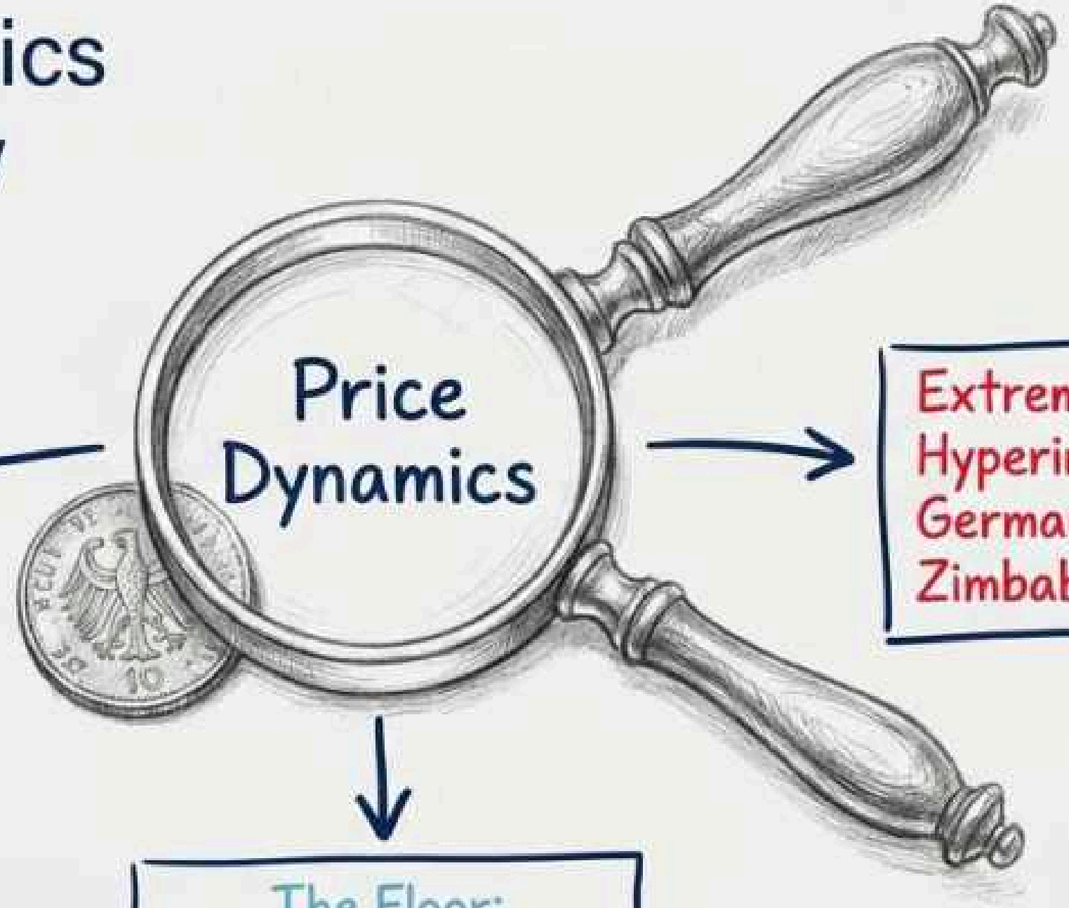
Charting the Dynamics of Prices and Money

¶ 5.1



Mechanics:
What is it?
Who wins and loses?
What drives it?

Extremes:
Hyperinflation in Germany, Hungary, Zimbabwe.

The Floor:
The hidden dangers of falling prices.

The answers to these three questions explain why central banks exert so much effort to control prices.

Gemini Notebook

Defining and Measuring the General Rise in Prices



Statisticians' typical basket of goods.

$$\pi = \frac{CPI_2 - CPI_1}{CPI_1} \times 100$$

$$t \approx \frac{72}{r}$$

Moderate Inflation	Elevated Inflation
r = 2% → t = 35 years to double. ✓	r = 10% → t = 7 years to double. !

Inflation dictates that each unit of money buys progressively less over time.

Gemini Notebook

The Silent Wealth Transfer

Savers, Fixed Incomes & Fixed-Rate Creditors

Borrowers with Fixed-Rate Debt



Fisher Equation:

$$r_{real} = i_{nominal} - \pi$$

↓ As π rises, r_{real} drops ↓

Repaying obligations with cheaper, devalued money.

