

21 Keys to US Fed, T-bills and Interest Rate

Master the essentials of US Fed, T-bills and Interest Rate.

Fed

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Basis Point

A unit of measure equal to one-hundredth of a percentage point (0.01%), used to express changes in interest rates, yields, or spreads in finance.

Abbreviated as "bps" or "bips," 100 basis points equal 1%, so a 50 bps rate hike increases from 4.50% to 5.00%. In bond markets, a 1 bp change in yield on a \$1 million par bond alters its price by about \$100 (basis point value or BPV). The Fed's September 2025 cut was 50 bps, the largest since 2008.

Basis points avoid ambiguity in percentage discussions; a 10% increase from 5% is 50 bps, not 0.5%. In mortgages, origination fees are often 100-200 bps of the loan amount, equating to \$2,000-\$4,000 on a \$200,000 loan. Spreads like corporate bond yields over Treasuries are quoted in bps (e.g., BBB spreads at 150 bps in 2025).

Globally, central banks use bps; the ECB cut by 25 bps in June 2025, aligning with Fed moves.

Bitcoin (BTC)

The first and most valuable decentralized digital currency, created by Satoshi Nakamoto in 2009.

Bitcoin (abbreviation: BTC; sign: ₿) is the first decentralized cryptocurrency or digital asset, invented in 2008 by an unknown entity under the pseudonym Satoshi Nakamoto and launched in 2009 as open-source software. It operates on a peer-to-peer network where computers (nodes) maintain a public distributed ledger called a blockchain to record transactions without central oversight.

Bitcoin enables encrypted, peer-to-peer transactions without needing a central bank or third-party involvement, making it a digital currency for secure, direct value transfer worldwide. Its value has grown significantly since inception, from fractions of a penny in 2010 to over \$110,000 in 2025, driven by adoption as a store of value and medium of exchange. Demand from retail investors, traditional financial institutions, and institutional investors seeking portfolio diversification and inflation hedge has driven this growth.

Spot Bitcoin ETFs, approved by the U.S. SEC in January 2024, are exchange-traded funds that directly hold Bitcoin, tracking its spot price in real-time. They provide investors with regulated exposure to Bitcoin without direct ownership, with major players like BlackRock's IBIT and Grayscale's GBTC managing billions in assets, enhancing accessibility and liquidity.

Consumer Price Index (CPI)

A monthly measure of average price changes in a fixed basket of goods and services purchased by urban consumers, produced by the Bureau of Labor Statistics.

CPI tracks about 80,000 items monthly via surveys in 75 urban areas, with major weights like housing (42%), food (14%), and transportation (17%). For August 2025, CPI inflation was 2.9% year-over-year, up from 2.7% in July, with a 0.4% monthly rise driven by 0.5% shelter and 0.7% food increases. Core CPI, excluding food and energy, held at 3.1% annually, with energy up 0.7% monthly.

It uses a fixed basket, updated biennially, leading to higher readings than PCE due to less substitution accounting; in 2025, CPI averaged 0.4 points above PCE. Regional variations show South at 2.6%, Midwest 2.8%, Northeast 3.0% for August year-over-year. Chained CPI-U, allowing substitution, rose 2.7% annually in August, used for tax adjustments.

Core Personal Consumption Expenditures (Core PCE)

A variant of PCE excluding volatile food and energy prices to gauge underlying inflation trends, favored by the Fed for policy decisions.

Core PCE strips out food (10% weight) and energy (4% weight) from the headline PCE, focusing on persistent price changes in areas like housing (18%) and healthcare (20%). In August 2025, core PCE rose 2.9% year-over-year, holding steady from July, with a 0.2% monthly gain, above the Fed's 2% target.

Calculations use BEA data, with recent drivers including a 4.1% shelter cost increase and 3.5% in medical services.

It provides a smoother signal for monetary policy; for instance, during 2022-2023 hikes, core PCE peaked at 5.6% before easing to 2.9% amid rate cuts starting September 2025. Trimmed mean PCE, another core variant from Dallas Fed, was 2.7% in August 2025, excluding extreme price changes for robustness. Median PCE from Cleveland Fed rose 0.2% monthly in August, annualizing to 3.2%, highlighting sticky inflation in the middle 50% of components.

