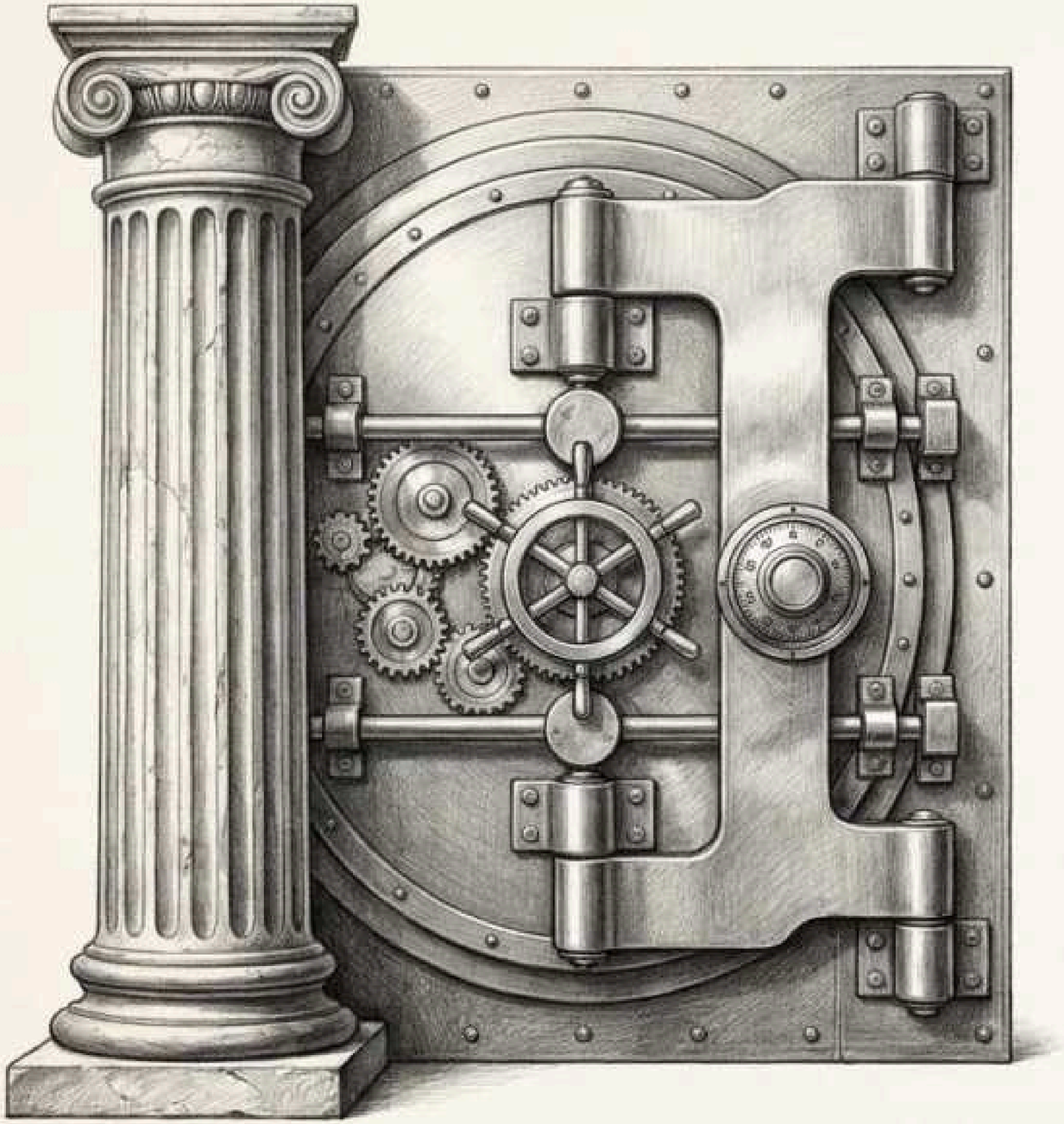
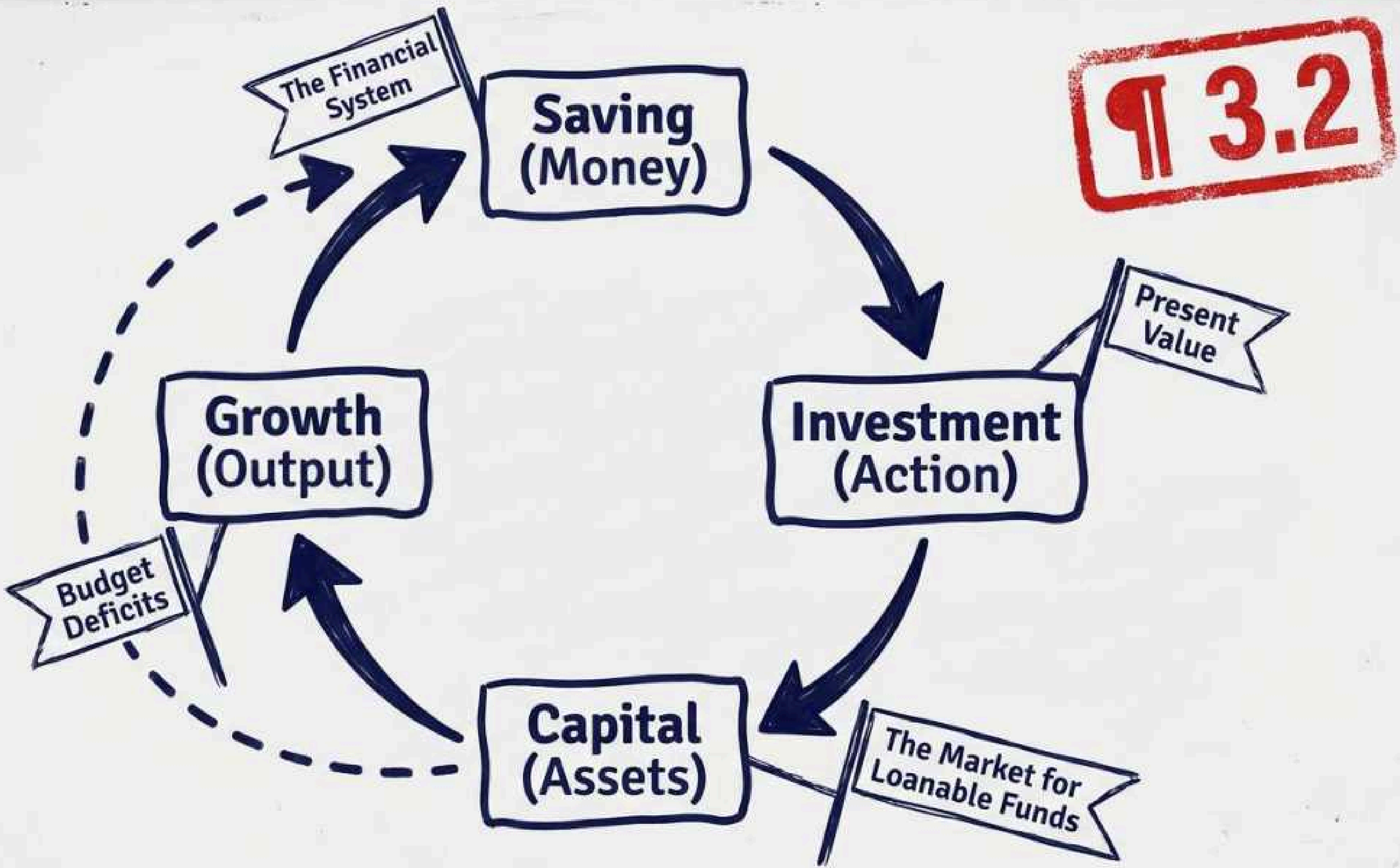


