Is your money safe in the bank?

What a bank does with deposits and why a bank run can happen; deposit insurance and its limits; nominal against real interest rate; the gap between an account at 2% and prices at 3%; the emergency fund: how big, and where.

1 What a bank does

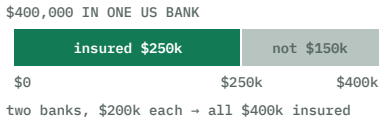
middleman

- Deposit → **not** in a vault → bank keeps a part as cash, **lends** the rest → interest on loans (the extra a borrower pays back) pays your interest
- Savers → bank → borrowers · works as long as savers do not all come back at once
- **Bank run**: "many savers withdraw at once, and a healthy bank cannot pay them all"
- Rumor → fear → everyone withdraws the same day → only the cash kept → run · 100 × $100, keeps $2,000 → pays **20** of 100 · 200 × $500, keeps a tenth → $10,000 → **20** of 200

2 Deposit insurance

what stops a run

- Government scheme → pays depositors back, up to a limit, if the bank fails (runs out of money, closes) → no reason to run
- US (FDIC, the federal deposit insurer): **$250,000** per person **per bank** · EU: **€100,000** · limits differ by country, change over time
- $300k in one bank → $250k back, $50k not insured · $400k in one bank (one or two accounts) → $250k · $200k + $200k in **two** banks → all $400k · €150k → €100k
- Insured = **safe in dollars** ≠ safe in what dollars buy



3 Nominal and real

after prices

- **Nominal rate**: what the bank pays, in dollars · **real rate**: the gain in buying power
- **Inflation**: how fast prices rise, % a year · `real rate ≈ nominal rate − inflation` (≈ about)
- 2% − 3% = **−1%** · 3% − 3% = 0% · 4% − 3% = +1% · 5% − 3% = +2% · 1% − 4% = **−3%**
- Leo: $2,000 at 1%, prices +4% → $2,020, goods now $2,080 → buys ≈ **$1,940** of today's goods

4 The gap

20 years at 2%

- Maya: $1,000 at 2% → **$1,486** after 20 years · today's $1,000 of goods → **$1,806** (prices +3% a year)
- −1% a year × 20 ≈ −20% · exactly: $(1.02 \div 1.03)^{20} \approx 0.82$ → buys ≈ **$820** of today's goods: nearly a fifth less
- Keeps up only at rate = inflation (3%: both $1,806) · 4% → $2,191, buys ≈ $1,213



5 Emergency fund

what the bank is for

- **Emergency fund**: "cash kept for surprises, in a safe account you can reach the same day" → lost job, repair, medical bill
- Rule of thumb, not a law: **3 to 6 months** of spending (more if income is unsteady) · $1,500 a month → $4,500-$9,000 · $2,000 → $6,000-$12,000
- Needs: **safe** (insured) + **instant** (today) + **boring** · for what is **unexpected and necessary** → not a sale, not a planned trip
- Fits: insured savings or checking (everyday, card) account · not safe: cash at home, one company's shares (price moves daily) · not instant: deposit locked 5 years, 90 days' notice

Watch out: "safe" in the bank = safe in **dollars**, not in **buying power** → at 2% with 3% inflation the balance grows and buys less · and insurance counts per person **per bank**, not per account

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.