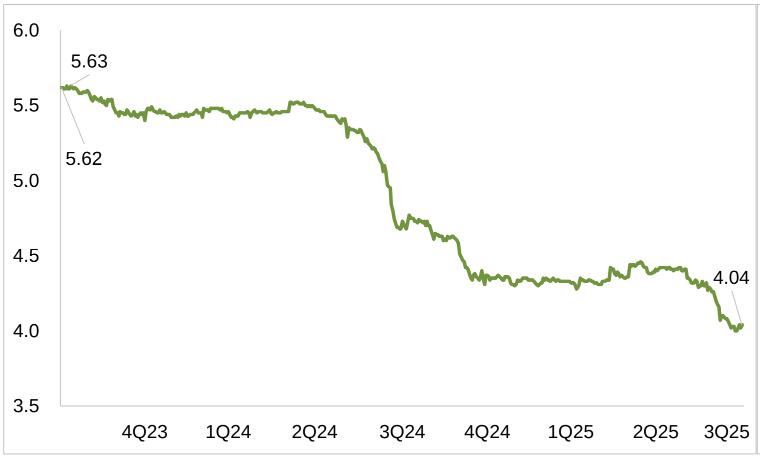
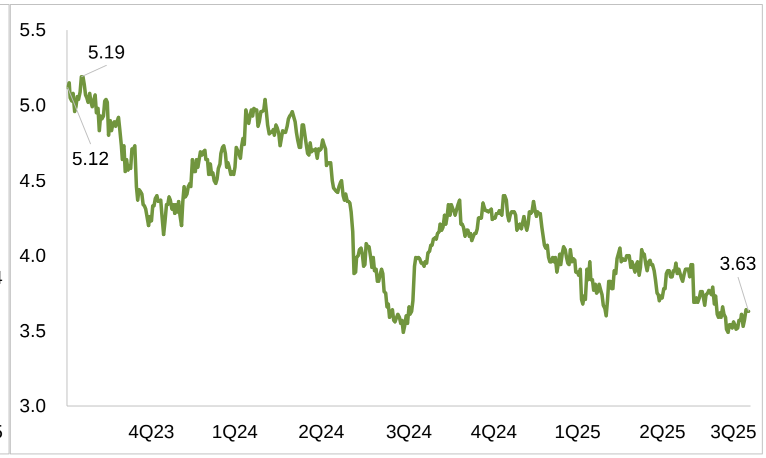



**Chart 43: US Treasury Rate - 2Y Note (%)**




Source: Bloomberg, SIFMA estimates

**Chart 44: US Treasury Rate – 5Y Note (%)**

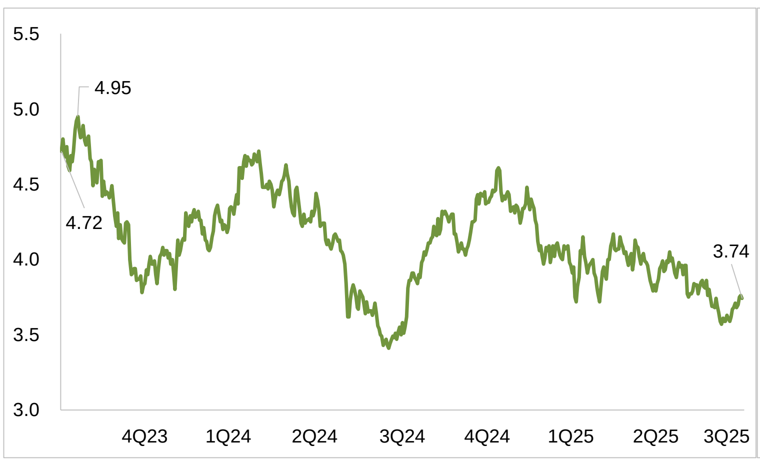
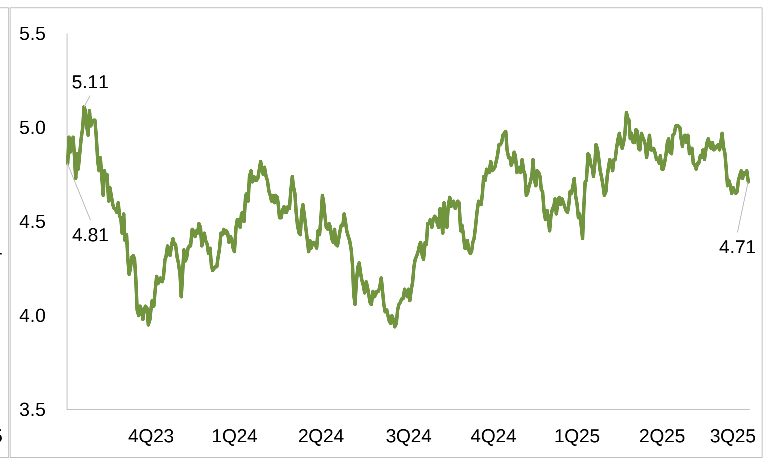



**Chart 45: US Treasury Rate - 30Y Bond (%)**



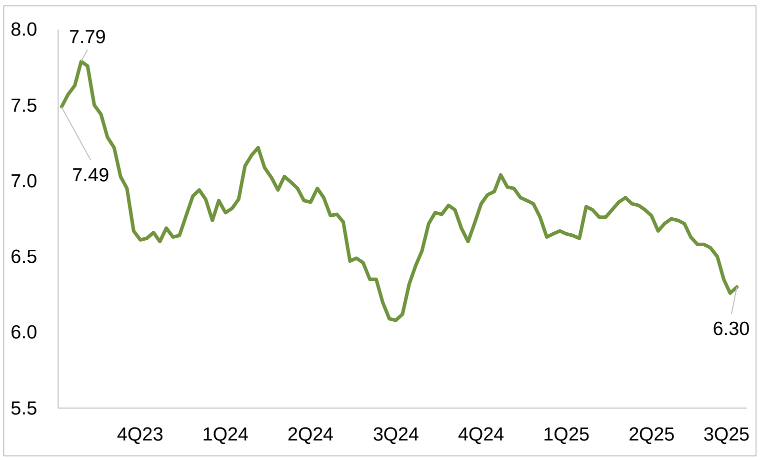

Source: Bloomberg, SIFMA estimates

## Other US Rates

### 30-Year Mortgage Rate

- Quarter end: 6.30%
- Quarter average: 6.57%
- Quarter peak: 6.75%, the week of 7/17/2025