Digital Asset

Electronically stored items of value that can be owned, transferred, or traded, typically secured by blockchain technology for immutability and transparency.

A digital asset is a broad term often used synonymously with cryptocurrency, which can be owned, transferred, or traded, typically secured by blockchain technology to ensure immutability and transparency. It better reflects the diverse nature of these assets, including Bitcoin and Ethereum, stablecoins, and tokenized real-world assets (RWAs) such as real estate, commodities, or U.S. Treasury bonds.

In the U.S., the term "digital asset" is widely adopted in policy and regulatory frameworks, notably by the IRS for tax purposes (defining cryptocurrencies as property) and the SEC for securities regulation, emphasizing their role in financial markets.

Digital Asset Treasuries (DAT), such as Strategy (MSTR) and BitMine Immersion (BMNR), strategically hold digital assets as core reserves to drive shareholder value, leveraging their liquidity and global accessibility.

Dot Plot

A chart released quarterly by the Federal Reserve showing anonymous projections from FOMC members for future federal funds rates.

Introduced in 2012 as part of the Summary of Economic Projections (SEP), the dot plot displays 19 dots (one per participant) for year-end rates up to three years ahead and longer-run. In September 2025, the median dot indicated a 4.4% rate by end-2025, 3.4% by 2026, and a long-run neutral of 2.9%. Projections assume appropriate policy to meet 2% inflation and maximum employment.

It provides forward guidance; a downward shift in June 2025 dots signaled three rate cuts, influencing market expectations and 10-year yields dropping 20 bps. Dots are not commitments but reflect individual views, with ranges showing uncertainty (e.g., 2025 dots from 3.9% to 5.1%).

In 2025, amid 2.6% GDP growth and 4.4% unemployment projections, the plot has guided futures markets to price in 75 bps of easing by December.

Fed (Federal Reserve System)

The central banking system of the United States, established in 1913 to provide a safe, flexible, and stable monetary and financial system.

The Federal Reserve System, commonly known as the Fed, consists of the Board of Governors in Washington, D.C., and 12 regional Federal Reserve Banks located across the country, such as in New York and San Francisco. It was created by the Federal Reserve Act of 1913 in response to financial panics, like the Panic of 1907, to centralize banking oversight and prevent widespread bank failures. The Fed's structure includes a seven-member Board of Governors appointed by the President and confirmed by the Senate, with the Chair serving a four-year term, renewable, as seen with recent chairs like Jerome Powell.

The Fed operates with a dual mandate from Congress: to promote maximum employment and stable prices, aiming for around 2% inflation annually. It achieves this through tools like setting the federal funds rate, conducting open market operations, and supervising banks to ensure soundness. For instance, during the 2008 financial crisis, the Fed implemented quantitative easing programs, purchasing over \$4 trillion in securities to lower long-term interest rates and support recovery.

In 2025, the Fed continues to monitor economic indicators like GDP growth (projected at 2.1% for the year) and unemployment (around 4.2%), adjusting policies accordingly, such as the recent rate cuts from 5.25-5.50% to 4.75-5.00% in September 2025 to combat slowing growth.

Federal Funds Interest Rate

The interest rate at which depository institutions lend reserve balances to each other overnight, targeted by the Federal Reserve to influence economic activity.

Calculated as a volume-weighted median of overnight transactions reported in the FR 2420 form, the effective federal funds rate (EFFR) stood at 4.83% as of October 2, 2025. The FOMC sets a target range, currently 4.75-5.00% following a 50 basis point cut in September 2025, to manage inflation and employment. Banks with excess reserves lend to those needing to meet requirements, with the rate influenced by the Fed's interest on reserve balances (IORB) at 4.90%.

Historically, the rate has ranged from near 0% during crises (e.g., 0-0.25% from 2008-2015) to over 20% in the early 1980s to combat inflation. Changes affect consumer rates; a 1% hike can increase borrowing costs by \$300 annually on a \$30,000 car loan. In 2022-2023, the Fed raised it from 0.25% to 5.50% to curb inflation peaking at 9.1%.

The rate serves as a benchmark for other short-term rates like SOFR (4.83% on October 2, 2025) and impacts global finance, with emerging markets often adjusting policies in response.