¶ 3.1

Lecture 3: Saving, Investment, and the Financial System

ECON 130 B: Macroeconomic Foundations


¶ 3.2
The Financial System
Saving (Money)
Present Value
Investment (Action)
Growth (Output)
Budget Deficits
Capital (Assets)
The Market for Loanable Funds

¶ 3.3

The Financial System

Savers:
Spare Capital looking for a return.



Key Function: Risk Sharing



Savers:
Spare Capital looking for a return.

Borrowers:
Business Ideas needing funding.

Financial Markets (Direct Lending)

¶ 3.4

The Saver

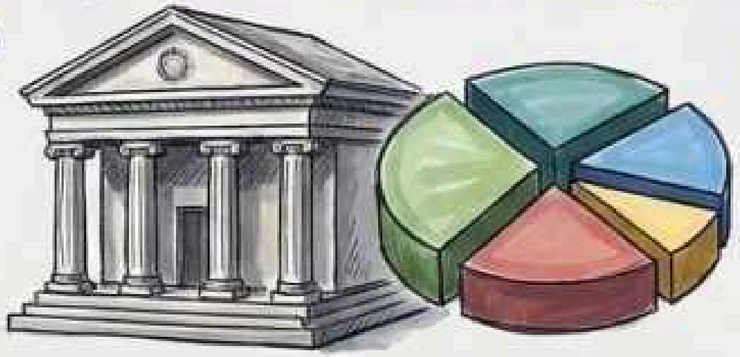


Stock = Share of Ownership/Profits

Bond = Loan promising Principal + Interest

The Borrower

Financial Intermediaries (Indirect Lending)



Savers deposit; intermediaries lend/invest

¶ 3.5

Step 1: $Y = C + I + G$ (Total output in a closed economy with no trade)

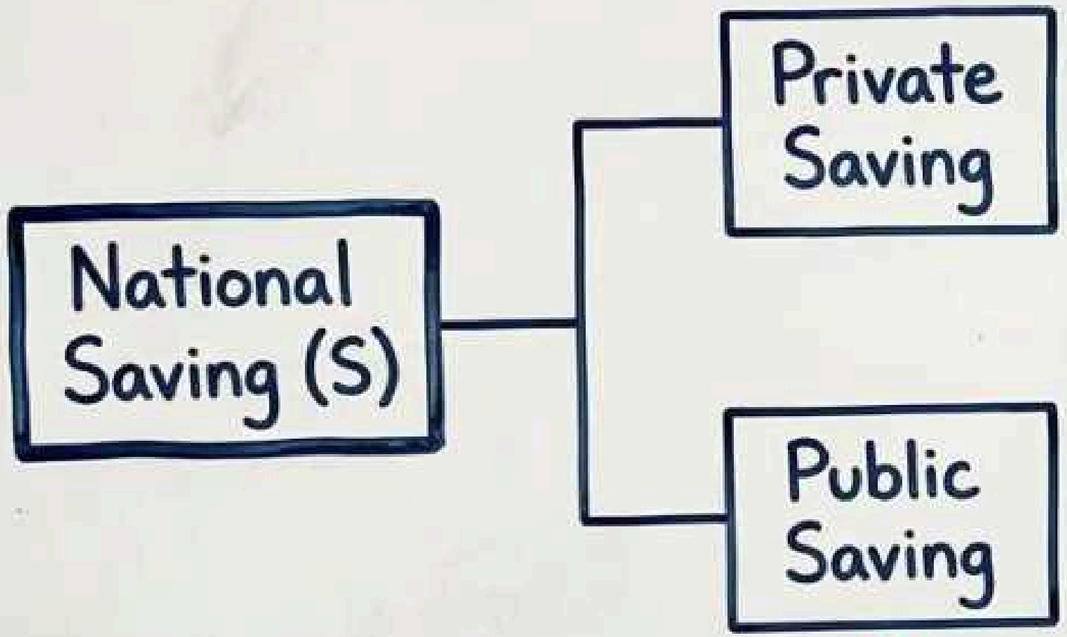
Step 2: $Y - C - G = I$ (Isolating Investment)

Step 3: Let $S = Y - C - G$ (Defining National Saving: what remains after consumption and government purchases)

$$S = I$$

(National Saving equals Investment)

¶ 3.6



$Y - T - C$

Income households keep after paying taxes (T) and consumption (C).

