

Saving and Investment

LECTURE: 7

Major Points

- ✓ What are the main types of financial institution and what is their function?
- ✓ Definition of saving and investment
- ✓ Types of saving and investment
- ✓ What's the difference between saving and investment?
- ✓ How does the financial system coordinate saving and investment?

Financial Institutions

The **financial system**: the group of institutions that helps match the saving of one person with the investment of another.

Financial markets: institutions through which savers can directly provide funds to borrowers. Examples:

- The Bond Market.

A **bond** is a certificate of indebtedness.

- The Stock Market.

A **stock** is a claim to partial ownership in a firm.

Financial Institutions

Financial intermediaries: institutions through which savers can indirectly provide funds to borrowers. Examples:

- Banks
- **Mutual funds** – institutions that sell shares to the public and use the proceeds to buy portfolios of stocks and bonds

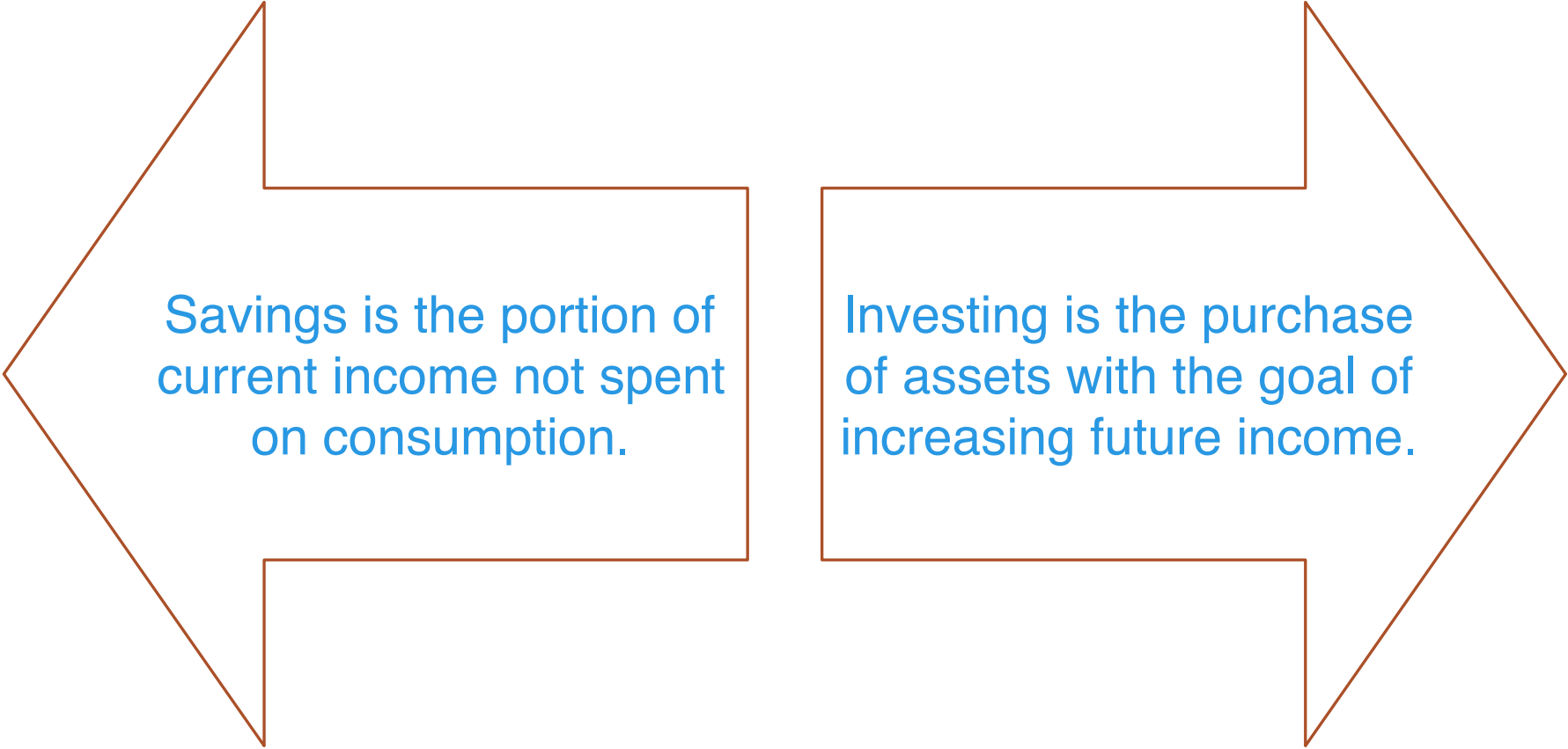


Starting a Savings Plan

“Getting rich is not a function of investing a lot of money; it is a result of investing regularly for long periods of time.”