### Chart 46: 30Y Mortgage Rate (%)

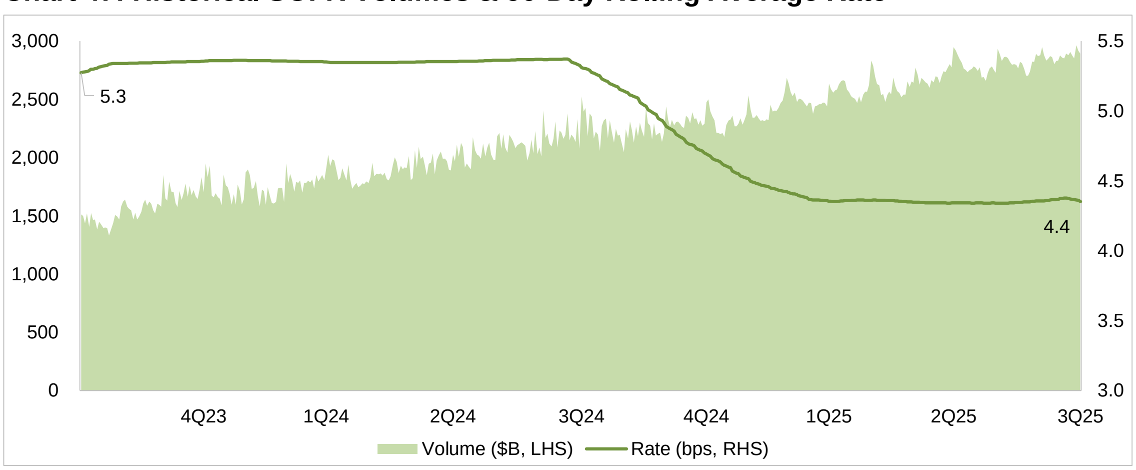



Source: Bloomberg, SIFMA estimates

### Secured Overnight Financing Rate (SOFR)

- Quarter end (90-day rolling average): 4.35%
- Quarter end Fed Volumes: $2.9 trillion

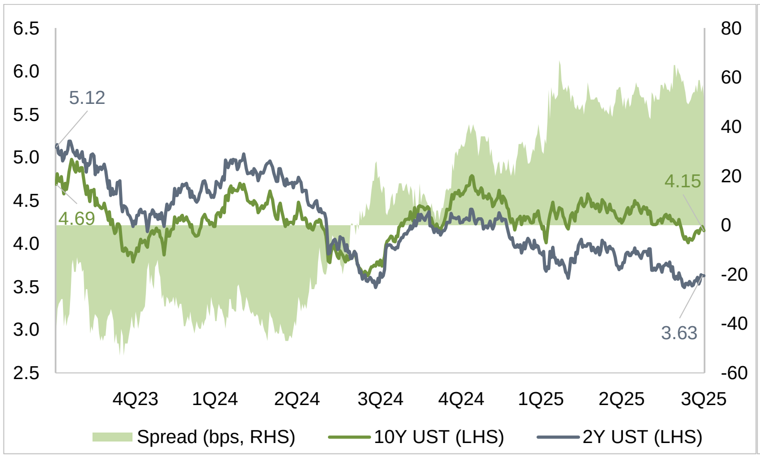
### Chart 47: Historical SOFR Volumes & 90-Day Rolling Average Rate



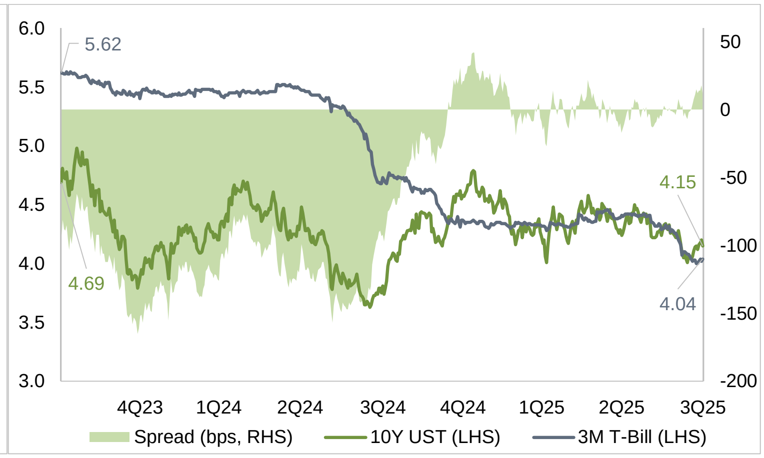

Source: Federal Reserve Bank of New York, SIFMA estimates
Note: SOFR (The Secured Overnight Financing Rate) is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities. It is calculated as a volume-weighted median of transaction-level tri-party repo data as well as GCF Repo transaction data and data on bilateral Treasury repo transactions cleared through FICC's DVP service.

