# Treasury Bill Essentials

Your quick guide to understanding, buying, and managing U.S. Treasury Bills. Learn about their safety, auction process, yield calculation, and effective strategies like laddering.

## Understanding T-Bills

### What Are T-Bills?

**Definition:** Short-term debt obligations issued by the U.S. Treasury.

Used by the government to finance its operations.

**Maturity:** Available in 4, 8, 13, 26, and 52-week terms.

**How They Work:** Sold at a discount to their face value. The investor receives the face value at maturity, with the difference being the interest earned.

**Example:** You buy a $1,000 T-Bill for $980. At maturity, you receive $1,000, earning $20 interest.

**Safety:** Considered among the safest investments globally due to being backed by the full faith and credit of the U.S. government.

**No Coupon Payments:** Unlike bonds, T-Bills do not pay periodic interest (coupon payments). Income is realized at maturity.

**Denomination:** Typically issued in increments of $100, with a minimum purchase of $100.

**Auction Process:** New T-Bills are sold via a weekly auction process.

### Key Characteristics

**Discount Security:** Purchased below face value. Return is the difference between face value and purchase price.

**Short-Term Maturity:** Defines them as money market instruments, distinct from longer-term Treasury notes and bonds.

**Highly Liquid:** Easily bought and sold in the secondary market before maturity.

**Auction Frequency:**

- 4, 8, 13, 26-week: Weekly
- 52-week: Every four weeks

**Minimum Bid Amount:** $100.

**Interest Calculation Basis:** Yields are quoted on a discount basis (annualized based on a 360-day year) but can be converted to a bond-equivalent yield (365/366 days) for comparison.

**Tax Treatment:** Interest is exempt from state and local income taxes, but subject to federal income tax.

**Registration:** Available in book-entry form only (electronic, no physical certificates).

### Benefits of Investing

**Maximum Safety:** Lowest risk investment globally, backed by the U.S. government.

**Predictable Return:** You know exactly what you will receive at maturity.

**Liquidity:** Can be sold on the secondary market if funds are needed before maturity, although the price may fluctuate.

**State/Local Tax Exemption:** Offers a tax advantage over corporate bonds or CDs for residents of states with high income tax.

**Diversification:** Adds a low-risk component to a diversified investment portfolio.

**Ideal for Short-Term Goals:** Suitable for parking cash needed in the near future (e.g., down payment, emergency fund).

**Transparency:** Auction results and market prices are publicly available.

### Risks to Consider

**Inflation Risk:** The return on T-Bills might be lower than the rate of inflation, reducing your purchasing power over time. This is the primary risk for T-Bills.

**Interest Rate Risk:** While minimal for short-term T-Bills, if you sell before maturity and interest rates have risen since you bought, the price may be lower than your purchase price.

**Lower Potential Returns:** Compared to riskier assets like stocks or corporate bonds, T-Bills typically offer lower yields.

**Reinvestment Risk:** When a T-Bill matures, future yields might be lower than the yield you previously received, requiring you to reinvest at a lower rate.

**Opportunity Cost:** Funds tied up in low-yield T-Bills could potentially earn higher returns elsewhere, though at higher risk.

**Market Volatility (Secondary Market):** If you sell before maturity, the secondary market price can fluctuate based on current interest rates, potentially resulting in a loss if rates have risen.

## Buying & Managing T-Bills

### How to Buy T-Bills

**TreasuryDirect:**

- Official government website.
- Buy directly from the Treasury without fees.
- Set up an account (individuals, businesses, minors).
- Link a bank account for funding and redemption.
- Primary market purchases (at auction) and limited secondary market access.

**Brokerage Account:**

- Buy through major online brokers (Schwab, Fidelity, Vanguard, etc.).
- Access primary market auctions and the extensive secondary market.
- May involve fees (commissions, markups) depending on the broker and transaction type.

**Choosing Your Method:**

- TreasuryDirect: Best for simple buy-and-hold strategies, zero fees.
- Brokerage: Better for secondary market trading, integrating with other investments, and potentially easier access for large investors.

**Setting Up:** Both require identity verification and linking a bank account.

**Funding:** Funds are typically debited from your linked bank account just before the T-Bill is issued (settlement date).

**Minimums:** $100 minimum purchase for both methods.

### The Auction Process

**Weekly Auctions:** T-Bills are auctioned every week (or every four weeks for 52-week). Treasury announces auction details beforehand.