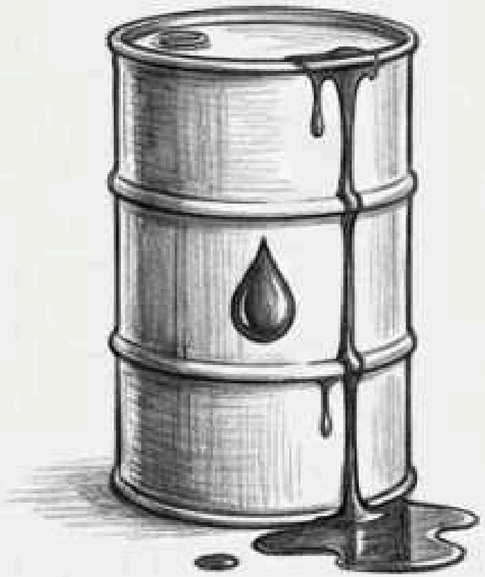
Gemini Notebook

The Three Engines of Price Acceleration



Demand-Pull: Spending outpaces production capacity.

AD > AS

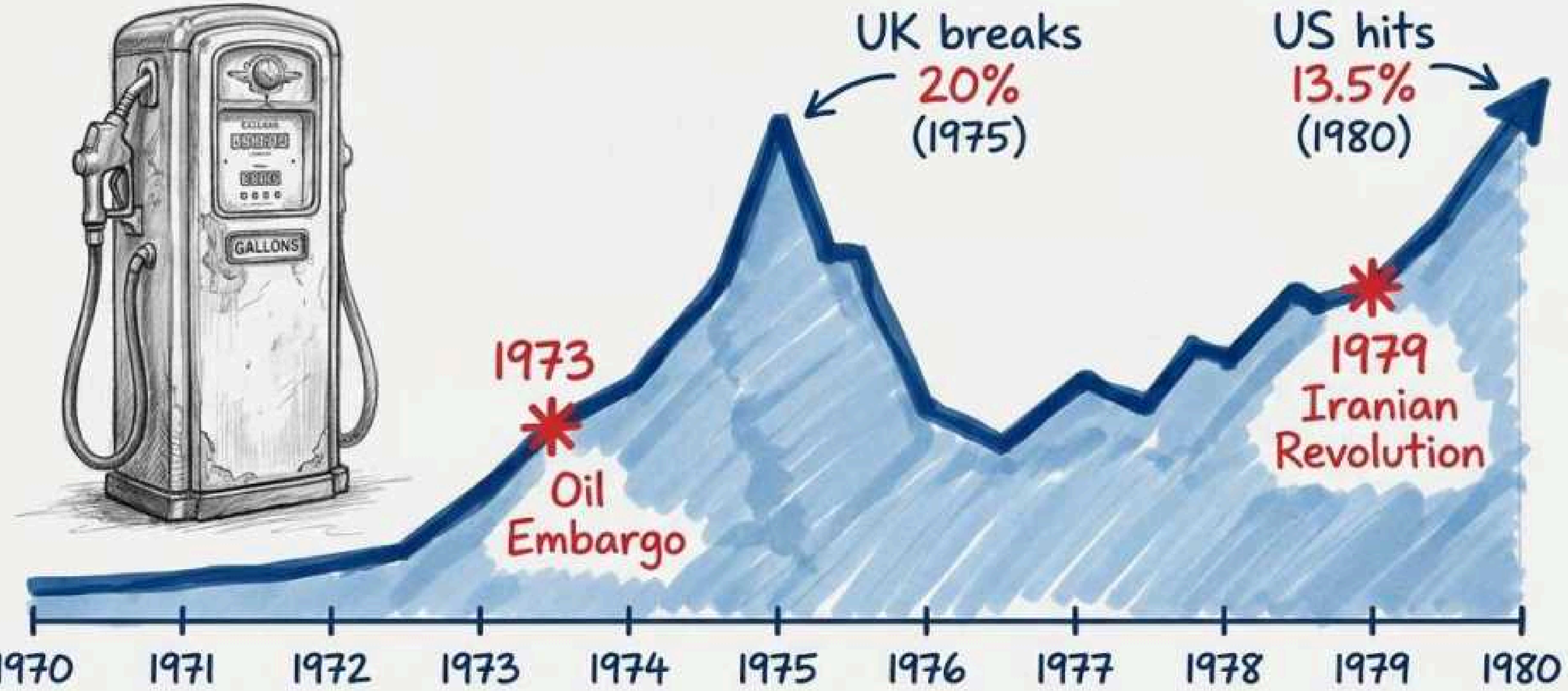