## US Rates: Yields & Spreads

### Chart 48: 10Y UST vs 2Y UST Yields (%)

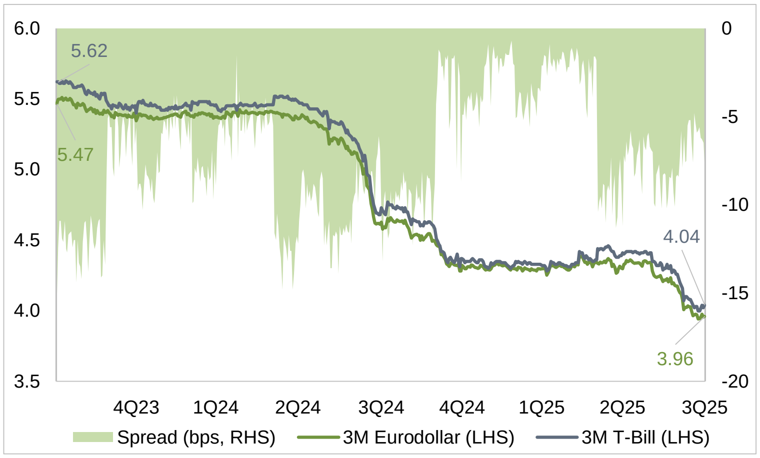



### Chart 49: 10Y UST vs 3M T-Bill Yields (%)




Source: Bloomberg, SIFMA estimates

### Chart 50: 3M Eurodollar vs 3M T-Bill Yields (%)




Source: Bloomberg, SIFMA estimates

**Chart 51: IG Corporate vs 10Y UST Yields (%)**

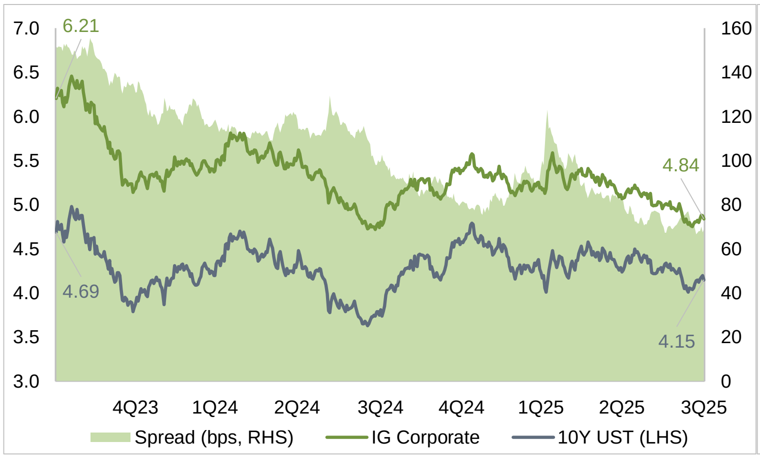
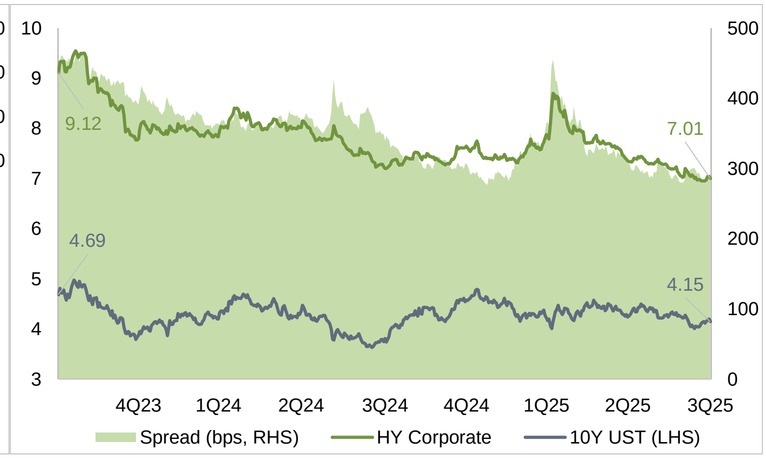



**Chart 52: HY Corporate vs 10Y UST Yields (%)**

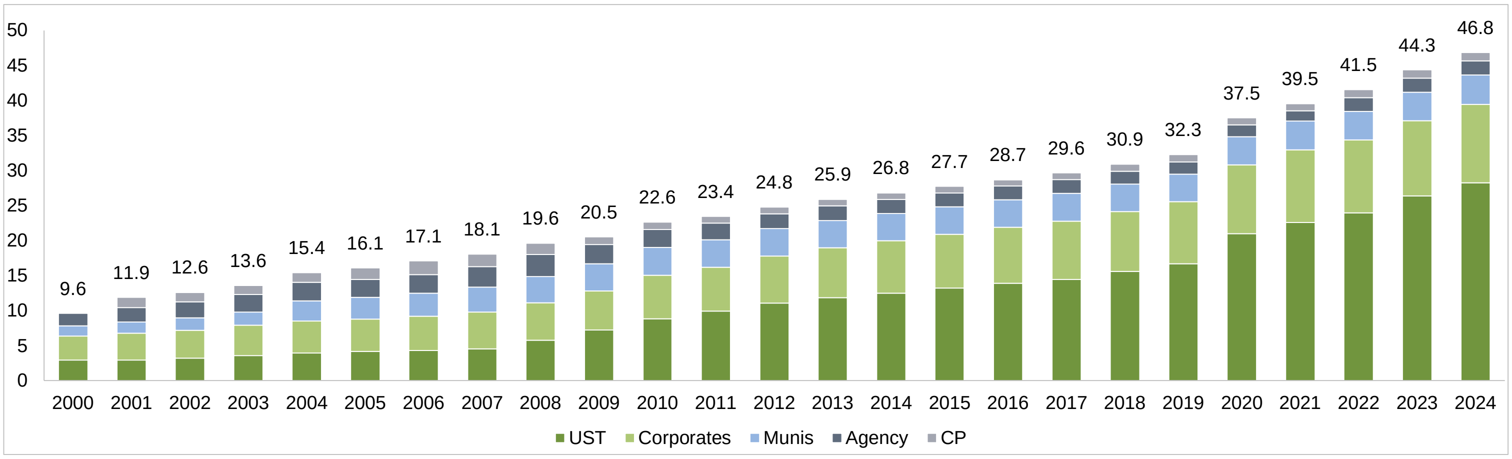



Source: Bloomberg, SIFMA estimates

# Appendix: Historical Trends

## Total Fixed Income Securities

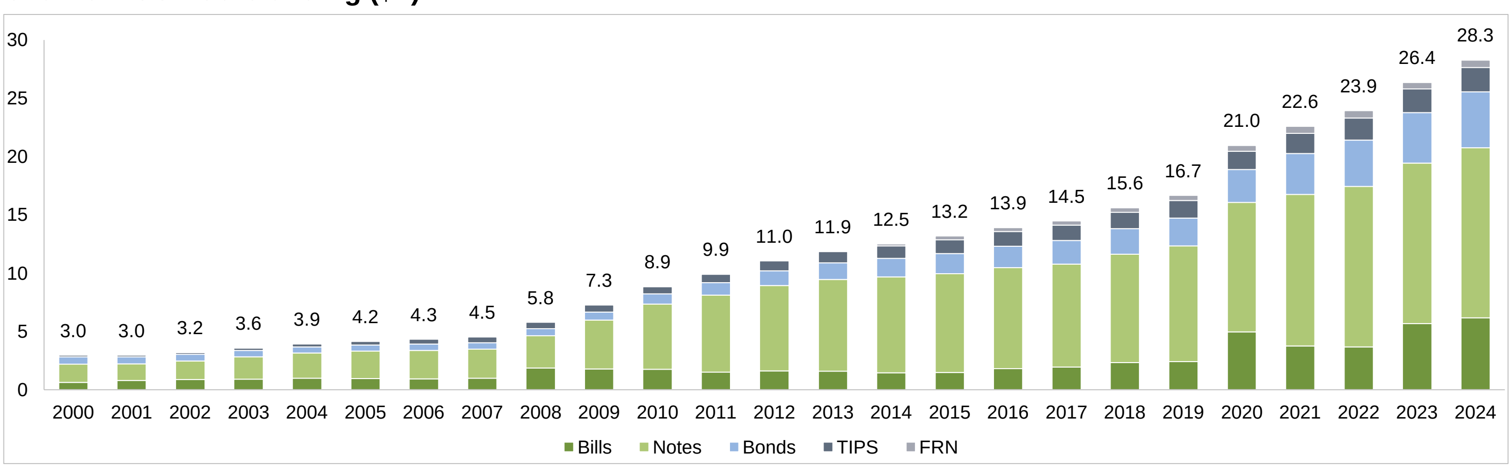
### Chart 53: US Fixed Income Outstanding ($T)