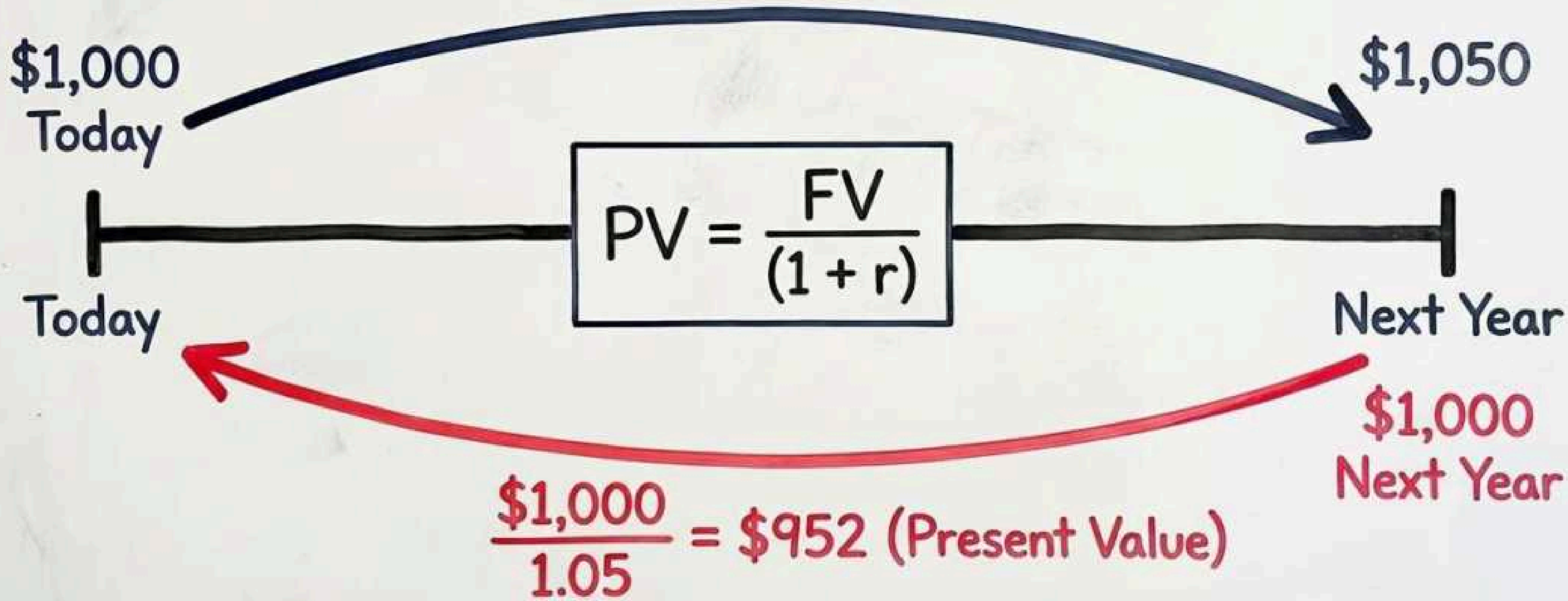
$T - G$

Tax revenue (T) minus government spending (G).

If $T < G$ → Budget Deficit (Negative Public Saving)
If $T > G$ → Budget Surplus

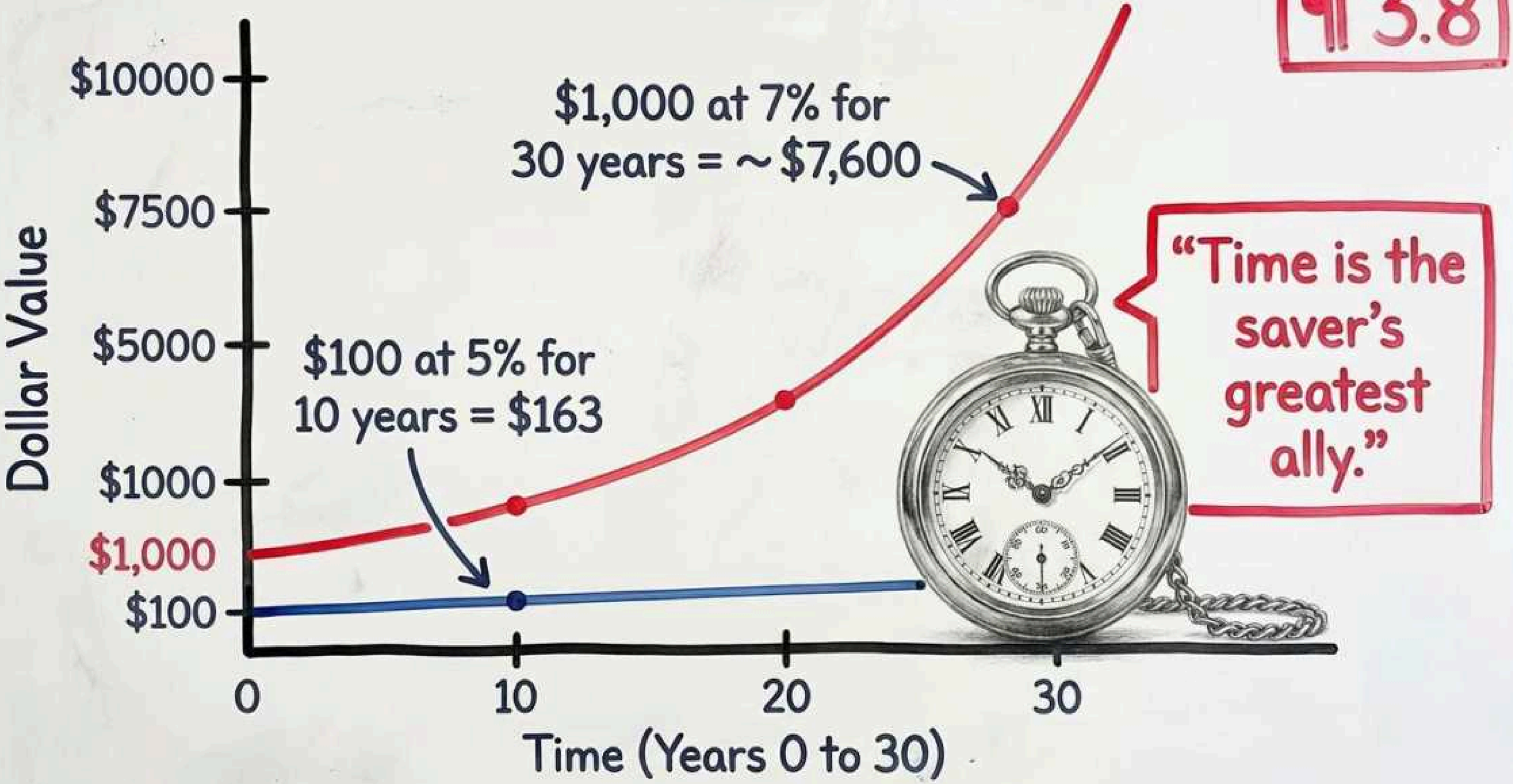
¶ 3.7

$1,000 × 1.05 = $1,050
(Assuming 5% interest rate)