**Two Bid Types:**

1. **Non-Competitive Bid:** You agree to accept the yield determined by the auction.
    - Guaranteed to receive the amount you bid for (up to $5M for individuals).
    - Receive the *high yield* of the auction (the highest accepted yield from competitive bidders).
    - Ideal for individual investors prioritizing certainty of purchase over a specific yield.

**Two Bid Types (cont.):**
2. **Competitive Bid:** You specify the yield you are willing to accept.
* May or may not receive the T-Bills; allocation starts from lowest yield (highest price) to highest yield (lowest price) until the offering amount is met.
* Primarily used by large institutional investors.
* Risks missing out if your bid yield is too low.

**Auction Results:** Treasury publishes results showing the high yield, median yield, and amount of bids received vs. accepted.

**Submission Deadline:** Bids must be submitted by the deadline, typically earlier on the auction day.

**Settlement Date:** The date the T-Bill is issued and funds are withdrawn, typically a few days after the auction.

**Primary vs. Secondary Market:** Auctions are the *primary* market. After issuance, T-Bills trade in the *secondary* market (via brokers).

### Calculating Yields

**Discount Yield (Published Yield):** Annualized return based on the discount from face value, calculated on a 360-day year.

Formula:
`[(Face Value - Purchase Price) / Face Value] * [360 / Days to Maturity]`

**Example (Discount Yield):** $1,000 T-Bill, 90 days to maturity, bought for $985.

`[(1000 - 985) / 1000] * [360 / 90] = [15 / 1000] * 4 = 0.015 * 4 = 0.06` or 6%.

**Bond-Equivalent Yield (Investment Yield):** Annualized return calculated on a 365 (or 366) day year, providing a better comparison to coupon bonds or other investments.

Formula:
`[(Face Value - Purchase Price) / Purchase Price] * [365 / Days to Maturity]`

**Example (Bond-Equivalent Yield):** Using the same example: $1,000 T-Bill, 90 days to maturity, bought for $985.

`[(1000 - 985) / 985] * [365 / 90] = [15 / 985] * 4.0556 ≈ 0.01522 * 4.0556 ≈ 0.0617` or 6.17%.

**Why the Difference?** Discount yield is based on face value and a 360-day year, while Bond-Equivalent Yield is based on the actual investment amount and a 365-day year, making it a more accurate reflection of the return on investment.

**Which to Use?** Use Bond-Equivalent Yield when comparing T-Bills to other investments like corporate bonds, CDs, or money market funds.

**Check TreasuryDirect:** Auction results published by TreasuryDirect usually include both the high discount rate and the investment rate (bond equivalent yield).

### Managing Your T-Bills

**At Maturity:**
- If held in TreasuryDirect: Funds are automatically deposited into your linked bank account on the maturity date.
- If held at a Brokerage: Funds are credited to your brokerage cash balance on the maturity date.
- The face value is paid out; the interest is the difference from the purchase price.

**Reinvestment (TreasuryDirect):** You can set up automatic reinvestment for eligible T-Bills (4, 8, 13, 26-week) for up to two years. You'll receive the new high yield at the next auction.

**Selling Before Maturity:**
- Only possible through a brokerage account (or limited secondary market via TreasuryDirect's Sell function for some securities).
- The sale price will depend on prevailing market interest rates at the time of sale.
- If rates have risen, you may sell at a loss (below your purchase price).
- If rates have fallen, you may sell at a gain (above your purchase price).

**Tracking:** Keep track of maturity dates, especially if you have multiple T-Bills with different terms.

**Tax Reporting:** You will receive a Form 1099-INT reporting the interest income (the difference between face value and purchase price) for the year the T-Bill matures or is sold.

**Automated Investing:** Some brokers offer automated tools or money market funds that invest heavily in T-Bills for convenience.

**Understanding Your Statement:** Whether from TreasuryDirect or a broker, understand how purchase price, face value, yield, and maturity are displayed.

## Tips, Tricks & Strategies

### Strategies: Laddering

**What is Laddering?** Buying T-Bills with staggered maturity dates (e.g., buying 4, 8, 13, and 26-week bills).

**How it Works:** As each T-Bill matures, you reinvest the proceeds into a new T-Bill with the longest desired maturity (e.g., buying a new 26-week bill).