Source: The Federal Reserve, The Federal Reserve Bank of New York, US Agencies, US Treasury, SIFMA estimates
Note: UST = US Treasury securities, Corporates = corporate bonds, Agency = federal agency securities, Munis = municipal bonds, CP = commercial paper

## US Treasury Securities

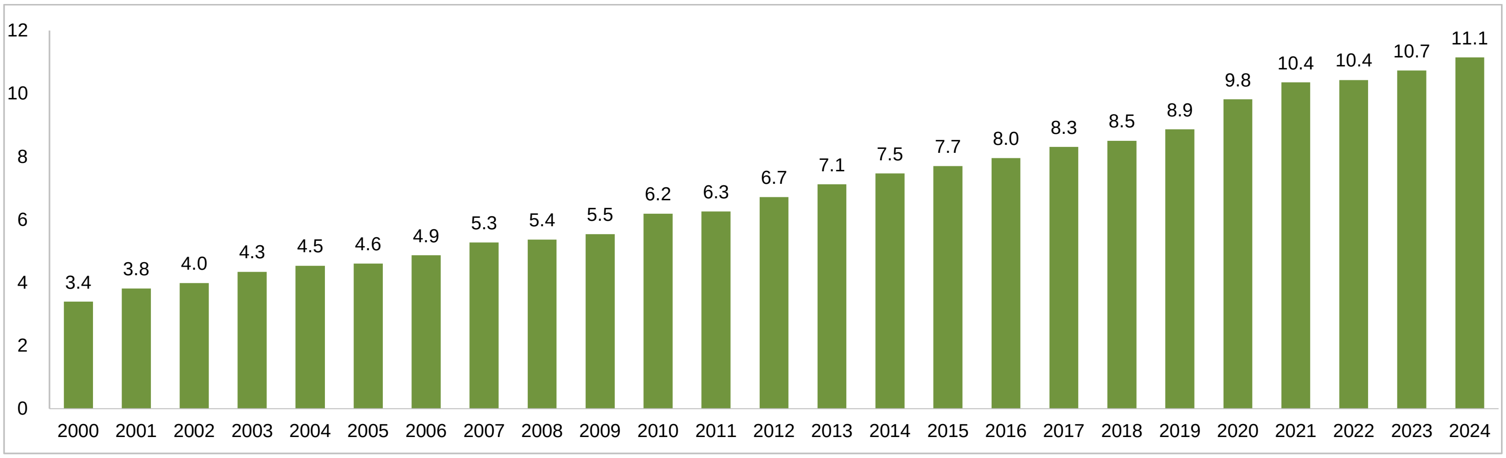
### Chart 54: UST Outstanding ($T)




Source:  US Treasury, SIFMA estimates
Note: FRN = floating rate note, TIPS = Treasury inflation-protected securities

## Corporate Bonds

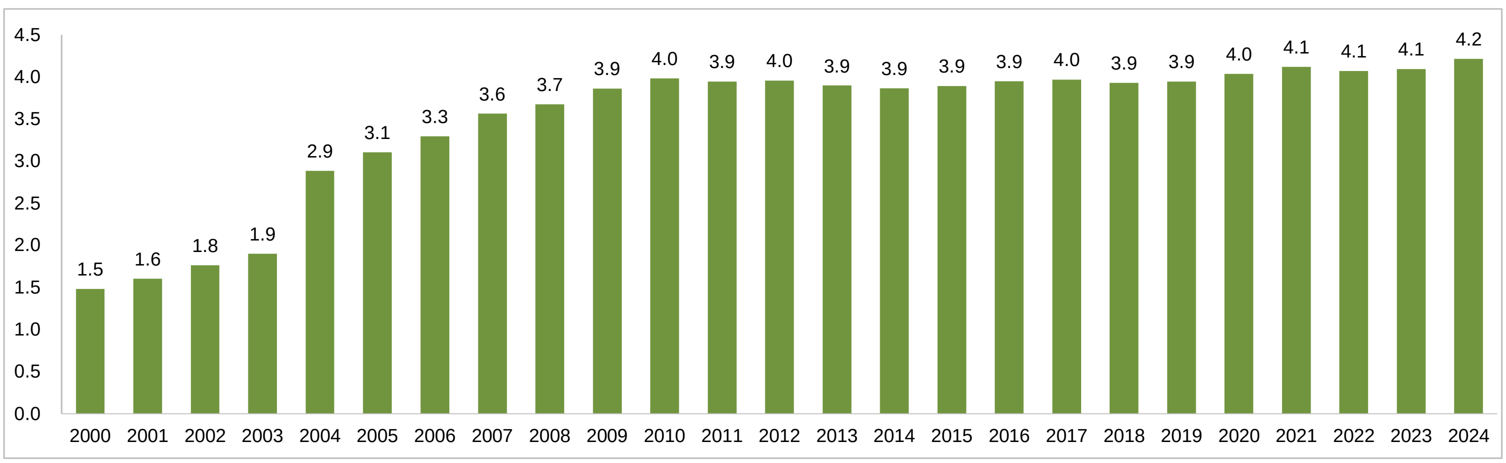
### Chart 55: US Corporate Outstanding ($T)




