

# US Equity Taxation

How capital-gains taxation works for US stocks — and how this portfolio tool implements it

## 1. The core idea

When you sell a US-listed equity at a different price from the one you bought it at, the **realised gain or loss** becomes a taxable event in the year of the sale. Unrealised gains on open positions are **not** taxed — the IRS only recognises profit at the moment of disposal. The amount of tax owed depends on two things:

- **How long you held the shares** (the holding period), which determines whether the gain is short-term or long-term.
- **Your overall taxable income**, which places long-term gains into one of three preferential brackets (0%, 15% or 20%) and short-term gains into the ordinary-income schedule.

## 2. Short-term vs long-term

The holding period begins the **day after acquisition** and ends on the day of sale. If the sale date is *strictly more than one year* after the acquisition date, the gain is **long-term**; otherwise it is **short-term**. One year exactly (to the day) is still short-term.

Attribute	Short-term (ST)	Long-term (LT)
<b>Holding period</b>	1 year or less	More than 1 year
<b>Tax rate (federal, 2024-26)</b>	Ordinary income: 10%-37%	0% / 15% / 20% by bracket
<b>Additional (NIIT)</b>	3.8% above income threshold	3.8% above income threshold
<b>Loss treatment</b>	Offsets ST gains first	Offsets LT gains first
<b>Cross-bucket offset</b>	Net ST loss offsets LT gain	Net LT loss offsets ST gain

Long-term gains enjoy preferential rates because tax policy rewards patient capital. Short-term gains are taxed as ordinary wage income — the highest marginal rates in the US system.

## 3. Long-term capital-gains brackets (2024)

Long-term rates depend on total taxable income, not just capital gains. The thresholds below are for the 2024 tax year — 2025 values are indexed slightly higher for inflation.

Filing status	0% rate up to	15% rate up to	20% rate above
<b>Single</b>	\$47,025	\$518,900	\$518,900
<b>Married joint</b>	\$94,050	\$583,750	\$583,750
<b>Head of house.</b>	\$63,000	\$551,350	\$551,350

An additional **3.8% Net Investment Income Tax (NIIT)** applies when modified AGI exceeds \$200,000 (single) or \$250,000 (married joint), pushing the effective top rate on LT gains to 23.8% and on ST gains to 40.8%.

## 4. How losses offset gains (§1211)

Capital losses are netted in a strict two-stage procedure defined by IRC §1211:

- **Stage 1 — same-bucket netting.** All ST gains and losses across every symbol are summed into a single ST net. All LT gains and losses are summed into a single LT net.
- **Stage 2 — cross-bucket offset.** If one bucket is a net loss and the other a net gain, the loss reduces the other bucket's gain before any tax is computed. A net ST loss first offsets any LT gain (and vice-versa).
- **Residual loss.** Up to \$3,000 of a remaining net capital loss may be deducted against ordinary income in the current year; any excess is carried forward indefinitely.

## 5. Worked example — classification

Consider the following trade history for AAPL:

Date	Symbol	Action	Qty	Price	Note
2023-03-15	AAPL	Buy	10	\$150	acquisition A
2024-09-01	AAPL	Buy	10	\$200	acquisition B
2025-04-01	AAPL	Sell	15	\$220	partial exit

On 2025-04-01 we sell 15 AAPL at \$220. Under FIFO, the first 10 shares sold come from the March 2023 acquisition (held ~2 years → **long-term**) and the remaining 5 come from the September 2024 acquisition (held ~7 months → **short-term**):

Bucket	Qty sold	Acquisition date	Holding period	Classification	P&L per share	P&L
LT	10	2023-03-15	~2 years	> 1 year → LT	\$220 – \$150 = \$70	\$700
ST	5	2024-09-01	~7 months	≤ 1 year → ST	\$220 – \$200 = \$20	\$100

The single sale produces **two separate tax lots**: \$700 of LT gain and \$100 of ST gain. Each goes into its own bucket for netting with the rest of the year's trades.