Saving and Investment



Savings is the portion of current income not spent on consumption.

Investing is the purchase of assets with the goal of increasing future income.

The Meaning of Saving and Investment

Private saving is the income remaining after households pay their taxes and pay for consumption. Examples of what households do with saving:

- ✓ *buy corporate bonds or equities*
- ✓ *purchase a certificate of deposit at the bank*
- ✓ *buy shares of a mutual fund*
- ✓ *let accumulate in saving or checking accounts*

Investment is the purchase of new capital.

Examples of investment:

- ✓ *General Motors spends \$250 million to build a new factory in Flint, Michigan.*
- ✓ *You buy \$5000 worth of computer equipment for your business.*
- ✓ *Your parents spend \$300,000 to have a new house built.*

Savings

Saving is that part of income that is not consumed. Saving equals income minus consumption: $S = Y - C$

Income is the sum of consumption and savings: $Y = C + S$

then $\frac{C}{Y} + \frac{S}{Y} = 1$ and $\frac{\Delta C}{\Delta Y} + \frac{\Delta S}{\Delta Y} = 1$

The marginal propensity to save $MPS = \frac{\Delta S}{\Delta Y}$

is defined as the fraction of an extra unit of income that goes to extra saving.

$MPC + MPS = 1$ because the part of each unit of income that is not consumed is necessarily saved.

Saving Function

Like consumption *saving* is also the function of income: $S = f(Y)$
If autonomous consumption exists then autonomous saving exists as well and saving function is: $S = -C_A + \text{MPS} \cdot Y$

Saving is a source for investment.

Different Kinds of Saving

Private saving

- = The portion of households' income that is not used for consumption or paying taxes
- = $Y - T - C$

Public saving

- = Tax revenue less government spending
- = $T - G$

National saving

= private saving + public saving

$$= (Y - T - C) + (T - G)$$

$$= Y - C - G$$

= the portion of national income that is not used for consumption or government purchases

Saving and Investment

Recall the national income accounting identity:

$$Y = C + I + G + NX$$

For the rest of this chapter, focus on the closed economy case:

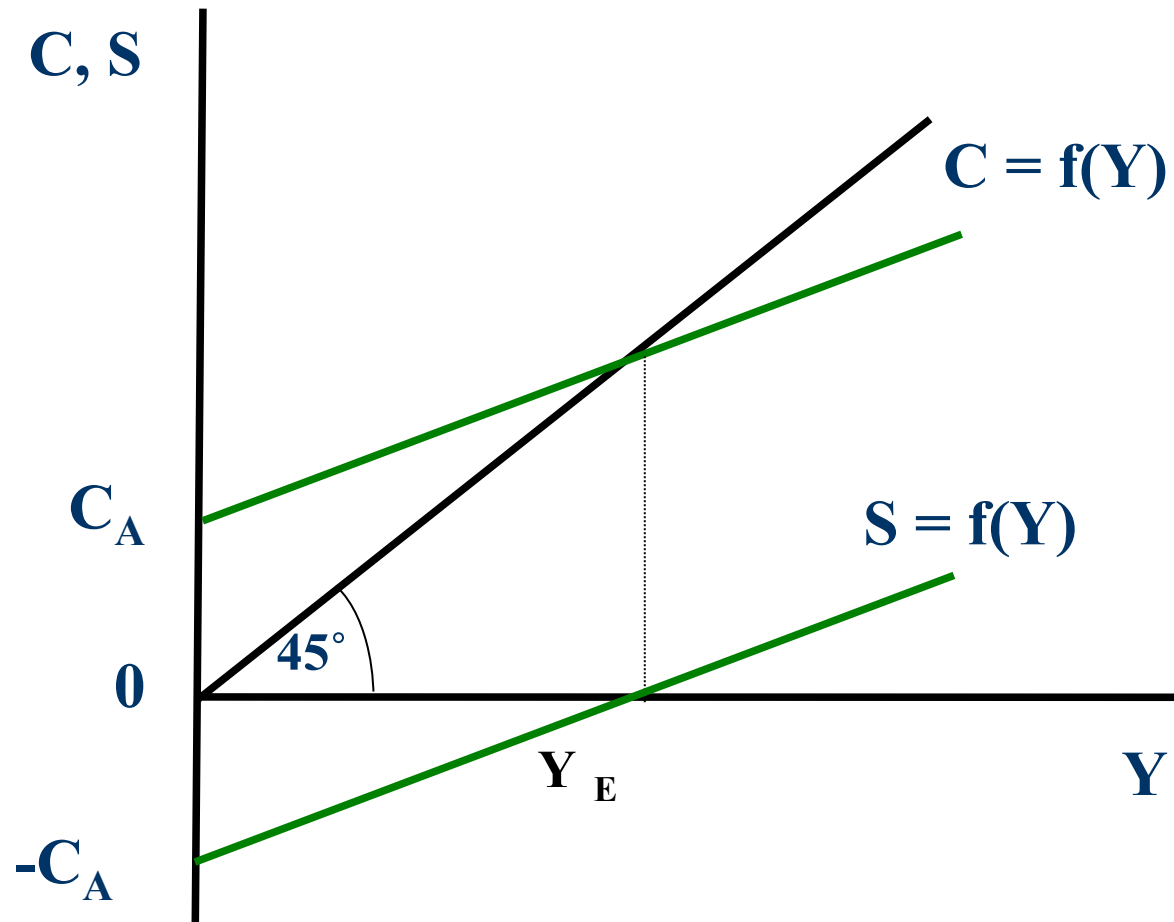
$$Y = C + I + G$$

Solve for **I**:

$$I = Y - C - G = \underbrace{(Y - T - C)}_{\text{national saving}} + (T - G)$$

Saving = investment in a closed economy

The Consumption and Saving Function



The saving function is the mirror image of the consumption function. It shows the relationship between the level of saving and income.

Investment

Investment plays two roles in macroeconomics:

It can have a major impact on AD (real output and employment)

It leads to capital accumulation (it increases the nation's potential output and promotes economic growth in the long run)

Determinants of Investment

Revenues: an investment should bring the firm additional revenue.

Costs: interest rate influences the costs of the investment.

Consumer demand: the bigger the increase in consumer demand, the more investment will be needed.

Expectation: business expectation about future state of economy.

Types of Investments

Savings/Share Accounts

- Low interest earning account
- Low risk
- Easily accessible
- First step in investing
- Helps develop pattern of investing

Online Savings/Share Accounts

Types of Investments

Money Market Deposit Accounts

Higher interest rate than savings

Easily accessible, but limited transactions

Low risk

Generally require a minimum balance

Banks and credit unions offer

Interest is taxable

Money Market Funds

Offered by brokerages & mutual fund families

Not FDIC insured

Easily accessible

Types of Investments

Certificates of Deposit

Higher interest than savings accounts

Must leave money in for fixed time

The longer you leave it in the higher the interest rate

Available at banks and credit unions and insured

Interest is taxable

Bonds

Loan to a corporation or government

Earns higher interest than CDs but return may be lower than for stocks

Government bonds less risky than corporate bonds

Can buy from employers, banks, and brokerages

The minimum may be more than you have

Returns are taxable

Types of Investments

Corporate bonds

Investment grade bonds vs. “junk” bonds

Range in maturity dates

Government bonds

Treasury bills (t-bills): 4, 13, and 26 week maturity

Treasury notes: 2 to 10 years maturity

Treasury bonds: 30 year maturity

Municipal bonds and other bonds

Types of Investments

Stocks

Buying a part of a publicly traded company

As profits increase value of stock increases

Highest potential rate of return

Highest risk

No limit on how long you have to invest or how much you could lose

Pay taxes on dividends and gains from appreciation

Available from stock brokers and online brokerages

Mutual Funds

Investment companies pool money from lots of individuals to invest in stocks and bonds