Source: The Federal Reserve, SIFMA estimates

## Municipal Bonds

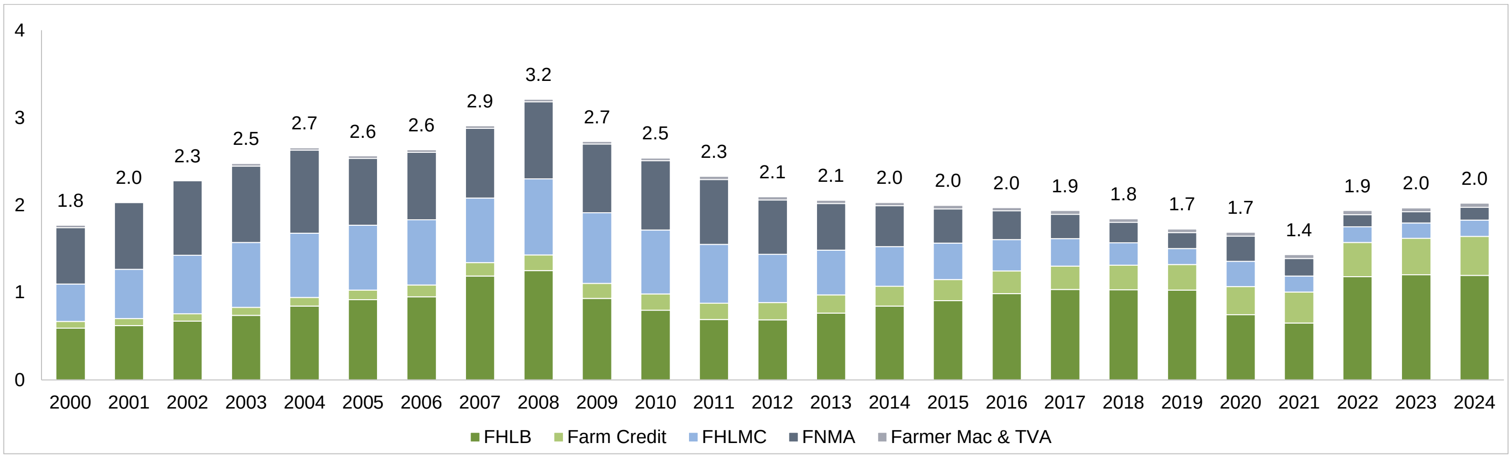
### Chart 56: US Municipal Outstanding ($T)




Source: The Federal Reserve, SIFMA estimates

## Federal Agency Securities

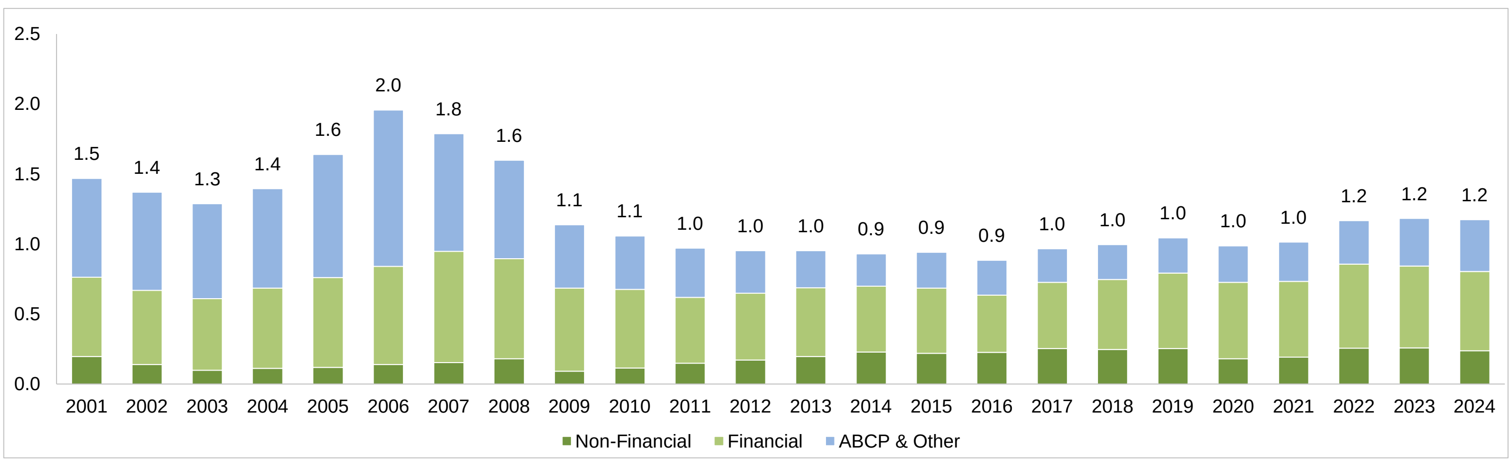
### Chart 57: US Agency Outstanding ($T)




Source: US Agencies, SIFMA estimates
Note: FHLB = The Federal Home Loan Banks, FHLMC = The Federal Home Loan Mortgage Corporation (Freddie Mac), FNMA = The Federal National Mortgage Association (Fannie Mae), TVA = The Tennessee Valley Authority

## Commercial Paper

### Chart 58: US Commercial Paper Outstanding ($T)




Source: The Federal Reserve, SIFMA estimates
Note: ABCP = asset-backed commercial paper

# Appendix: Definitions & Purpose

In general, fixed income securities are borrowed capital for the issuer to fund government operations, public projects, or corporate investments, thereby fueling economic growth. The diversity of fixed income products both increases the amount of funds available to borrow and spreads credit risk across multiple market participants.

- **U.S. Treasury Securities (UST)** – UST are debt obligations of the federal government used to fund its operations. Since UST are backed by the full faith and credit of the U.S. government, these securities are considered by market participants as the benchmark credit. As such, UST have a diversity of holders, in both institutional and retail, and domestic and foreign. UST include the following securities:

    - Treasury Bills (T-Bills): Non-interest bearing (zero-coupon) short-term securities with maturities of only a few days or 4, 6, 8, 13, 17, 26, or 52 weeks. They are purchased at a discount to par (face) value and paid out at par value at maturity.

    - Treasury Notes (T-Notes): These are fixed-principal securities with maturities of 2, 3, 5, 7, and 10 years. Interest is paid semiannually, with the principal paid at maturity.

    - Treasury Bonds (T-Bonds): These are fixed-principal, long-term securities issued with a maturity of 20 or 30 years. Outstanding T-bonds have remaining maturities of 10 to 30 years. Interest is paid semiannually, with the principal paid at maturity.

    - Treasury Inflation Protected Securities (TIPS): These are indexed to inflation, as measured by the Consumer Price Index (CPI), acting as a hedge against the negative effects of inflation. They come in 5, 10, and 30 year maturities, and interest is paid semiannually. TIPS are considered a low-risk investment since the par value rises with inflation, while the interest rate remains fixed.