Cost-Push: The cost of key inputs jumps unexpectedly.



Gemini Notebook

The Great Inflation of the 1970s

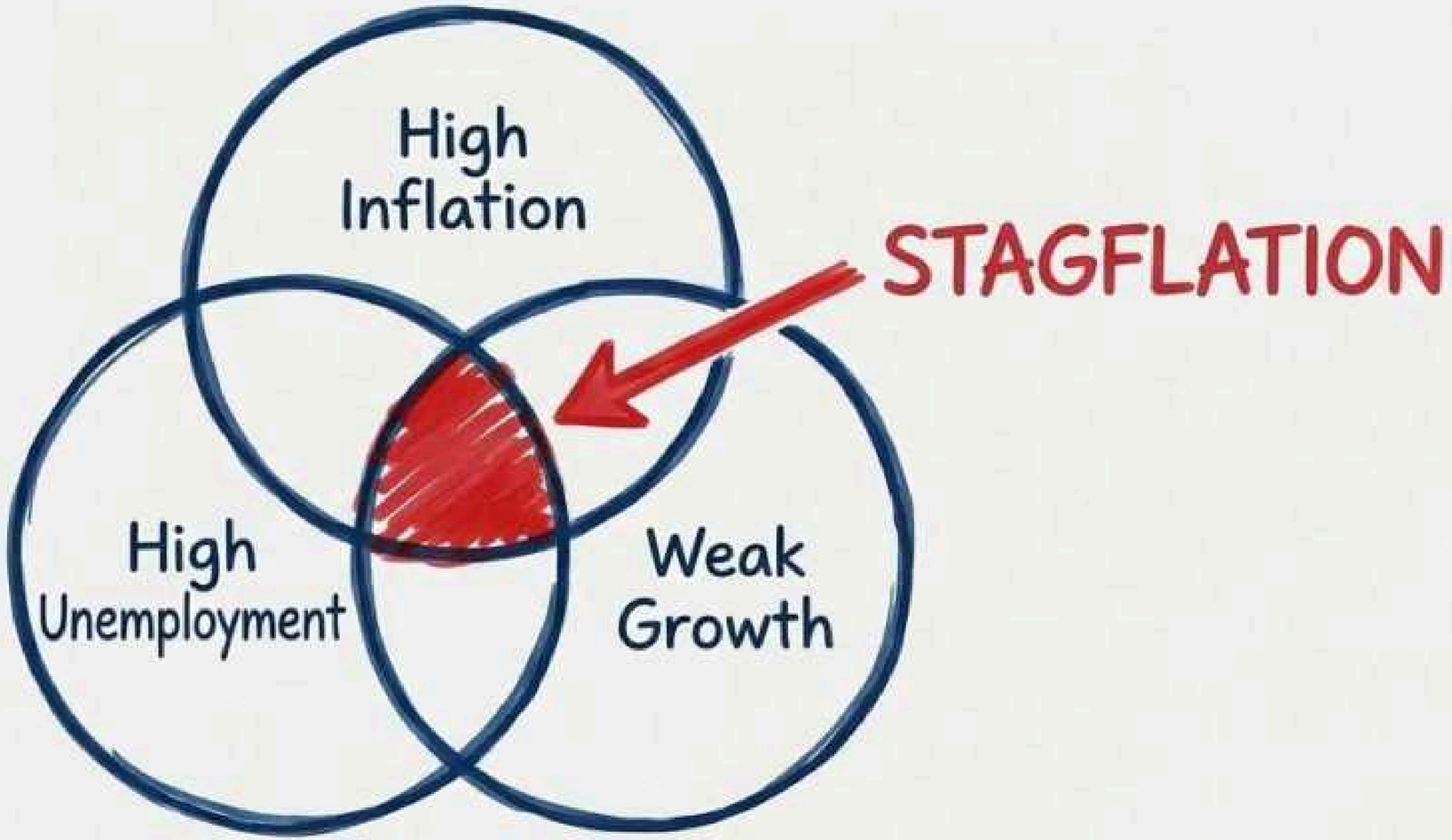


Driven by consecutive oil price jumps and fundamentally loose monetary policy across the globe.