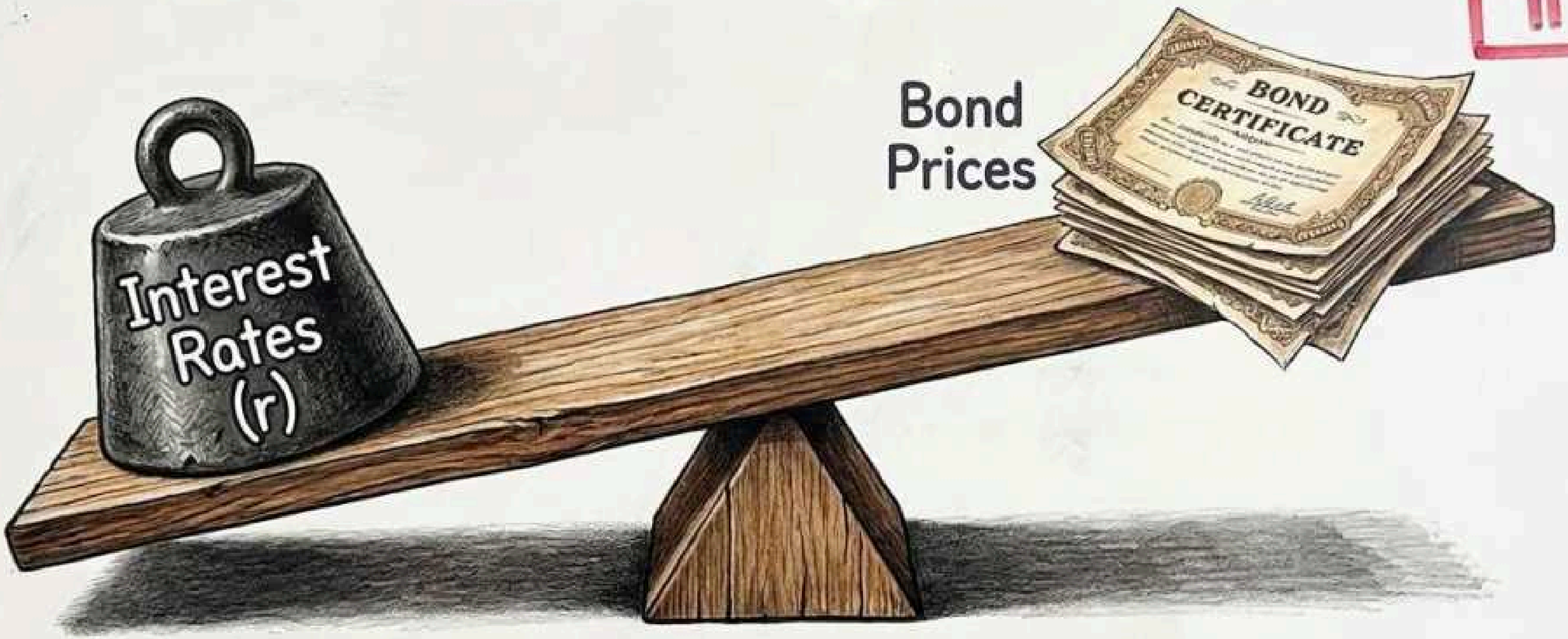


$$\frac{\$1,000}{1.05} = \$952 \text{ (Present Value)}$$

¶ 3.8


$10000
$7500
$5000
$1000
$1,000
$100
Dollar Value
$1,000 at 7% for
30 years = ~$7,600
$100 at 5% for
10 years = $163
"Time is the saver's greatest ally."
0
10
20
30
Time (Years 0 to 30)

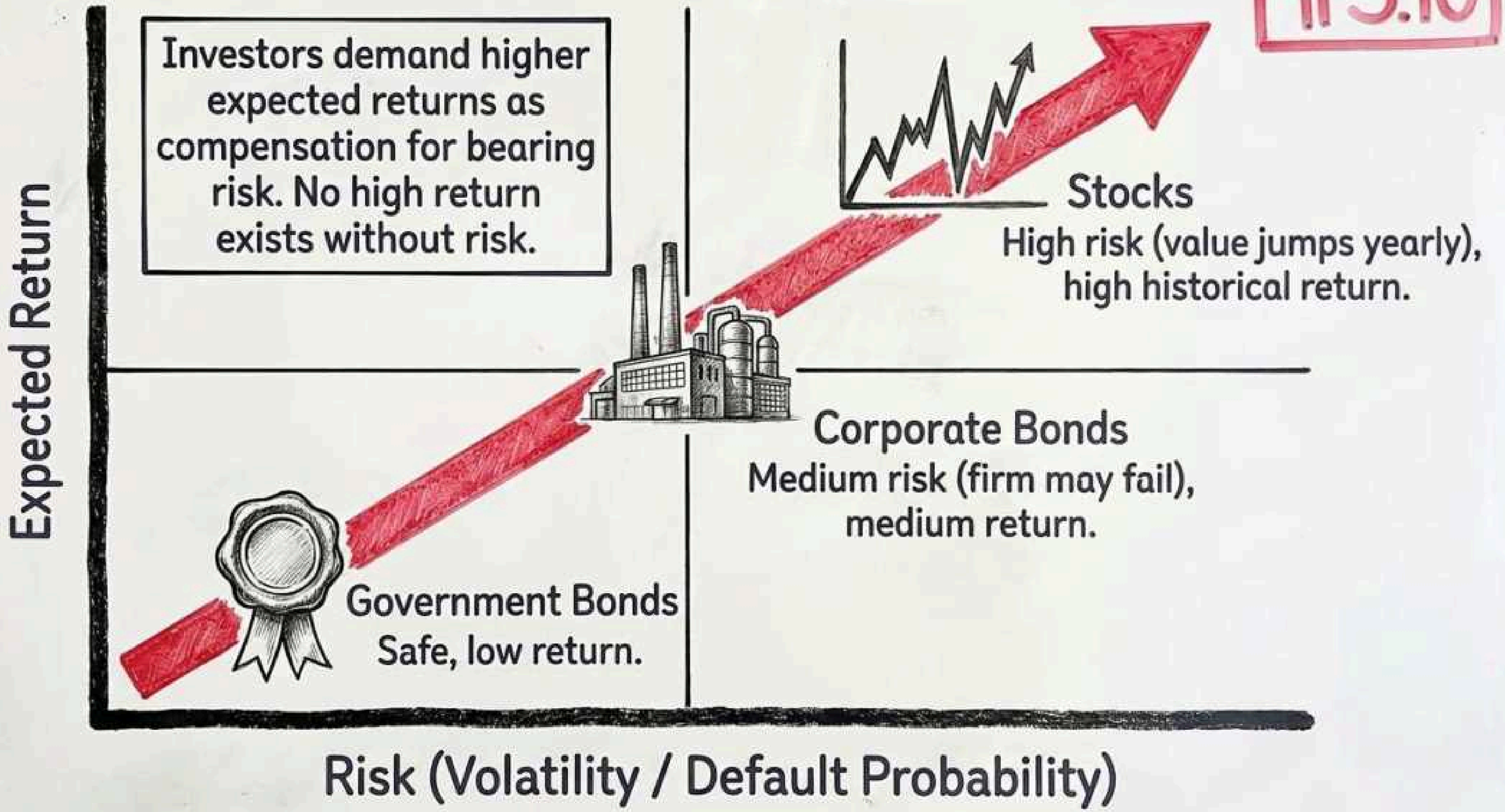
¶ 3.9



Bond promises $1,050 in 1 year.
If rates = 5%, Present Value = $1,000.
If rates rise to 10%, Present Value falls to ~$955.

Bond prices and interest rates move in strictly opposite directions.