    - Floating Rate Notes (FRN): These are debt instruments with a 2 to 5 year maturity and a variable interest rate. Its interest rate is tied to a benchmark (U.S. T-Bill rate, Fed Funds rate).

- **Repurchase Agreements (Repos)** – Repos are financial transactions in which one party sells an asset to another party with a promise to repurchase the asset at a pre-specified later date (a reverse repo is the same transaction seen from the perspective of the security buyer). Repos can be overnight (duration one day) or term (duration up to one year; some are up to two years, but the majority are three months or less). The repo market enables market participants to provide collateralized loans to one another, and financial institutions predominantly use repos to manage short-term fluctuations in cash holdings, rather than general balance sheet funding. In general, repos aid secondary market liquidity for the cash markets (for example, U.S. Treasuries/UST), allowing dealers to act as market makers in a very efficient manner.

- **Corporate Bonds (Corporates)** – Corporates are debt securities issued by public and private corporations. They are issued to raise money to fund investments or expansion plans. Corporates are considered riskier than UST and commonly receive ratings from credit ratings agencies that help investors determine creditworthiness, i.e. the probability of repayment of debt in according to its terms.
  - Corporates include the following categories of securities:
    - Publicly Traded: SEC-registered bonds.
    - 144A: Securities Act Rule 144A creates a mechanism for the sale of bonds that are not registered with the SEC, if certain conditions are met.
    - High Yield: Bonds rated by the credit rating agencies below BBB, indicating a higher risk of default.
    - Investment Grade: Bonds rated by the credit rating agencies as BBB or higher, indicating a lower risk of default.
  - The securities may have one or more of the following structural features:
    - Fixed Rate: These pay the same rate of interest for its entire term, i.e. a guaranteed interest rate throughout maturity.
    - Floating Rate: These pay a variable interest rate, typically tied to a benchmark rate, such as the U.S. Treasury bill rate, Fed Funds rate, SOFR, or the prime rate.
    - Callable: These resemble standard bonds, but the issuer has an option to recall (retire) and prepay the bonds. Otherwise, the bond retires at the originally specified maturity date.
    - Non-Callable: These cannot be redeemed early by the issuer except with the payment of a penalty.
    - Convertible: These can be converted into a predetermined amount of the underlying company's equity at certain times during the bond's life, usually at the bondholder's discretion.

- **Mortgage-Backed Securities (MBS)** – A mortgage is a debt instrument collateralized by a specified real estate property(ies). Mortgages may be related to residential or commercial properties. A typical residential mortgage has a term of 15 or 30 years, fully amortizing, and is freely prepayable by the borrower. Commercial mortgages may have varying terms, and typically feature a bullet maturity as opposed to being fully amortizing. A pool of mortgages will serve as collateral for, and the source of repayment of, MBS. MBS include the following securities:
    - Agency MBS: Issued by Fannie Mae, Freddie Mac, or Ginnie Mae. Can be residential or commercial. Many residential agency MBS are traded in the so-called TBA market, where securities are sold on a forward basis, and provide an important hedging mechanism for mortgage lenders, and allow borrowers to get free or low-cost rate locks when they shop for loans.
    - Non-Agency MBS: Issued by private entities, such as finance companies or banks. Can be residential or commercial.
    - Passthrough: The security simply "passes through" payments made by borrowers to security holders (subject to customary fees, such as servicing fees).
    - Collateralized Mortgage Obligation: Cashflows from a pool of mortgage loans are structured in to multiple classes of bonds which may have varying terms, and levels of prepayment, credit, or other risks.
    - Residential MBS (RMBS): A bond collateralized by residential mortgages on 1-4 family homes.
    - Commercial MBS (CMBS): A bond collateralized by commercial and/or multifamily mortgages.
    - Fixed-Rate Mortgage: The borrowers on the mortgage that collateralize the MBS pay the same interest rate for the life of their loans, i.e. monthly principal and interest payment never change.
    - Adjustable-Rate Mortgage (ARM): The borrowers on the underlying mortgages have variable interest rates that are commonly fixed for an initial term, but then fluctuate with market rates or relative to an index. Monthly payments may change
- **Asset-Backed Securities (ABS)** – Similar to MBS, ABS are securities collateralized by a pool of assets such as auto loans, student loans, credit card debt (cards), equipment, home equity loans, aircraft leases, other loans and leases, royalties, or account receivables. Pooling these assets creates a more liquid investment vehicle, with a valuation based on the cash flows of the underlying assets and the structure of the transaction.

- **Federal Agency Securities (Agency)** – Agency debt is issued by quasi-governmental agencies to fund operations. Unlike UST, these securities are not always fully guaranteed by the U.S. government but are considered to have some degree of an implicit guarantee.

    - Federal Government Agency Bonds: These are backed by the full faith and credit of the U.S. government and include bonds issued by the Small Business Administration (SBA), etc.

    - Government-Sponsored Enterprise Bonds (GSE): These are not backed by the same guarantee as federal government agencies and are issued by the Federal National Mortgage Association (Fannie Mae or Fannie), Federal Home Loan Mortgage (Freddie Mac or Freddie), Federal Farm Credit Banks Funding Corporation (Farm Credit) or the Federal Home Loan Bank (FHLB), Federal Agricultural Mortgage Corporation (Farmer Mac). Tennessee Valley Authority (TVA) is unique. A wholly-owned agency of the U.S. government, the TVA is a self-supporting entity whose debt is not guaranteed by the government, but rather is supported strictly by TVA revenues.

- **Municipal Bonds (Munis)** – Munis are debt securities issued by state or local governments or other government agencies and public entities, such as public utilities or school districts. The money raised funds public projects, predominantly infrastructure projects such as: roads, bridges, transit systems, water treatment centers, schools, airports or hospitals. Efficient muni markets enable states and municipalities to borrow at low rates and finance capital expenditures over a longer period commensurate with their useful lives. Munis include the following securities.

    - General Obligation Bond (GO): These are backed by dedicated property taxes or general funds of the municipality, not by revenue from a specific project.

    - Revenue Bond: These are backed by revenue from a specific project.

    - Negotiated: An underwriter sells the bonds to its clients, after determining the bond price by gathering indications of interest during a presale.

    - Competitive: Bonds are advertised for sale, and any market participant may bid, with the bonds going to the bidder offering the lowest interest cost.

