How do you stop inflation?

Why prices feed themselves, how a higher rate slows them with a lag, what it costs in jobs, why belief in the bank matters, and what the US saw in 1979-83.

1 Problem · tool

inflation

- **Inflation** = general price level ↑ ⇒ each $ buys less · 10%: $100 → $110 → $121 · hurts **fixed incomes** (pension $1,000) · helps borrowers at a fixed rate
- **Tool** → central bank **interest rate** ⇒ loans dearer ⇒ spending ↓ ⇒ AD (aggregate demand = total spending) left ⇒ pressure on prices ↓

2 Feeds itself

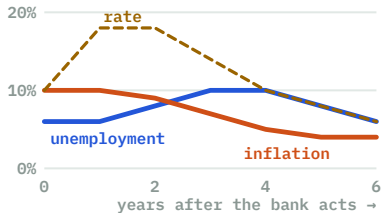
expectations

- expect 10% ⇒ ask 10% pay ⇒ firms raise prices 10% ⇒ expect 10% again · bank must change **expected inflation**
- **Real rate** = `rate − inflation` · 10% − 10% = **0** ⇒ no bite · 18% − 10% = **8** ⇒ bites · 6% − 9% = **−3** ⇒ borrowing is a bargain
- Rate must be **above** inflation to slow anyone down

3 The lag

jobs first

- Toy: inflation 10%, normal unemployment **6%** (no push on prices) · rate 10% → **18%** in year 1
- Rule: `inflation falls ½ point per point of unemployment above 6%` · below 6% it **rises** · overheating: inflation 2%, unemployment 4% ⇒ +1 a year ⇒ **6%** after 4 years
- **Jobs are lost first** → unemployment peaks year 3 (10%) → inflation 4% only in year 5 · **lag** = time between policy and effect



4 The cost

sacrifice ratio

- **Point-year** = 1 point of extra unemployment for 1 year · 2 + 4 + 4 + 2 = **12**
- **Sacrifice ratio** = `point-years ÷ points of inflation cut` = 12 ÷ 6 = **2**
- **Credibility** = people believe the bank ⇒ expect less ⇒ ask less ⇒ 1 + 1 + 1 = **3** point-years for the same 6 points ⇒ ratio **0.5**
- Nordia: 8% → 4% = 4 points ⇒ unemployed 2 + 4 + 2 = **8** ⇒ ratio 2 · Country F 12% → 4%: not believed 8 × 2 = **16**; believed 2 + 3 + 2 + 1 = **8** ⇒ ratio **1**

5 Trust

independence · target

- Government may cut rates before a vote ⇒ people doubt · **independent bank** = sets rates on its own, goal set by law ⇒ promise **credible**
- **Inflation target** = public number to aim for · **New Zealand 1989**: 0-2%, reached by end 1991 · today many banks ≈ **2%**
- **Cold turkey** (one big rise: short, deep recession = real GDP ↓, jobs ↓) vs **gradual** (milder, longer) · Laurence Ball (US economist, 1993), 65 cases: fast cuts cost fewer jobs per point

6 Evidence

US 1979-86

- **Paul Volcker** (chair of the Fed = US central bank, 1979-87) · rate ≈ **16%** avg 1981, near **20%** in 1980
- Inflation **13.5%** (1980) → **3.2%** (1983) · unemployment **7.2%** (1980) → ≈ **10%** (1982, 10.8% in Dec) ⇒ **lag** again
- 1981: 10-year loans still ≈ **14%** ⇒ lenders still expected high inflation ⇒ belief not yet won ⇒ recession deeper

7 Trade-off

policy card

- FOR inflation eats savings, fixed incomes · harder to stop the longer it lasts · AGAINST a recession costs jobs now, hits those who lose them hardest
- **Positive** (data: “unemployment reached 10.8%”) ≠ **normative** (“was worth it”: values)
- Chain: bank raises rate ⇒ loans dearer ⇒ AD ↓ ⇒ sales, jobs ↓ ⇒ pay, prices slower ⇒ inflation ↓
- Policy card: problem **10% and expected** → tool **higher rate** → model **10% → 4%, 12 point-years** → evidence **US 1980-83** → trade-off **stable prices later vs jobs now**