¶ 3.10


Investors demand higher expected returns as compensation for bearing risk. No high return exists without risk.
Stocks
High risk (value jumps yearly), high historical return.
Corporate Bonds
Medium risk (firm may fail), medium return.
Government Bonds
Safe, low return.
Expected Return
Risk (Volatility / Default Probability)

¶ 3.11



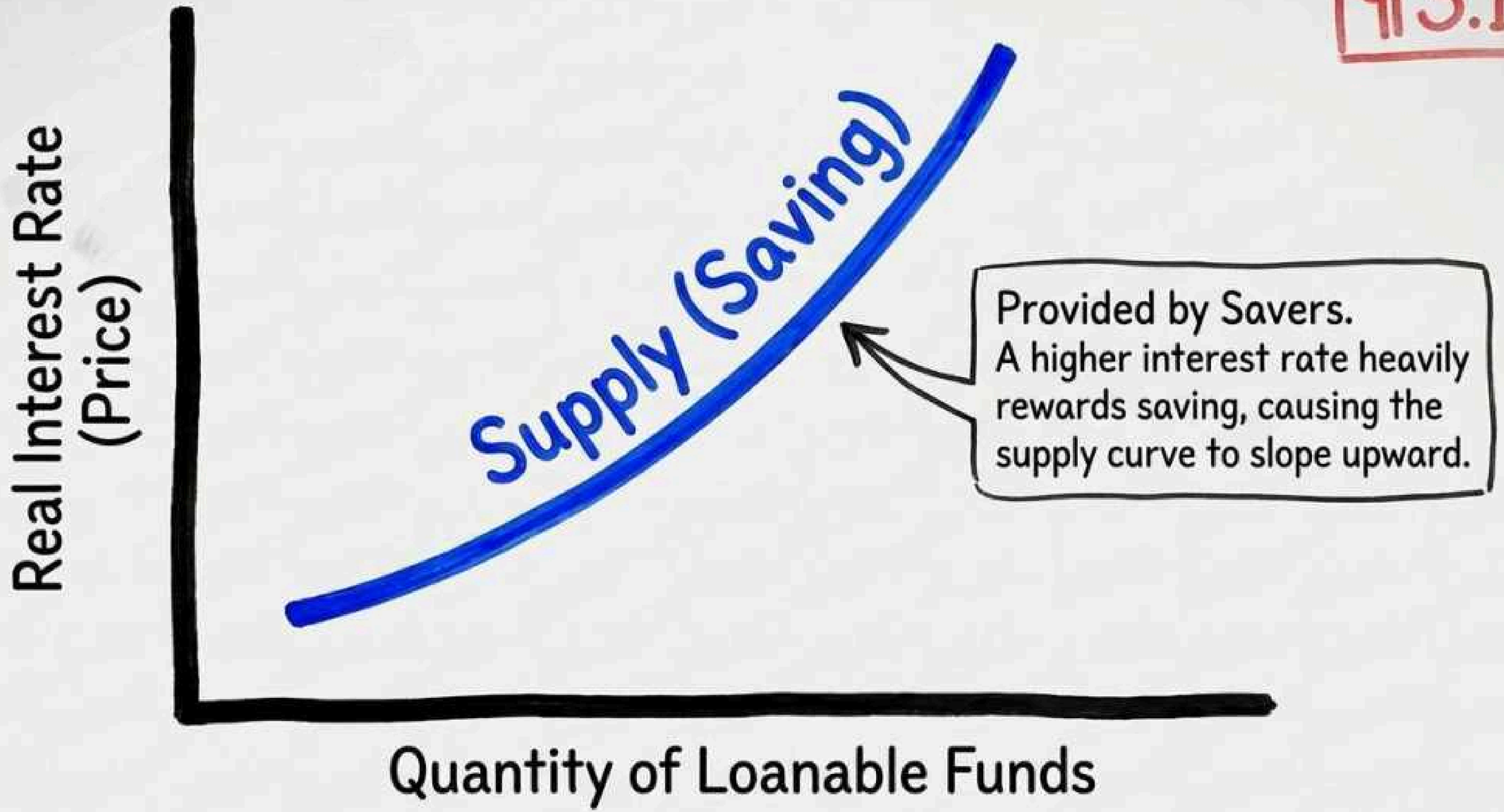
Public Information &
Unpredictable News

Prices immediately reflect all available data. Because news is unpredictable, price changes are unpredictable.

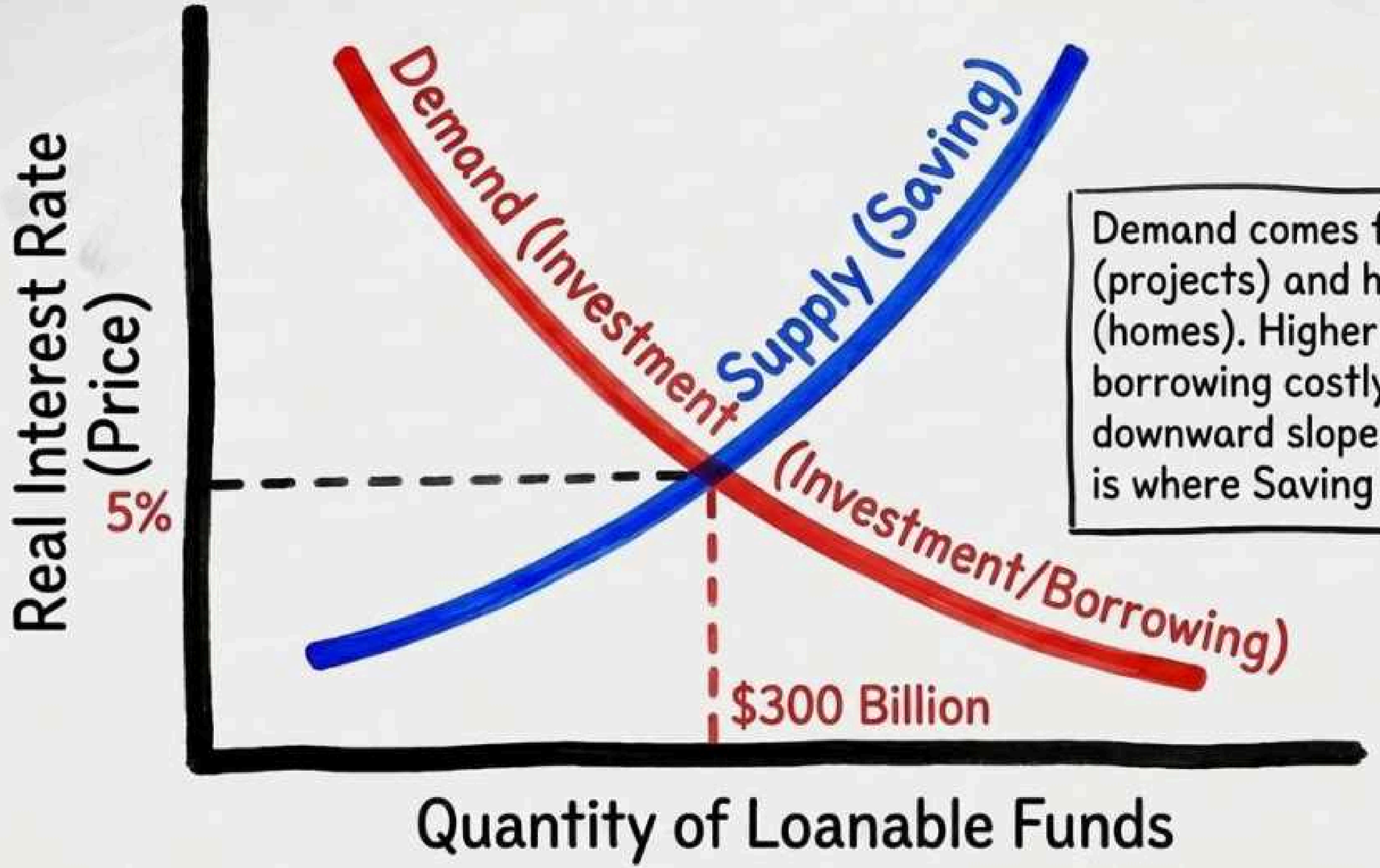
Current Stock Prices.