Federal Open Market Committee (FOMC)

A 12-member committee within the Federal Reserve System responsible for setting U.S. monetary policy, including interest rates and open market operations.

The FOMC comprises the seven members of the Federal Reserve Board of Governors, the president of the Federal Reserve Bank of New York, and four rotating presidents from the other 11 regional Reserve Banks. Established under the Banking Act of 1935, it meets eight times a year in Washington, D.C., to review economic conditions and decide on policy actions. For example, in September 2025, the FOMC lowered the federal funds rate target by 50 basis points to 4.75-5.00% amid concerns over employment.

The committee's primary tool is open market operations, where it buys or sells government securities to influence the federal funds rate and broader interest rates. It also provides forward guidance on future policy and releases the Summary of Economic Projections (SEP), including the dot plot, quarterly. During the COVID-19 pandemic, the FOMC expanded its balance sheet to over \$8 trillion through asset purchases to stabilize markets.

Decisions are made by majority vote, with minutes released three weeks after each meeting and transcripts after five years, promoting transparency. In 2025, the FOMC has focused on balancing inflation control (at 2.5% core PCE) with labor market support, projecting two more rate cuts by year-end.

LIBOR

The former benchmark rate for short-term interbank loans in London, phased out in 2023 and replaced by SOFR due to manipulation scandals.

Calculated daily by ICE from submissions by 11-18 panel banks for five currencies and seven tenors (e.g., 3-month USD LIBOR at 5.6% peak in 2023), it underpinned \$350 trillion in contracts. Introduced in 1969, it was based on estimated borrowing costs, leading to rigging by banks like Barclays, fined \$450 million in 2012. Transition involved synthetic LIBOR for legacy contracts until end-2024.

It influenced adjustable-rate mortgages (e.g., adding 200 bps margin) and derivatives, with \$200 trillion in swaps. During 2008, LIBOR-OIS spread widened to 364 bps, signaling credit stress. Post-phaseout, \$5 trillion in legacy USD contracts use CME Term SOFR plus 11.448 bps spread.

In 2025, LIBOR is defunct, with regulators prohibiting new use since 2021.

Money Markets

Financial markets for short-term borrowing and lending, typically under one year, involving instruments like repos, commercial paper, and CDs.

U.S. money markets handle \$20 trillion in assets in 2025, with daily trading volumes of \$5 trillion in repos and \$2 trillion in T-bills. Participants include banks, corporations, and governments, with rates like SOFR at 4.83% and commercial paper at 5.0% for 3-months. Money market funds (MMFs) hold \$6.5 trillion, investing in assets yielding 4.7% average.

They provide liquidity; during 2020, MMFs faced \$150 billion outflows, prompting Fed facilities like MMLF to lend \$50 billion. Instruments include CDs with \$2.5 trillion outstanding and Eurodollars at \$14 trillion. Regulations post-2008 require prime MMFs to float NAV, reducing risk.

In 2025, money markets reflect Fed policy, with yields compressing as rates fall, boosting corporate short-term funding at lower costs.

Open Market Operations (OMO)

The Federal Reserve's buying and selling of government securities in the open market to adjust the supply of reserves and influence interest rates.

Conducted by the New York Fed's Trading Desk, OMOs include permanent operations like outright purchases of Treasuries (e.g., \$600 billion monthly during QE in 2020) and temporary ones like repos to manage daily liquidity. In 2024, the Fed executed over \$1 trillion in repo operations to stabilize funding markets during volatility. Purchases increase reserves, lowering rates, while sales drain them, raising rates.

The FOMC directs OMOs, with the System Open Market Account (SOMA) holding \$7.2 trillion in securities as of September 2025. During the 2008 crisis, OMOs expanded to include agency MBS, totaling \$1.25 trillion in purchases under QE1. In quantitative tightening since 2022, the Fed has allowed up to \$95 billion in securities to mature monthly without reinvestment.

OMO's affect broader markets; a \$100 billion Treasury purchase can lower 10-year yields by 10-20 basis points, stimulating borrowing.

Overnight Reverse Repurchase Agreement Facility (ON RRP)

A Federal Reserve tool where eligible counterparties lend cash overnight to the Fed in exchange for Treasury securities as collateral, helping to set a floor on short-term rates.