## 6. Worked example — cross-bucket offset

Suppose by year-end the portfolio's totals are: ST net **–\$2,000** (a loss) and LT net **+\$5,000** (a gain). The §1211 netting produces:

Step	Short-term	Long-term
Net P&L across all sales	–\$2,000	+\$5,000
Cross-bucket offset (ST loss absorbs LT gain)	+\$2,000 → \$0	–\$2,000 → \$3,000
Taxable amount	\$0	\$3,000
Applied rate	37% (unused — no gain)	20%
Tax owed	\$0	\$600

Without the offset, the LT gain would have been taxed on the full \$5,000. The ST loss effectively shields \$2,000 of that gain at the LT rate.

## 7. How this site implements it

The portfolio tool estimates tax on realised gains using a purely deterministic model driven by the trade ledger. It does not model NIIT, bracket interactions with ordinary income, wash sales, qualified-dividend interactions, or foreign-account rules — so treat its output as a planning figure, not a tax filing.

### 7.1 Portfolio-level inputs

- **Short-term tax rate** — set per portfolio (e.g. 37% for top ordinary-income bracket).
- **Long-term tax rate** — set per portfolio (e.g. 15% or 20% depending on income).
- Both values are stored on the *portfolios* table as decimal fractions ( $0.37 = 37\%$ ) and can be changed at any time.

### 7.2 Per-trade classification

For every sell trade, the engine walks a **parallel FIFO date queue** of the symbol's acquisition lots — independent of the cost-basis method configured on the portfolio. Each sold share is matched to the oldest remaining acquisition lot; its holding period is (*sell\_date* – *acquisition\_date*), and it is classified as long-term when that difference strictly exceeds one calendar year.

Crucially, this FIFO date queue is used **even when the cost-basis method is Average**. The Average method computes cost per share as a running weighted mean, but tax law still requires a holding-period determination per share. The IRS default for Average-cost accounts (used by mutual funds) is FIFO for the date of each sold share — which is the rule we apply.

### 7.3 Per-bucket netting and cross-bucket offset

Each trade's realised P&L is split into ST and LT components using the qty ratio drawn from the FIFO date queue. These per-trade components accumulate into two portfolio-wide nets, *stNet* and *ltNet*. The offset step then mirrors §1211:

```
if stNet < 0 and ltNet > 0:
    offset = min(-stNet, ltNet)
    stTaxable = stNet + offset # walks toward 0
    ltTaxable = ltNet - offset
elif ltNet < 0 and stNet > 0:
    (symmetric - LT loss offsets ST gain)

stTax = max(0, stTaxable) × stRate
ltTax = max(0, ltTaxable) × ltRate
totalTax = stTax + ltTax
```

A bucket that remains negative after offsetting yields **zero tax** (losses never create a refund directly — they can only shield other gains or carry forward). The \$3,000 ordinary-income deduction and loss carryforwards are **not** modelled.

### 7.4 Where it appears in the UI

- The **Return panel** on the portfolio page shows a "Tax on Realized P&L" row with the total tax figure and a ST/LT breakdown showing each bucket's net P&L and the resulting tax after offset.
- The new-portfolio form exposes both rates as percentage inputs; existing portfolios can be updated via the PortfolioUpdate endpoint.

- The figure updates reactively: any change to trades, cost basis, current prices, or tax rates flows through the *symbolLedger* → *realizedTax* memo chain.

## 8. Caveats and simplifications

- **Wash-sale rule (§1091)** — the IRS disallows a loss if a substantially identical security is repurchased within 30 days before or after the sale. Not modelled; realised losses are always counted.
- **Specific-identification** — a taxpayer may elect to identify exactly which lot is sold (rather than defaulting to FIFO). Not supported; the tool always uses FIFO for dates.
- **Qualified dividends** and interest income are outside the ledger's scope and are not taxed here.
- **State taxes** vary widely (e.g. California treats all gains as ordinary income, Florida has none). Only federal-style single-rate buckets are modelled.
- **Bracket interaction** — in reality LT rates depend on total income, which pushes some of the gain into a higher band. The tool assumes a single flat LT rate per portfolio.
- **NIIT** (3.8% on investment income above thresholds) is not added on top.

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Financial Analysis — internal reference on US equity tax modelling. Not tax advice.