Gemini Notebook

The Birth of an Economic Contradiction

¶ 5.6

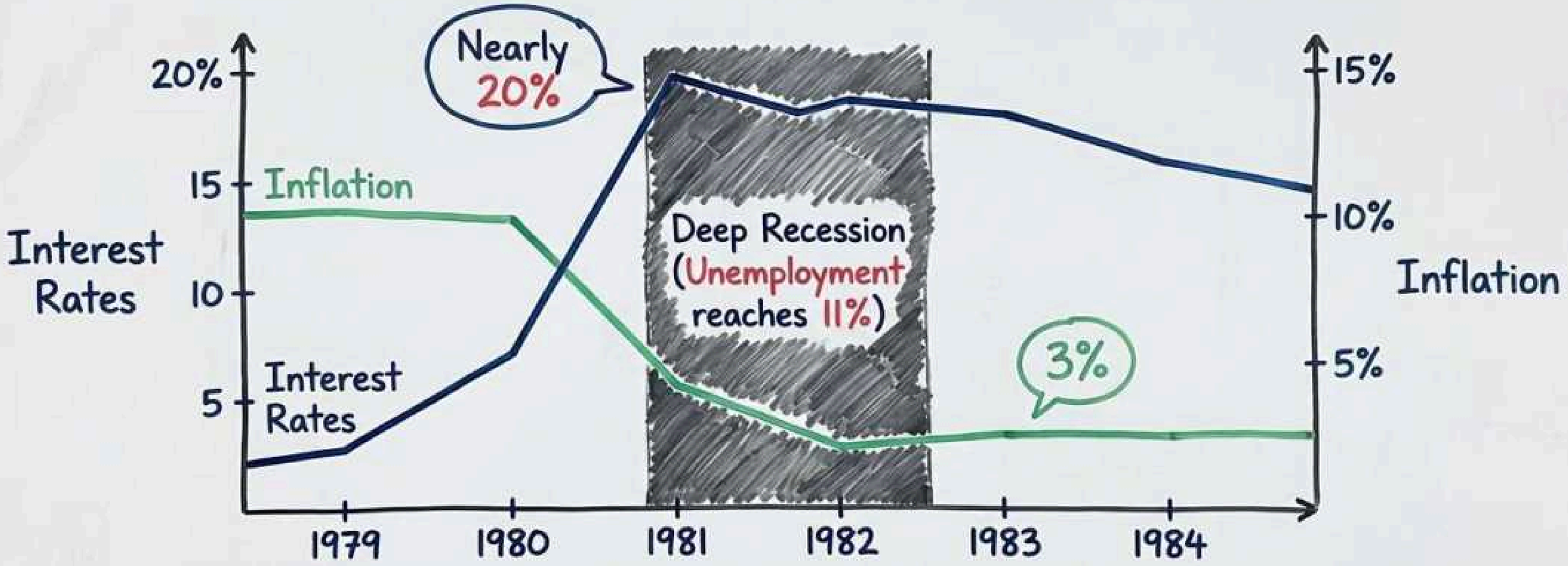


A new term for a previously unthinkable combination of economic miseries.

Gemini Notebook

¶ 5.7

The Volcker Shock and the Cost of the Cure



Tightened money supply = a painful, recessionary, but highly effective cure that kept prices low for decades.

Gemini Notebook

Crossing the Hyperinflation Threshold

¶ 5.8



>50% per month



~~Store of Value~~

~~Unit of Account~~

At this extreme velocity, prices double every two months, causing populations to flee to any alternative asset.

Gemini Notebook

¶ 5.9

Germany 1923: The Mechanics of Currency Collapse

WWI Debts & Reparations burden the state.