The Result: Many prefer low-cost index funds that simply hold the entire market basket.

¶3.12

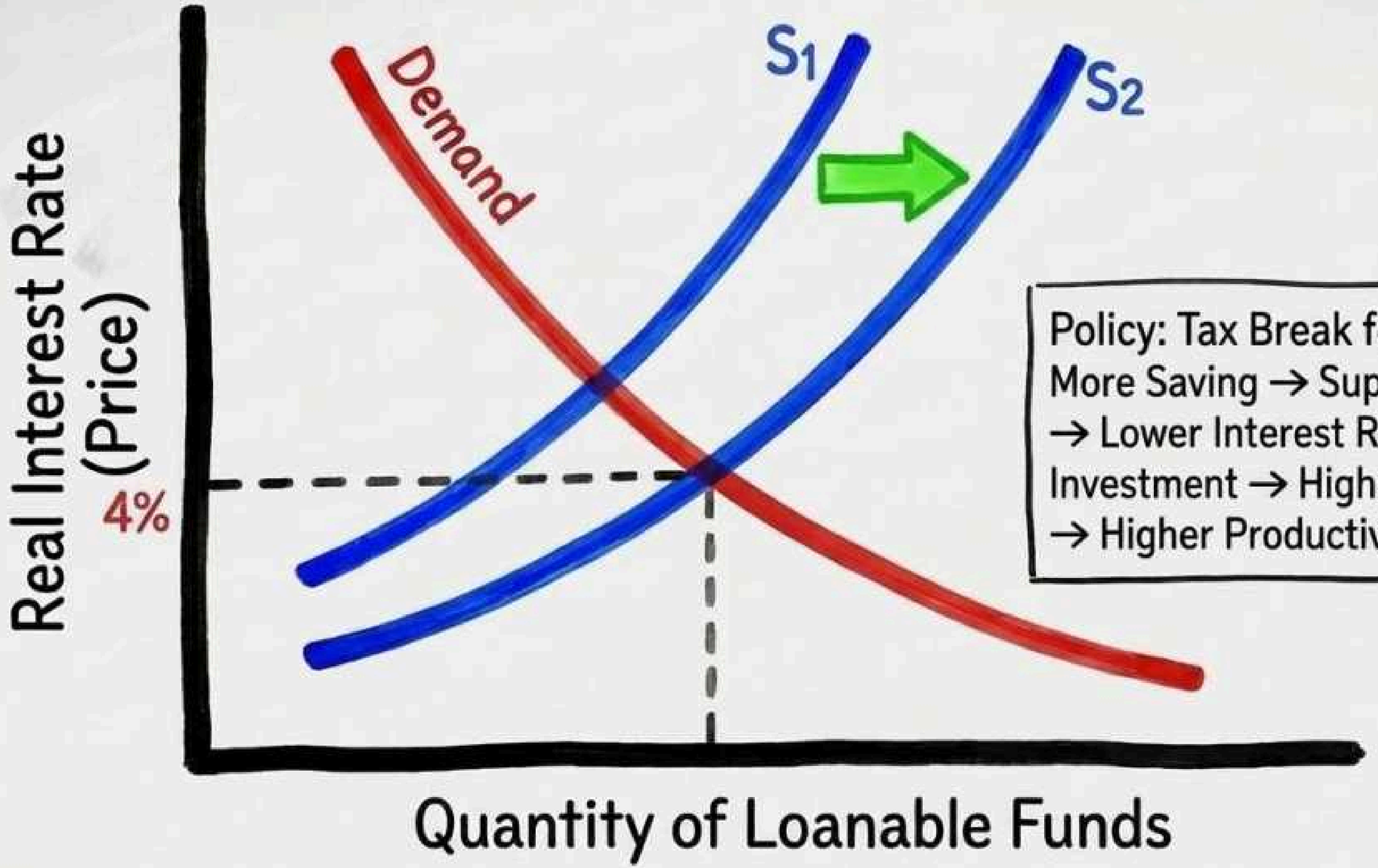

Real Interest Rate
(Price)
Supply (Saving)
Provided by Savers.
A higher interest rate heavily rewards saving, causing the supply curve to slope upward.
Quantity of Loanable Funds

¶ 3.13



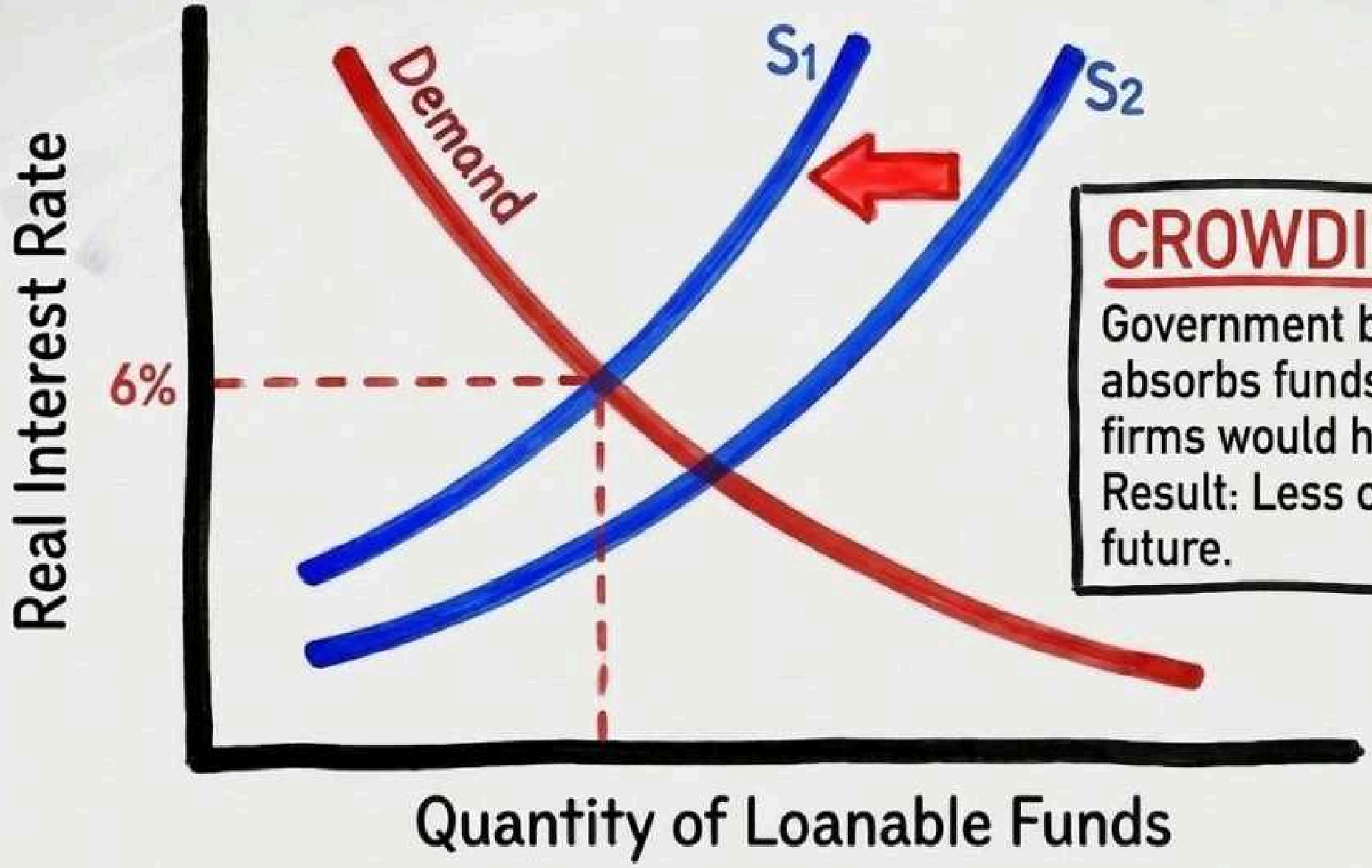
Demand comes from firms (projects) and households (homes). Higher rates make borrowing costly, causing the downward slope. Equilibrium is where Saving = Investment.