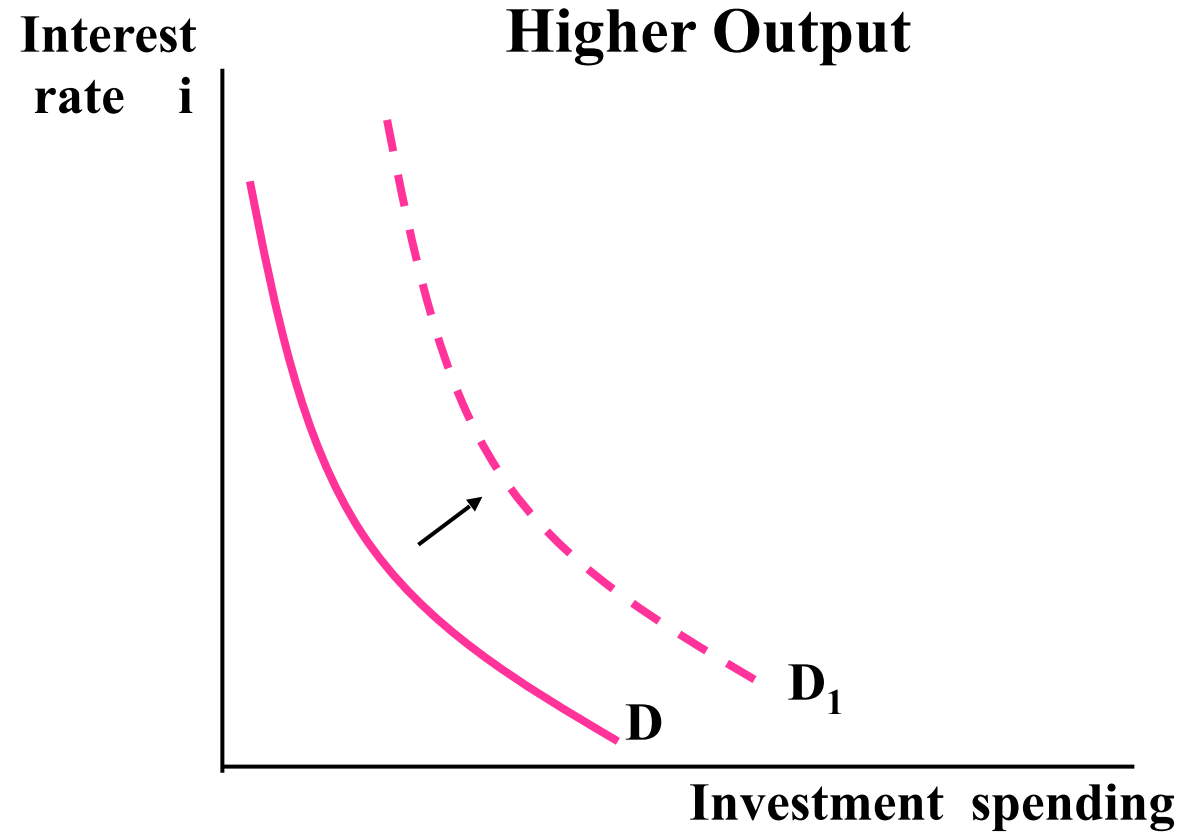
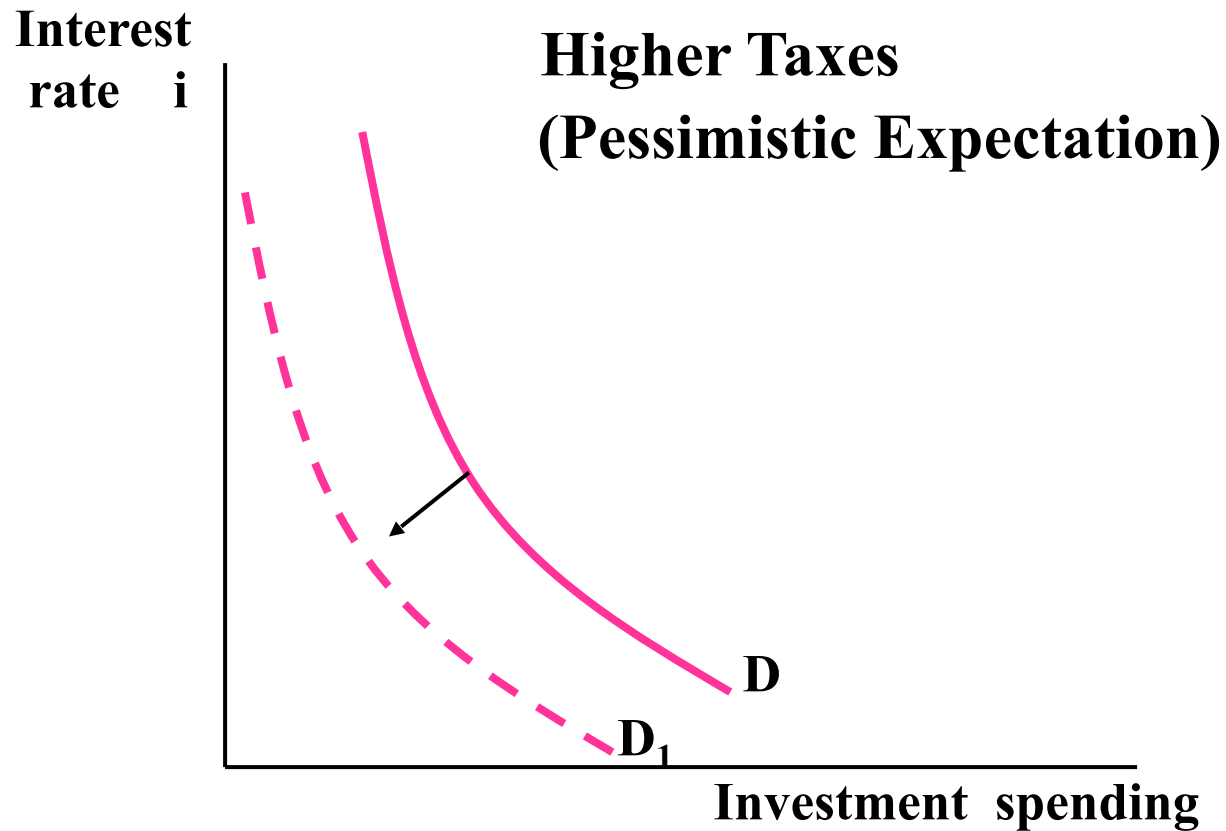
Easy way to invest in a variety of stocks and bonds -- diversify