    - Private placement: A broker-dealer sells the entire muni bond placement to its clients.

    - Refunding: Retiring or redeeming an outstanding bond issue at maturity by using the proceeds from a new debt issue, typically at a lower interest rate.

    - New Capital: First issue of a bond, not a refunding.

    - Tax-Exempt Bond: The interest earned by investors is generally free from federal income tax and often state and local income tax.

  - Taxable Bond: The interest earned by investors is subject to taxation

- **Money Markets (MM)** – The money markets involve highly liquid, short maturity (typically overnight to less than one year) financial instruments, which are used by issuers and investors to borrow and lend in the short term. Common money market instruments include:
  - Commercial Paper (CP): A short-term, unsecured debt instrument issued by a corporation, typically to finance short-term liabilities (accounts receivables, inventories, etc.). Maturities are usually under 270 days. CP is most often issued at a discount from face value and reflects prevailing market interest rates.
  - Certificate of Deposit (CD): A savings certificate with a fixed maturity date and interest rate, which restricts access to the funds until the maturity date. CDs are generally issued by commercial banks, in essentially any denomination, and are insured by the FDIC up to $250,000 per individual.
  - Bankers Acceptances: A promised future payment, or time draft, guaranteed by and drawn on a deposit at the bank. The amount, date and holder of the draft are specified at issuance, at which time the draft becomes a liability of the bank. The holder of the draft can sell the bankers acceptance for cash to a buyer who is willing to wait until the maturity date for the funds in the deposit.

- **Secured Overnight Financing Rate (SOFR)** – The Secured Overnight Financing Rate (SOFR) is a broad measure of the cost of overnight borrowing collateralized by U.S. Treasury securities, based on actual transactions in the Treasury repurchase agreement market. It replaced LIBOR as the primary reference rate and was first published in April 2018. Trading and clearing of SOFR based swaps and futures began in May 2018.

# Appendix: Description & Purpose of Repo Markets

### Defining Repo Markets

A repurchase agreement (repo) is a financial transaction in which one party sells an asset to another party with a promise to repurchase the asset at a pre-specified later date (a reverse repo is the same transaction seen from the perspective of the security buyer). Repos can be overnight (duration one day) or term (duration up to one year, albeit some are up to two years and the majority are three months or less). The repo market enables market participants to provide collateralized loans to one another, and financial institutions predominantly use repos to manage short-term fluctuations in cash holdings, rather than general balance sheet funding.

In general, repos aid secondary market liquidity for the cash markets (for example, U.S. Treasuries/UST), allowing dealers to act as market makers in a very efficient manner. Market makers stand ready to buy and sell securities, providing liquidity to markets. These firms must take the other side of trades when there are short-term buy and sell imbalances in customer orders. Healthy repo markets provide them the necessary cash and access to securities to perform these actions and keep secondary cash markets running effectively. The ability to finance and efficiently source securities contributes to lower interest rates paid by the issuers, most notably the U.S. Treasury, which lowers debt servicing costs borne by taxpayers.

The repo markets allow investors to manage excess cash balances safely and efficiently. Dealers also benefit from significantly reduced funding costs, the capacity to finance long positions in securities and the ability to borrow securities to cover short positions to satisfy client needs. Long holders of securities can also gain incremental returns by engaging in repo transactions with cash investors for securities they own but have no immediate need to sell.

### Types of Repo Markets

While a broad array of assets may be financed in the repo market, the most commonly used instruments include UST, federal agency securities, high quality MBS, corporate bonds and money market instruments.

The repo market can be split into two main segments:

- **Bilateral Repo** – The bilateral repo market has investors and collateral providers directly exchange money and securities, absent a clearing bank. Bilateral repo transactions can either allow for general collateral or impose restrictions on eligible securities for collateral. Bilateral repo is preferred when market participants want to interact directly with each other or if specific collateral is requested.

- **Tri-Party Repo** – The tri-party repo market is named as such given the role played by clearing banks in facilitating settlement. Clearing banks act as an intermediary, handling the administrative details between the two parties in the repo transaction. Tri-party repo is used to finance general collateral, with investors accepting any security within a broad class of securities. According to the Federal Reserve Bank of New York (New York Fed), market participants view tri-party repo as more cost efficient.

There is also the **general collateral finance (GCF) repo** market, which is offered by the Fixed Income Clearing Corporation (FICC), a central clearing counterparty. GCF repo is predominantly used by securities dealers, who negotiate the trade on an anonymous basis and then submit it to FICC. FICC then interposes itself as the legal counterparty to both sides of the repo transaction.

### Repo Market Participants

Securities dealers are at the heart of the repo market, operating in all repo market segments. The diagram on the following page shows the interaction of market participants in both repo market segments described above. Additional participants in the repo market include:

- **Financial institutions** – Primary dealers (see appendix for a current list), banks, insurance companies, mutual funds, pension funds, hedge funds

- **Governments** – The New York Fed (used in its implementation of monetary policy), other central banks, municipalities

- **Corporations** – Corporations use repo markets primarily for short-term, secured financing (borrowing cash by selling securities) and for investing excess cash (earning returns via reverse repos).

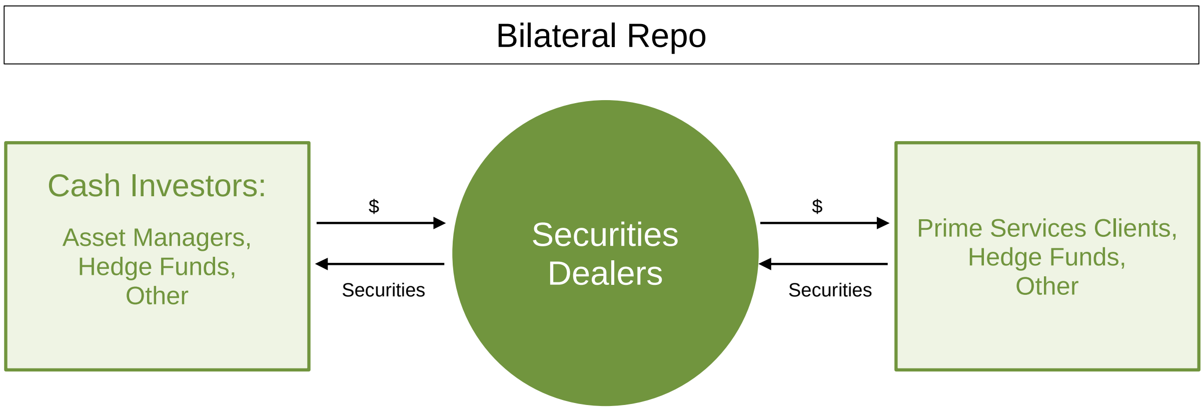
- These entities all benefit from the security, operational efficiency and low funding costs available in the repo market. Repos offer cash providers collateralization (with additional margin requirements in most cases) marked-to-market daily to ensure continuing protection. The operational efficiencies developed through tri-party repo and the largely centralized settlement mechanism for repos further minimize risks. Standardized documentation, broadly accepted by market participants, provides further certainty for market participants.