**Benefit 1: Liquidity:** Provides regular access to cash as bills mature periodically.

**Benefit 2: Mitigate Reinvestment Risk:** You don't reinvest your entire amount at a single point in time, hedging against reinvesting everything when yields are low.

**Benefit 3: Capture Higher Yields:** By always buying the longest maturity in your ladder, you typically capture slightly higher yields than consistently buying the shortest term.

**Example:** Start with $10k. Buy $2.5k of 4, 8, 13, and 26-week bills. When the 4-week matures, buy a new 26-week bill. When the 8-week matures, buy another 26-week bill, and so on. Eventually, you'll have $2.5k maturing every 4 weeks.

**Flexibility:** Adjust the ladder based on your cash flow needs (e.g., use only 4 and 8-week bills for shorter needs).

### Tax Advantages & Planning

**State & Local Tax Exemption:** T-Bill interest is *always* exempt from state and local income taxes.

This is a significant advantage, especially for residents in high-tax states.

**Federal Taxable:** T-Bill interest *is* subject to federal income tax.

**Timing of Taxation:** For T-Bills held to maturity, the income (difference between face value and purchase price) is generally taxed in the year the T-Bill *matures*, not the year you bought it.

This can offer a slight tax deferral if you buy late in one year and it matures early the next.

**Selling Before Maturity (Tax):** If you sell a T-Bill before maturity, any gain or loss is typically treated as a capital gain or loss, not interest income.

**Example (Tax Deferral):** Buy a 13-week T-Bill in October 2023. It matures in January 2024. The income is taxed on your 2024 federal tax return (filed in 2025).

**Reporting:** You'll receive a Form 1099-INT from TreasuryDirect or your broker showing the federally taxable interest income.

**Consider Tax Bracket:** The value of the state/local tax exemption increases with your state's income tax rate. Factor this into comparisons with taxable alternatives like CDs or corporate money market funds.

## Monitoring Yields & Markets

**Follow Auction Results:** Check the TreasuryDirect website for the latest auction results. This shows the prevailing yields for different maturities.

**Understand the Yield Curve:** Plotting yields for different maturities gives you the yield curve. An *inverted* yield curve (short-term yields higher than long-term) can indicate market expectations of future interest rate cuts or economic slowdown.

**Federal Reserve Policy:** T-Bill yields are highly sensitive to Federal Reserve monetary policy, especially the target federal funds rate. Pay attention to Fed announcements.

**Inflation Data:** Monitor inflation reports (CPI, PCE) as high inflation erodes the real return on T-Bills.

**Economic Indicators:** GDP growth, employment reports, and consumer confidence can influence interest rate expectations and thus T-Bill yields.

**Compare Alternatives:** Benchmark T-Bill yields against high-yield savings accounts, money market funds, and Certificates of Deposit (CDs) to ensure you're getting a competitive rate for your low-risk cash.

**Brokerage Data:** Brokerage platforms often provide real-time or near-real-time data on secondary market T-Bill prices and yields.

## Common Pitfalls & Tips

**Pitfall: Confusing Yields:** Don't confuse Discount Yield with Bond-Equivalent Yield. Always use Bond-Equivalent Yield for comparing to other investments.

**Tip: Use Non-Competitive Bids:** For individuals, non-competitive bids at auction are usually the simplest and guarantee you'll get the T-Bill at the market-clearing rate (the high yield).

**Pitfall: Ignoring Inflation:** While safe nominally, high inflation can mean you lose purchasing power. T-Bills are not a substitute for inflation-protected securities (like TIPS) in all scenarios.

**Tip: Ladder for Liquidity:** If you anticipate needing cash periodically, a T-Bill ladder is an excellent way to ensure funds are available without selling before maturity.

**Pitfall: Overlooking Brokerage Fees:** If buying T-Bills in the secondary market or even primary market via a broker, be aware of potential transaction fees or markups that can reduce your effective yield.

**Tip: Set Reminders:** If not using auto-reinvest, set reminders for maturity dates so you don't miss opportunities to reinvest or use the funds.

**Pitfall: Not Comparing Tax-Adjusted Yields:** When comparing T-Bills to taxable investments (like corporate bonds or CDs), calculate the *after-tax* yield to make a fair comparison, factoring in the state/local tax exemption.

**Tip: Start Small:** If new to T-Bills, start with a small investment in a short-term bill (like 4 or 8-week) via TreasuryDirect to familiarize yourself with the process.