France & Belgium occupy the Ruhr industrial region (Jan 1923).

Berlin initiates massive money printing to pay striking workers.

Total currency destruction. By November, 1 USD = 4 Trillion Marks.

Prices began doubling every few days.

Gemini Notebook

The Social Toll and the Rentenmark Resolution



Workers paid multiple times daily, spending instantly. Savers ruined. Deep societal distrust forged.



November 1923: 1 New Rentenmark replaces 1 Trillion Old Marks.

- Deficit printing strictly banned.
- Government spending aggressively slashed.

Gemini Notebook

Hungary 1945–1946: The Worst on Record



Mid-1946: Prices doubled in under 24 hours.

The pengő entirely collapsed
→ The forint is introduced (August 1946) alongside strict stabilization measures.

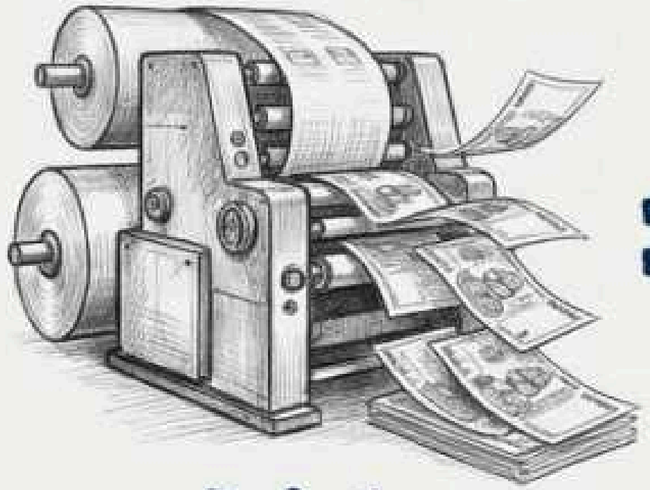
Zimbabwe: Supply Shock Meets the Money Printer

¶ 5.12



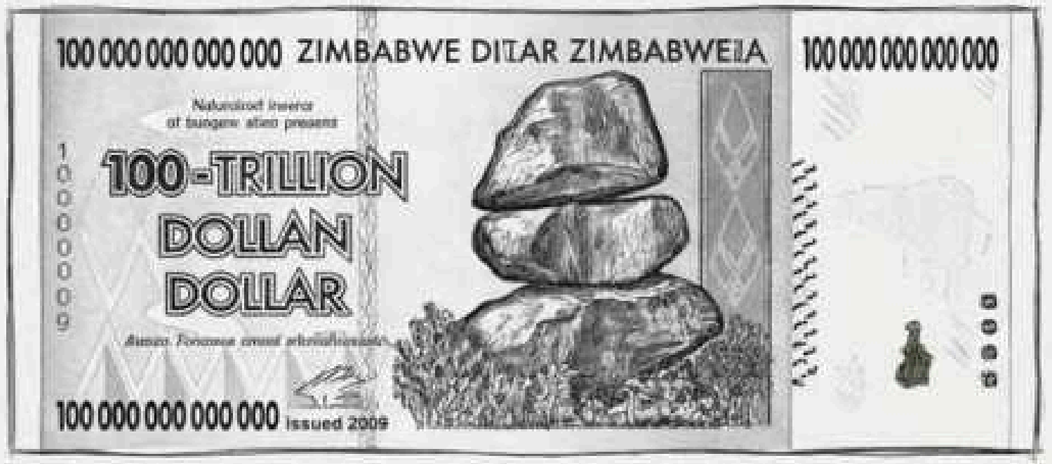
Farm Seizures &
Production Collapse

+



Deficit
Monetization

= Hyperinflation.