¶ 3.14



Policy: Tax Break for Saving.
More Saving → Supply Shifts Right
→ Lower Interest Rates → More
Investment → Higher Productivity
→ Higher Productivity & Growth.

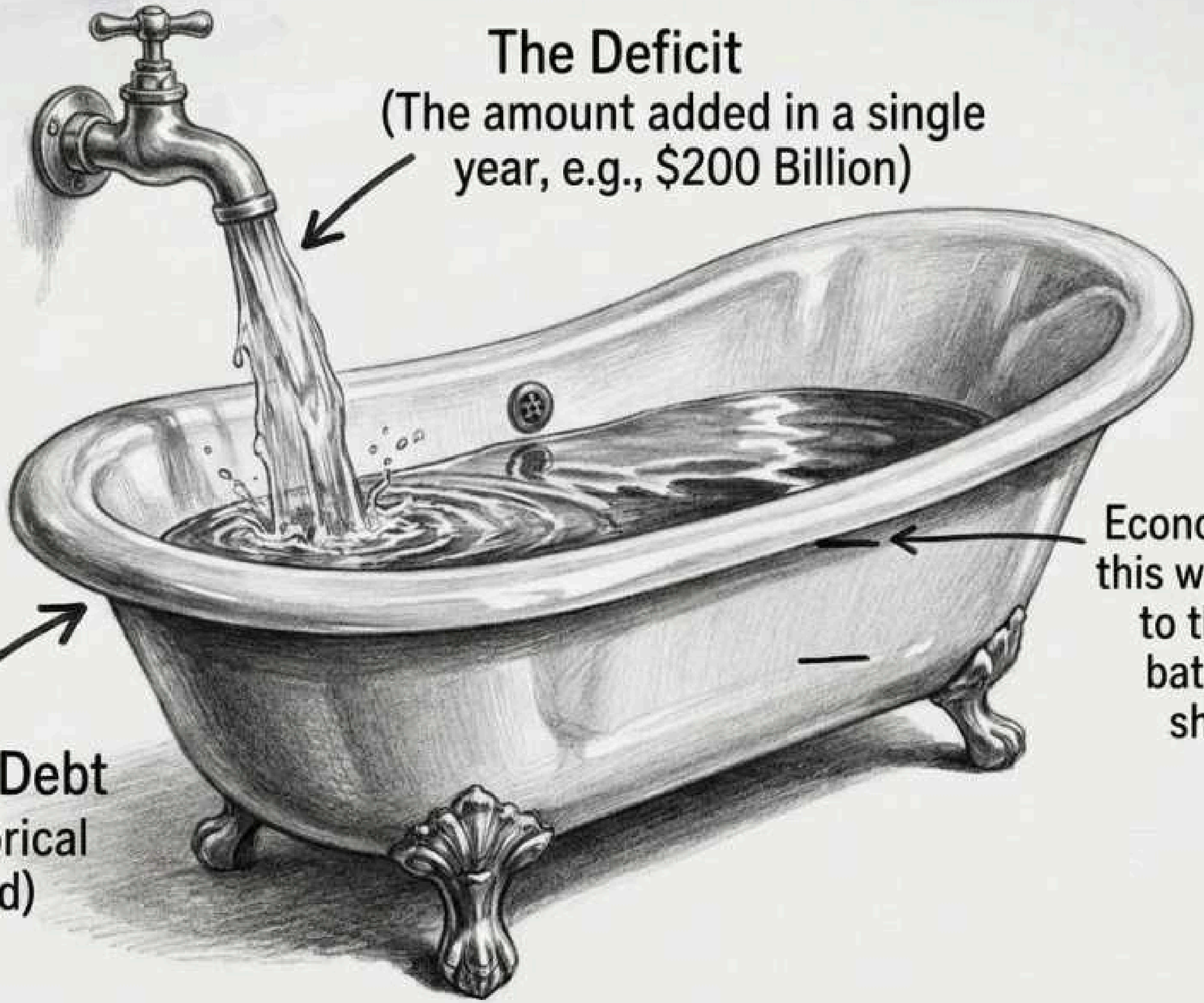
¶3.15



CROWDING OUT

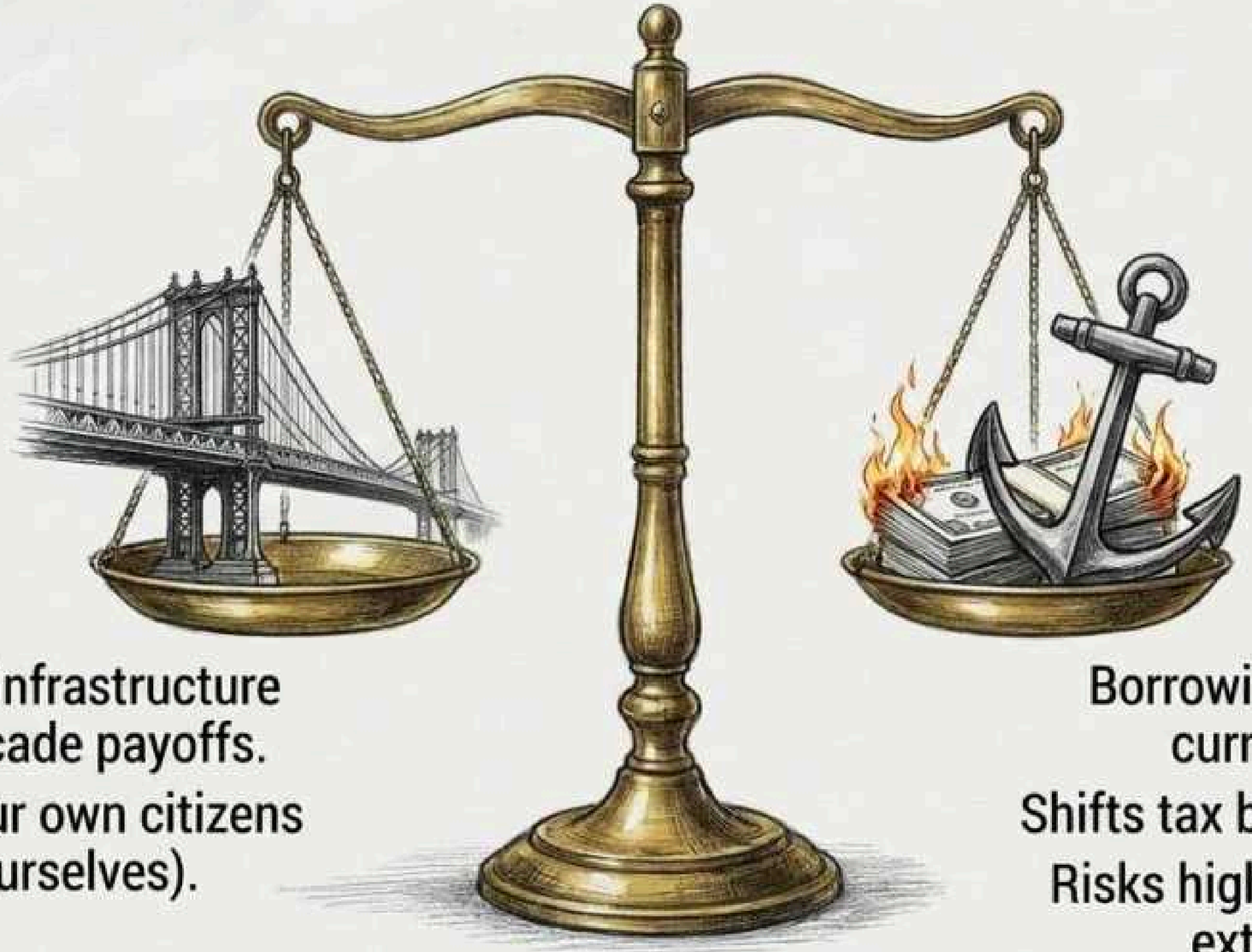
Government borrowing absorbs funds that private firms would have used. Result: Less capital in the future.

¶3.16


The Deficit
(The amount added in a single year, e.g., $200 Billion)
Economists measure this waterline relative to the size of the bathroom—as a share of GDP.
The National Debt