Established in 2013 and expanded in 2021 to include 108 counterparties like money market funds and GSEs, the ON RRP rate is set at 4.55% as of October 2025. Daily usage peaked at \$2.55 trillion in December 2022 but fell to \$450 billion by September 2025 as reserves tightened. Transactions are capped at \$160 billion per counterparty, with the Fed selling securities and repurchasing them the next day.

It absorbs excess liquidity, preventing rates from falling below the target; during 2021 abundance, it drained over \$1 trillion daily from money funds yielding below market rates. In the ample reserves framework, ON RRP complements IORB (4.90%) for non-banks, stabilizing the federal funds rate within 4.75-5.00%.

Usage in 2025 averaged \$600 billion, down from 2023 highs, reflecting QT progress and higher opportunity costs in alternatives like T-bills yielding 4.7%.

Personal Consumption Expenditures (PCE)

A measure of US inflation tracking average price changes in goods and services consumed by households, released monthly by the Bureau of Economic Analysis.

The PCE Price Index calculates inflation using data from business surveys on consumer spending, covering a broader range of expenditures than CPI, including items paid by employers like health insurance. For August 2025, the PCE inflation rate stood at 2.7% year-over-year, up from 2.6% in July, with a monthly increase of 0.2%. It uses a chain-type index, adjusting weights dynamically for consumer substitution, such as switching from beef to chicken when prices rise.

The Federal Reserve prefers PCE over CPI for its 2% inflation target because it better reflects changing consumption patterns, with historical data showing PCE often 0.3-0.5 percentage points lower than CPI annually. In 2025, services contributed 65% to PCE, driving recent inflation with a 3.8% annual rise, while goods increased 1.2%. The index is revised quarterly with comprehensive data, like the July 2025 update incorporating 2023 annual surveys, adjusting prior estimates by up to 0.2 points.

Quantitative Easing (QE)

A Federal Reserve policy of large-scale asset purchases, primarily Treasuries and MBS, to lower long-term interest rates and stimulate the economy when short-term rates are near zero.

The Fed has conducted four rounds of QE: QE1 (2008-2010, \$1.75 trillion), QE2 (2010-2011, \$600 billion), QE3 (2012-2014, \$1.6 trillion), and QE4 (2020-2022, \$4.9 trillion during COVID). Purchases are made through primary dealers, injecting reserves into the banking system, which peaked at \$8.9 trillion in April 2022. For example, QE reduced 10-year Treasury yields by about 100 basis points during the Great Recession.

QE works by signaling commitment to low rates, reducing term premiums, and encouraging lending; studies show it boosted GDP by 3% and employment by 2 million jobs post-2008. However, it increased the Fed's balance sheet from \$900 billion pre-2008 to \$7.2 trillion in 2025, raising concerns over asset bubbles in stocks (S&P 500 up 400% since 2009).

In 2025, with rates above zero, QE is not active, but the Fed holds \$4.5 trillion in Treasuries and \$2.3 trillion in MBS, allowing gradual runoff at \$25 billion monthly for MBS.

Secured Overnight Financing Rate (SOFR)

A benchmark rate measuring the cost of borrowing cash overnight collateralized by U.S. Treasury securities in the repurchase agreement market.

Published daily by the New York Fed since 2018, SOFR is a volume-weighted median of repo transactions, averaging \$1.8 trillion daily volume in 2025. It replaced LIBOR in 2023 for new contracts, with the rate at 4.83% on October 2, 2025. SOFR includes tri-party, GCF, and bilateral repos, excluding unsecured lending.

It's used in \$200 trillion of financial products, including derivatives (e.g., SOFR futures traded 1.2 billion contracts in 2024 on CME) and loans. Term SOFR rates for 1-month (4.72%) and 3-month (4.55%) are forward-looking, calculated by CME. During March 2020 stress, SOFR spiked to 5.25% before Fed intervention.

In 2025, SOFR underpins 95% of new floating-rate debt, with a fixed spread of 11.448 bps added for LIBOR transitions.

Supervisory Capital Assessment Program (SCAP)

A one-time 2009 Federal Reserve stress test of the 19 largest U.S. bank holding companies to determine capital needs amid the financial crisis.