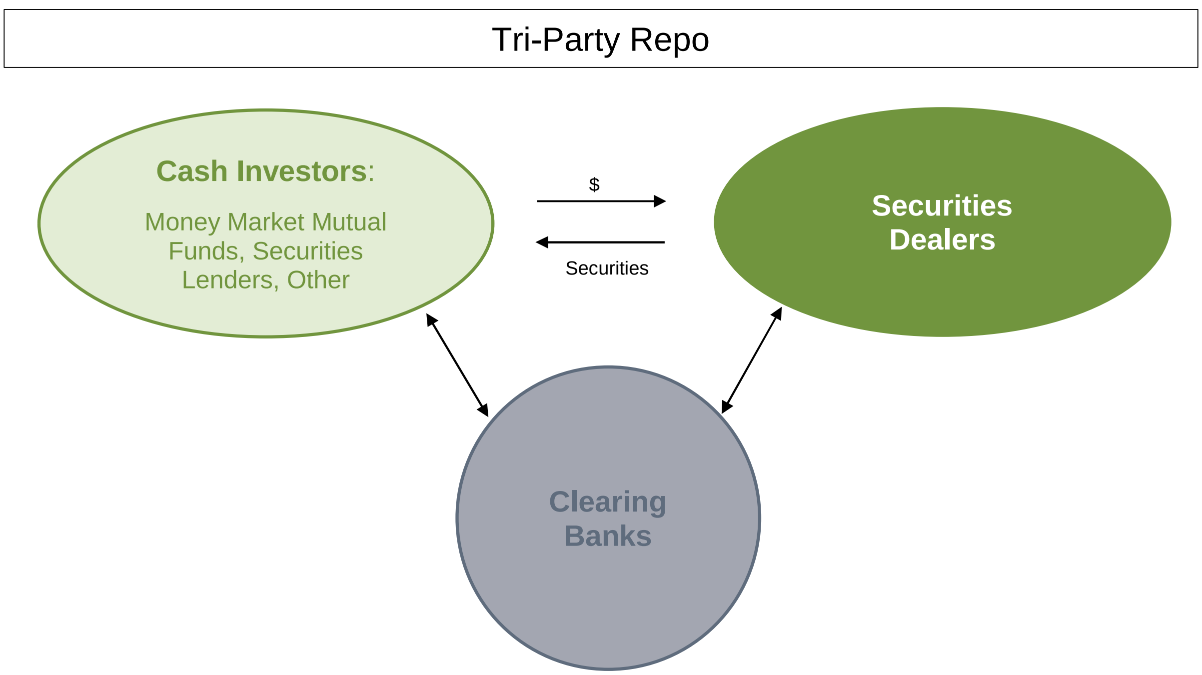
### Repo Regulation

Prior to the financial crisis, some financial institutions used repos to fund leveraged position taking in securities. As asset prices declined during the crisis, repo lenders increased the amount of collateral required, limiting the level of repo activity for some investors holding leveraged portfolios. This created a funding shortfall and forced investors to decrease leverage by selling assets, leading to even lower asset valuations. This fed back into additional asset sales, and the circle went round and round. Repos backed by government securities also faced stress. Flight to safety tendencies drove increased demand for these standalone assets, leading to shortages of available collateral in the repo market.

In light of this, the New York Fed works continuously with market participants – most notably with the Treasury Market Practices Group – to monitor repo infrastructure and recommend reforms as necessary, to ensure these markets remain stable sources of funding during periods of market stress. The New York Fed also provides data for market participants on the repo markets. While comprehensive data for all segments of repo markets are not available, data is provided for certain segments of and specific firms operating in this market.

## Repo Operations




Sources: Federal Reserve Bank of New York, SIFMA

# Appendix: SIFMA Research Reports

SIFMA Research: www.sifma.org/research

- **Quarterly Reports**:
  - Equity and Related: capital formation (IPOs, other issuance statistics); market performance (index prices); volatility (VIX); cash equites, ETFs, and multi-listed options volumes; exchange market shares and landscape; equity market capitalization and number of listed companies.
  - Fixed Income – Issuance & Trading: issuance and trading metrics for U.S. Treasuries, mortgage-backed securities, corporate bonds, municipal securities, federal agency securities, and asset-backed securities, as well as ESG issuance statistics; and rates update (Treasuries, mortgage, SOFR).
  - Fixed Income – Outstanding: outstanding balances for U.S. Treasuries, mortgage-backed securities, corporate bonds, municipal securities, federal agency securities, asset-backed securities, money markets, and repurchase agreements; and rates update (Treasuries, mortgage, SOFR).
  - US Banks: financial (income statement and balance sheet metrics) and regulatory (ratios on capital levels and more) data for CCAR firms, essentially a proxy for the financial services industry.

- **Capital Markets Fact Book**: a comprehensive look at capital markets, including
  - Global: Equity and fixed income markets data on outstanding, issuance, volumes); the investment banking landscape; and international securities transactions.
  - U.S.: Equity, fixed income, derivatives, and private placement markets data on outstanding, issuance, volumes, and index prices, as well as mutual fund and ETF statistics; the investment banking landscape; household liquid financial asset breakout, household equity ownership, and holders of equities; retirement asset breakout and mix across asset classes, savings rates, and other economic indicators; federal balance sheet overview; number of broker-dealers, registered representatives, registered investment advisors, and branch offices, along with state maps for that data; and industry financial overview.

- **Market Structure Compendiums**:
  - Equity: Comprehensive analysis of themes and metrics across equity markets, volatility (VIX), equity trading, exchange-traded funds (ETFs), options trading, and capital formation.
  - Fixed Income: Comprehensive examination of themes and market metrics shaping the U.S. fixed income markets.

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