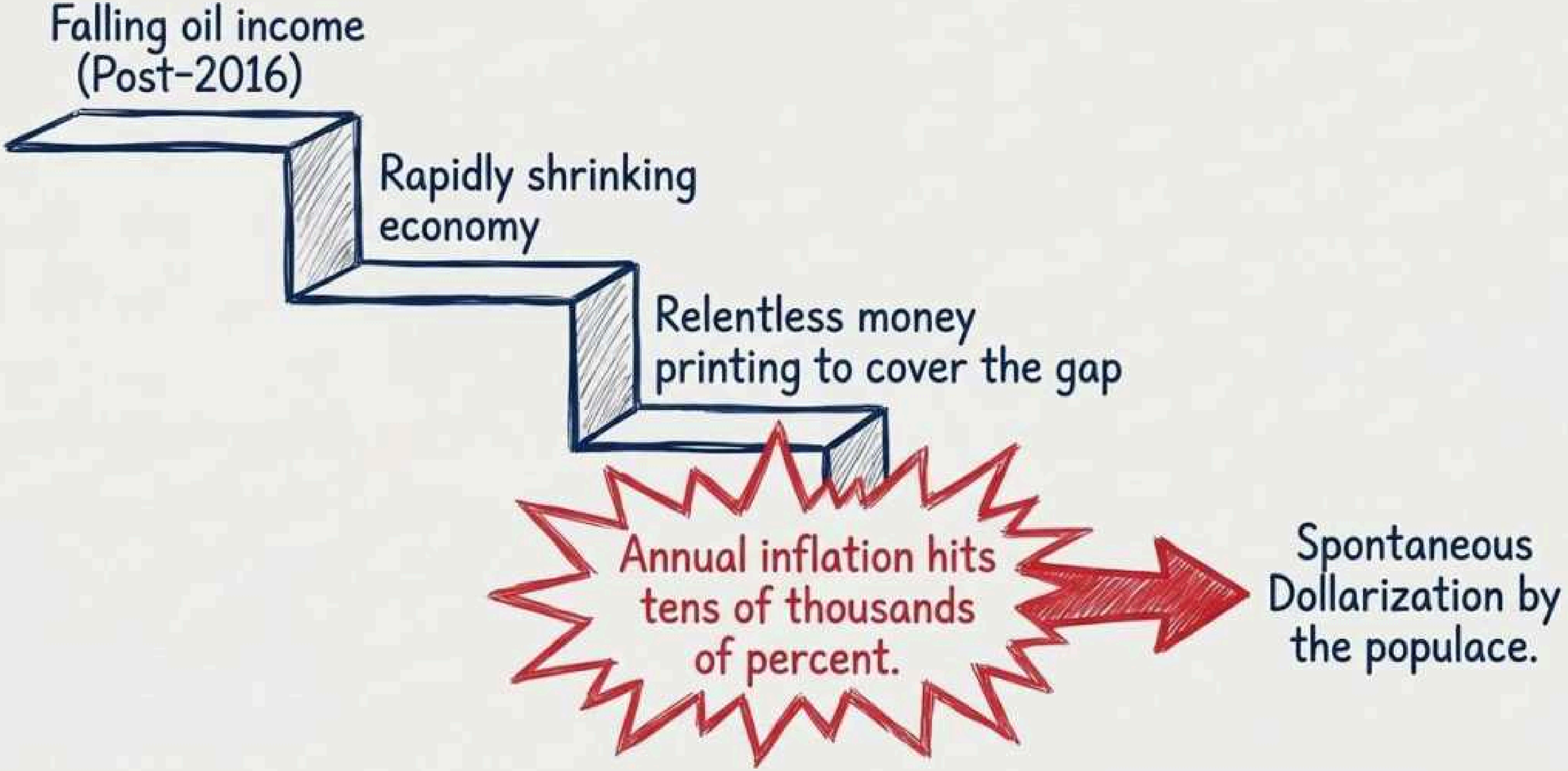
Late 2008: Prices roughly doubled every day.

Result: Currency abandoned for the US Dollar.

