



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.

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Problem · tool

inflation

- **Inflation** = general price level $\uparrow \Rightarrow$ each \$ buys less · 10%: \$100 $\rightarrow$ \$110 $\rightarrow$ \$121 · hurts **fixed incomes** (pension \$1,000) · helps borrowers at a fixed rate
- **Tool** $\rightarrow$ central bank **interest rate** $\Rightarrow$ loans dearer $\Rightarrow$ spending $\downarrow \Rightarrow$ **AD** left $\Rightarrow$ pressure on prices $\downarrow$

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Feeds itself

expectations

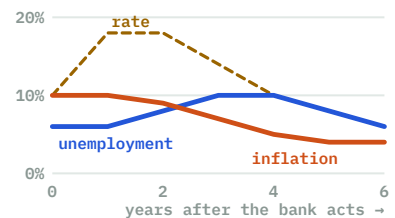
- expect 10% $\Rightarrow$ ask 10% pay $\Rightarrow$ firms raise prices 10% $\Rightarrow$ expect 10% again · bank must change **expected inflation**
- **Real rate** = **rate - inflation** · 10% - 10% = 0 $\Rightarrow$ no bite · 18% - 10% = 8 $\Rightarrow$ bites · 6% - 9% = -3 $\Rightarrow$ borrowing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

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The lag

jobs first

- Toy: inflation 10%, normal unemployment 6% · rate 10% $\rightarrow$ 18% in year 1
- Rule:
inflation falls $\frac{1}{2}$ point per point of unemployment above 6% · below 6% it **rises** · overheating: inflation 2%, unemployment 4% $\Rightarrow$ +1 a year $\Rightarrow$ 6% after 4 years
- **Jobs are lost first** $\rightarrow$ unemployment peaks year 3 (10%) $\rightarrow$ inflation 4% only in year 5 · **lag** = time between policy and effect



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The cost

sacrifice ratio

- **Point-year** = 1 point of extra unemployment for 1 year · 2 + 4 + 4 + 2 = 12
- **Sacrifice ratio** = **point-years $\div$ points of inflation cut** = 12 $\div$ 6 = 2
- **Credibility** = people believe the bank $\Rightarrow$ expect less $\Rightarrow$ ask less $\Rightarrow$ 1 + 1 + 1 = 3 point-years for the same 6 points $\Rightarrow$ ratio 0.5
- Nordia: 8% $\rightarrow$ 4% = 4 points $\Rightarrow$ unemployed 2 + 4 + 2 = 8 $\Rightarrow$ ratio 2 · not believed 12% $\rightarrow$ 4%: 8 $\times$ 2 = 16; believed: 8 $\Rightarrow$ ratio 1

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Trust

independence · target

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

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Evidence

US 1979-86

- **Volcker** (Fed chair 1979-87) · rate $\approx$ 16% avg 1981, near 20% in 1980
- Inflation 13.5% (1980) $\rightarrow$ 3.2% (1983) · unemployment 7.2% (1980) $\rightarrow$ $\approx$ 10% (1982, 10.8% in Dec) $\Rightarrow$ **lag** again
- 1981: 10-year loans still $\approx$ 14% $\Rightarrow$ lenders still expected high inflation $\Rightarrow$ belief not yet won $\Rightarrow$ recession deeper

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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%") $\neq$ **normative** ("was worth it": values)
- Chain: bank raises rate $\Rightarrow$ loans dearer $\Rightarrow$ AD $\downarrow \Rightarrow$ sales, jobs $\downarrow \Rightarrow$ pay, prices slower $\Rightarrow$ inflation $\downarrow$
- Policy card: problem 10% and expected $\rightarrow$ tool **higher rate** $\rightarrow$ model 10% $\rightarrow$ 4%, 12 point-years $\rightarrow$ evidence **US 1980-83** $\rightarrow$ trade-off **stable prices later vs jobs now**