Conducted from February to May 2009 on firms with over \$100 billion in assets (e.g., Bank of America, Citigroup), SCAP used a baseline and more adverse scenario with 8.9% unemployment and 3.3% GDP decline. It projected \$600 billion in losses over two years, identifying a \$75 billion capital shortfall across 10 banks. Banks raised \$185 billion in capital post-results, exceeding requirements.

SCAP required Tier 1 common capital ratios of at least 4% under stress, leading to conversions like GMAC's \$3 billion preferred to common equity. It was paired with the Capital Assistance Program (CAP), offering Treasury convertible preferred stock, though unused as markets stabilized. The transparent methodology, including loss rates (e.g., 9.1% on first-lien mortgages), restored confidence, with the S&P 500 rising 35% in 2009.

SCAP paved the way for annual CCAR and DFAST, influencing global stress testing; its design estimated revenues at \$363 billion against losses.

Treasury Bills (T-Bills)

Short-term U.S. government debt securities with maturities from 4 to 52 weeks, sold at a discount and maturing at face value.

Issued weekly via auctions, T-bills have no coupon interest; yield is the difference between purchase price and \$1,000 par (e.g., a 4-week bill at 99.6 yields 5.2% annualized). In 2025, outstanding T-bills total \$5.5 trillion, with 52-week yields at 4.3% as of October. Minimum purchase is \$100, with competitive bids setting rates.

Backed by the full faith and credit of the U.S., they are exempt from state taxes and used as collateral in repos (e.g., \$2 trillion daily). During crises, yields drop; in March 2020, 3-month T-bills yielded 0.02%. Investors include money funds holding \$3 trillion in T-bills in 2025.

Auction results influence money market rates; a recent 26-week auction cleared at 4.55%, closely tracking the federal funds rate.

Treasury Bonds (T-Bonds)

Long-term U.S. government debt securities with 20- or 30-year maturities, paying semiannual fixed interest.

Auctioned quarterly, T-bonds have minimum denominations of \$100, with a 30-year bond issued in August 2025 at 4.625% coupon yielding 4.4%. Outstanding amount is \$8 trillion in 2025, used for funding deficits exceeding \$1.8 trillion annually. They are callable after 25 years for 30-year bonds.

Yields influence long-term borrowing; the 30-year yield at 4.5% in October 2025 affects corporate bonds (AAA at 4.8%). During inflation spikes, yields rose to 5.0% in 2023, causing price drops of 20% for existing bonds. Foreign holders own 30%, with Japan at \$1.1 trillion.

Institutional investors favor them for duration; insurance companies allocate 40% of portfolios to T-bonds.

Treasury Notes (T-Notes)

Intermediate-term U.S. government debt securities with maturities of 2, 3, 5, 7, or 10 years, paying semiannual fixed interest.

Auctioned monthly, T-notes have face values starting at \$100, with coupons like 4.375% for a 10-year note issued in August 2025 yielding 4.1% at auction. Outstanding volume is \$18 trillion in 2025, comprising 60% of marketable Treasuries. Interest is taxable federally but exempt from state taxes.

They trade in secondary markets with yields inversely affecting prices; a 50 bps yield rise drops a 10-year note's price by about 4%. The 10-year note yield, at 4.2% in October 2025, benchmarks mortgage rates (30-year fixed at 6.5%). During QE, the Fed held \$3.5 trillion in notes.

Investors use them for duration matching; pension funds buy 7-year notes yielding 4.0% for liability hedging.

US Inflation Rate

The percentage increase in the general price level over a year, primarily measured by CPI at 2.9% for August 2025.

Calculated via CPI-U for 93% of the population, the rate reflects price shifts in urban areas, with August 2025 at 2.9% year-over-year, influenced by 3.6% food, 4.0% services, and –1.2% energy changes. Alternatively, PCE measures it at 2.7%, preferred by Fed for broader coverage including rural areas and flexible weights. Monthly, CPI rose 0.38% from July to August, with core at 0.26%.

Historical peaks include 9.1% CPI in June 2022, easing to 2.9% amid Fed hikes totaling 525 basis points from 2022-2023.

Nowcasting estimates October 2025 monthly CPI at 0.15%, core 0.25%, projecting annual around 2.8% if trends hold. Impacts include COLA adjustments; Social Security rose 2.5% for 2025 based on 2.6% Q3 CPI-W.