Gemini Notebook

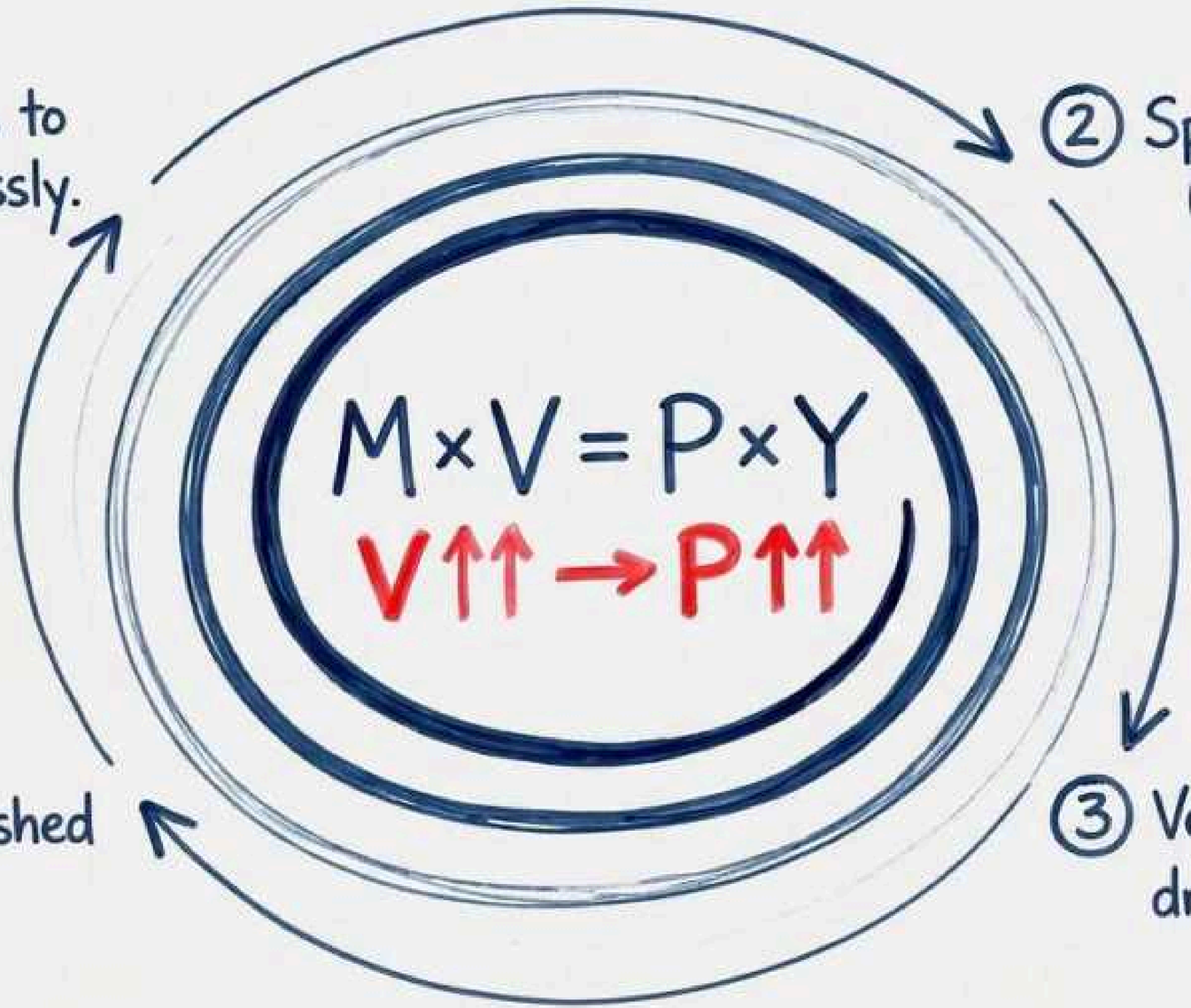
Venezuela and the Modern Pattern of Collapse

¶ 5.13



Gemini Notebook

The Velocity Feedback Loop



Gemini Notebook

The Hidden Danger of the Floor: Deflation



The Debt-Deflation Spiral, defined by economist Irving Fisher in 1933.

Gemini Notebook

The Great Depression (1929–1933)

