Stocks or bonds?

A bond is a loan, a stock is ownership; return and risk go together (US data 1928-2024); the mix of stocks and a safe part; doubling time; diversification and the index fund; what a fund fee costs; why an average is not a promise.

1 Stock and bond

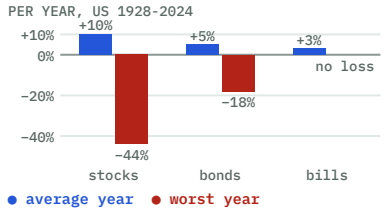
owner or lender

- **Bond**: "a loan to a company or a government, with a promised interest" → interest on a schedule + money back on a set date → you are a **lender**
- **Stock**: "a share of ownership in a company, with a claim on its profits" → good years and bad years → you are an **owner** · nothing promised
- $1,000 bond, 4%, 3 years → $40 a year × 3 = $120 → **$1,120** · same $1,000 in one stock → more, less, or **$0**
- Promise ≠ certainty: a bond's **price** can fall too: rates ↑ → new bonds pay more → old bonds sell for less (US 10-year bonds −18% in 2022)

2 Return and risk

US, 1928-2024

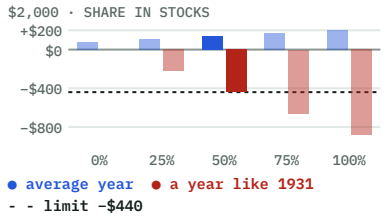
- **Return** = what a year adds to (or takes from) the money, in % · average year: stocks ≈ **10%** · 10-year government bonds ≈ **5%** · 3-month bills (short government loans) ≈ **3%**, never a losing year (Aswath Damodaran, finance professor, NYU Stern; rounded)
- Worst year: stocks **−44%** (1931), −37% (2008) · bonds −18% (2022)
- Higher average ⇔ deeper falls → **risk premium**: "the extra average return paid to people who accept a bigger chance of loss"
- Same choice, small scale: $50 sure or coin flip $120 / $0 → expected value (average outcome) ½ × $120 = $60 · taking the sure $50 = not a mistake, a dislike of risk



3 The mix

toy numbers

- Safe part: 4%, never loses · stock part: 10% on average, −44% in a year like 1931
- `average ≈ 4% + 6% × share in stocks` · `bad-year loss = 44% × the stock part`
- $1,000, half in stocks → 7%, **−$220** · $2,000: 0% → +$80, $0 · 50% → +**$140**, **−$440** · 100% → +$200, −$880
- Limit of −$440 on $2,000 → at most **50%** in stocks · more in stocks → more on average, deeper falls



4 Time

rule of 72

- `years to double ≈ 72 ÷ rate` · 10% → ≈ **7** years · 5% → ≈ **14** years (twice as long)
- $1,000 for 30 years: at 10% → ≈ **$17,000** · at 5% → ≈ $4,300 → the return matters; the falls are its price

5 Diversify

one basket or many · index fund

- **Diversification**: "spreading money over many different assets so that no single failure ruins you"
- One company → one failure → **$0** · one industry (5 airlines, 4 oil firms) → one shock hits all · spread wide (500 firms, thousands worldwide) → all must fail at once
- Employer's shares only → **job + savings** on one firm · a crash still hits a wide fund: S&P 500 −37% in 2008 → $1,000 → $630
- **Index** = a list of companies (S&P 500: 500 large US firms) · **index fund**: holds every company in it, no picking · John Bogle (American), first one for savers, 1976

6 Fees

a certain cost

- **Expense ratio**: "the yearly fee of a fund, as a percentage of the money in it" · US: index stock funds ≈ **0.05%**, funds with managers ≈ **0.6%** (Investment Company Institute, US fund-industry association, 2025)
- $10,000 → $60 against $5 a year · $20,000 → $120 against $10 → $110 a year → **$1,100** in 10 years, before growth (Lesson 8 adds it)

Watch out: an average is **not a promise** → US stocks fell in about **one year in four** · 10% average ≠ $1,000 → $1,100 next year · "bonds can't lose" × (−18%, 2022) · a fee is certain, the return is not

This is a lesson, not financial advice. It shows what the evidence says about choices like these; what is right for you depends on your life.