(The total historical amount owed)

Is National Debt Inherently Bad? It Depends.

¶ 3.17



Borrowing for infrastructure with multi-decade payoffs.

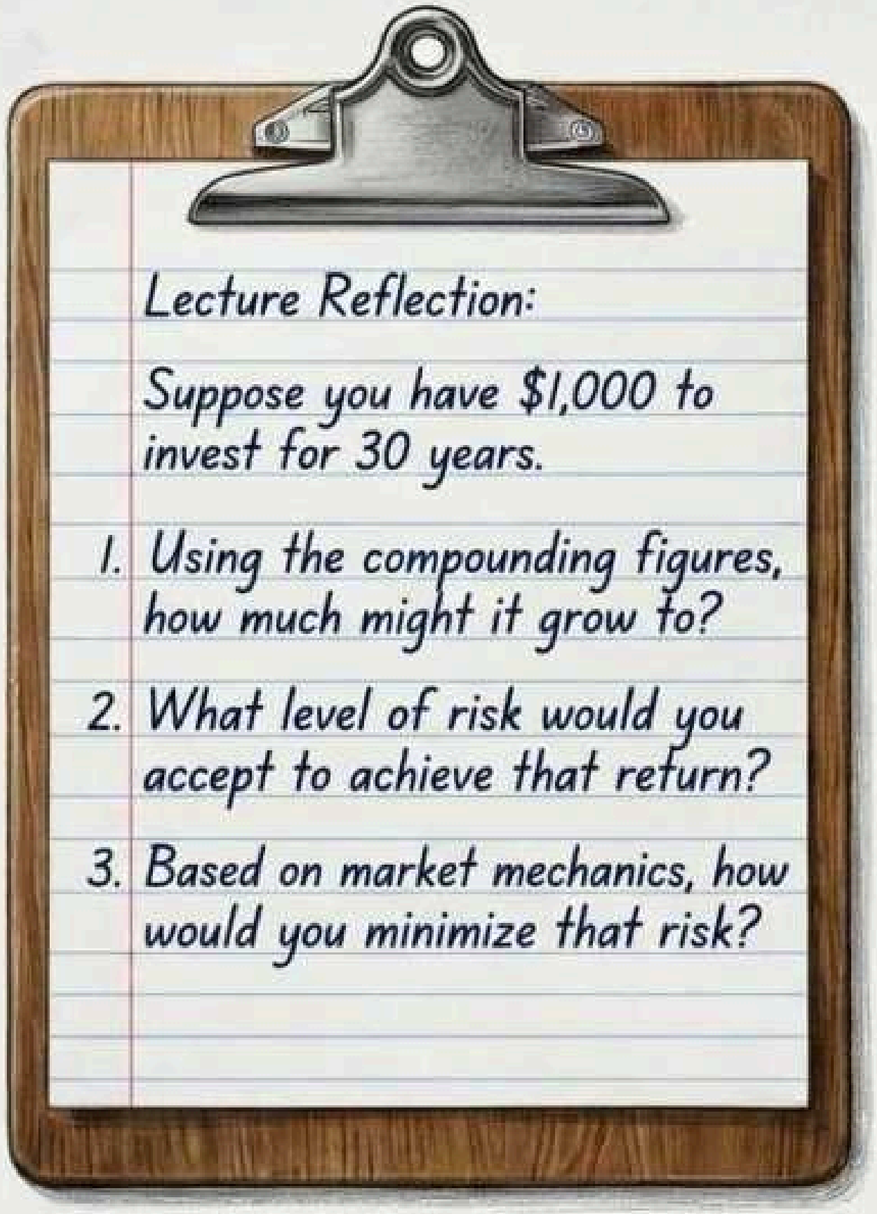
Debt owed to our own citizens (owed to ourselves).

Borrowing for immediate, current spending.

Shifts tax burden to the future.

Risks high interest rates and extreme default.

¶ 3.18



Apply Present Value, Compounding, and Index Fund concepts.

¶3.19







Looking Ahead to Lecture 4:

We meet Money itself, the Banks that create it, and the Central Bank that controls it.