Rule of 25s Data Dashboard

Prices

-25%

Output

-25%

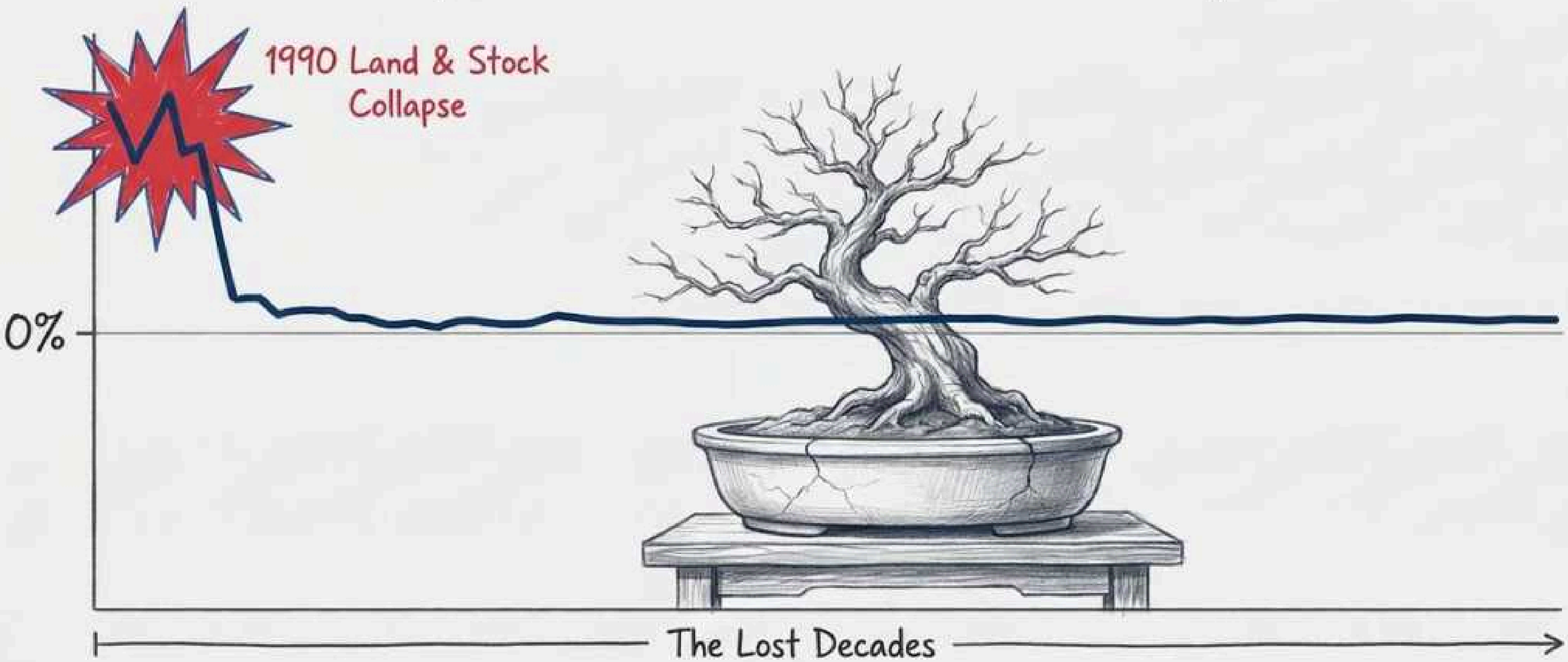
Employment

1 in 4 workers jobless



Banks failed, debts choked the economy. Deflation was not just a symptom, but the core catalyst of the downward spiral.

Japan's Low-Inflation Trap



Bank of Japan cuts rates close to zero in the late 90s.
Escaping a low-inflation trap proves historically difficult.

¶ 5.18

The Buffer: Why Central Banks Target 2%

The Policy Cushion:
Provides vital room to cut interest rates during a downturn.



$$W_{real} = \frac{W_{nominal}}{P}$$

Allows firms to adjust real wages downward without the friction of cutting nominal pay.

Gemini Notebook

¶ 5.19

The Master Synthesis: Three States of Price Levels

	Moderate/High Inflation	Hyperinflation	Deflation
Impact:	Erodes value, transfers wealth from savers to borrowers.	Total currency destruction. 	Destructive debt spirals (The Great Depression).
Drivers:	Demand, Costs, Expectations.	Covering massive government deficits with printed money (Germany, Hungary, Zimbabwe). 	Drivers Falling prices multiplying real debt burdens.
Resolution:	Volcker's recessionary cure.		

Gemini Notebook

Reflection: The 50% Thought Experiment

If prices in your country were rising 50% a month...

How would your behavior change the moment you get paid?

What specific assets would you choose to hold?

How fast would you spend your money?

What exactly must the government do to restore your trust in the money?

Gemini Notebook