Depending on the type of fund, risk and rate of return vary

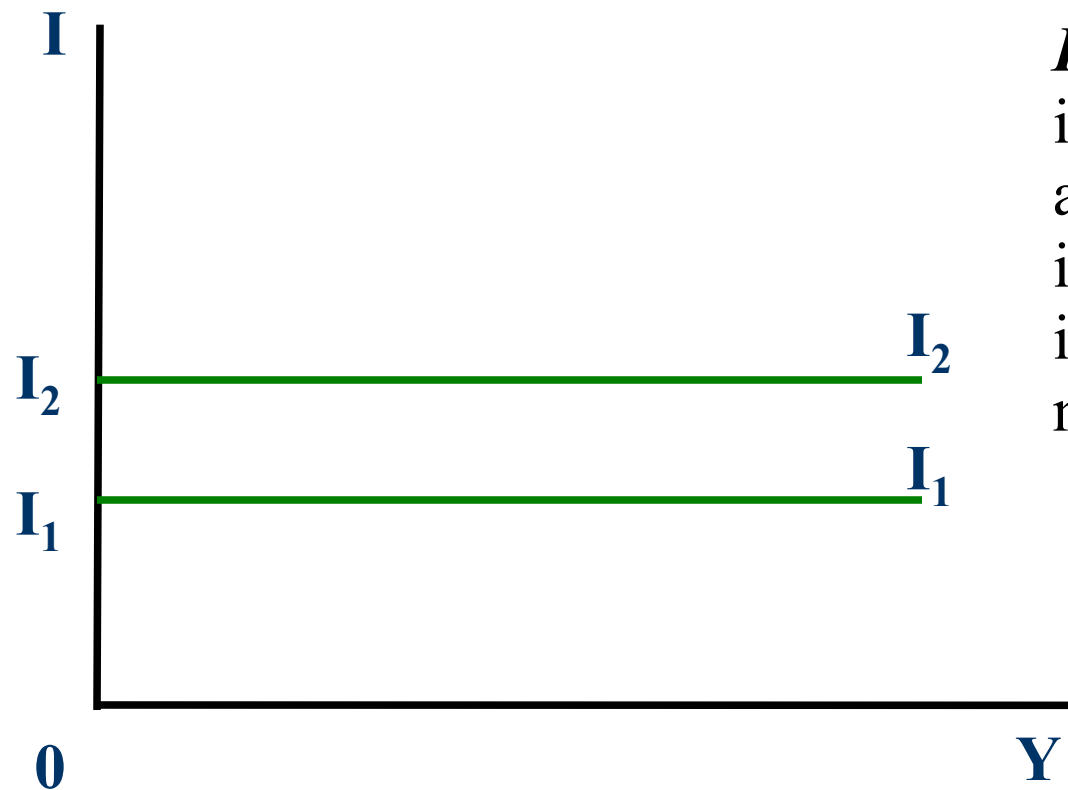
Can begin investing with relatively small amounts

Can purchase from mutual fund companies, brokerages, and online

The Investment Demand Curve

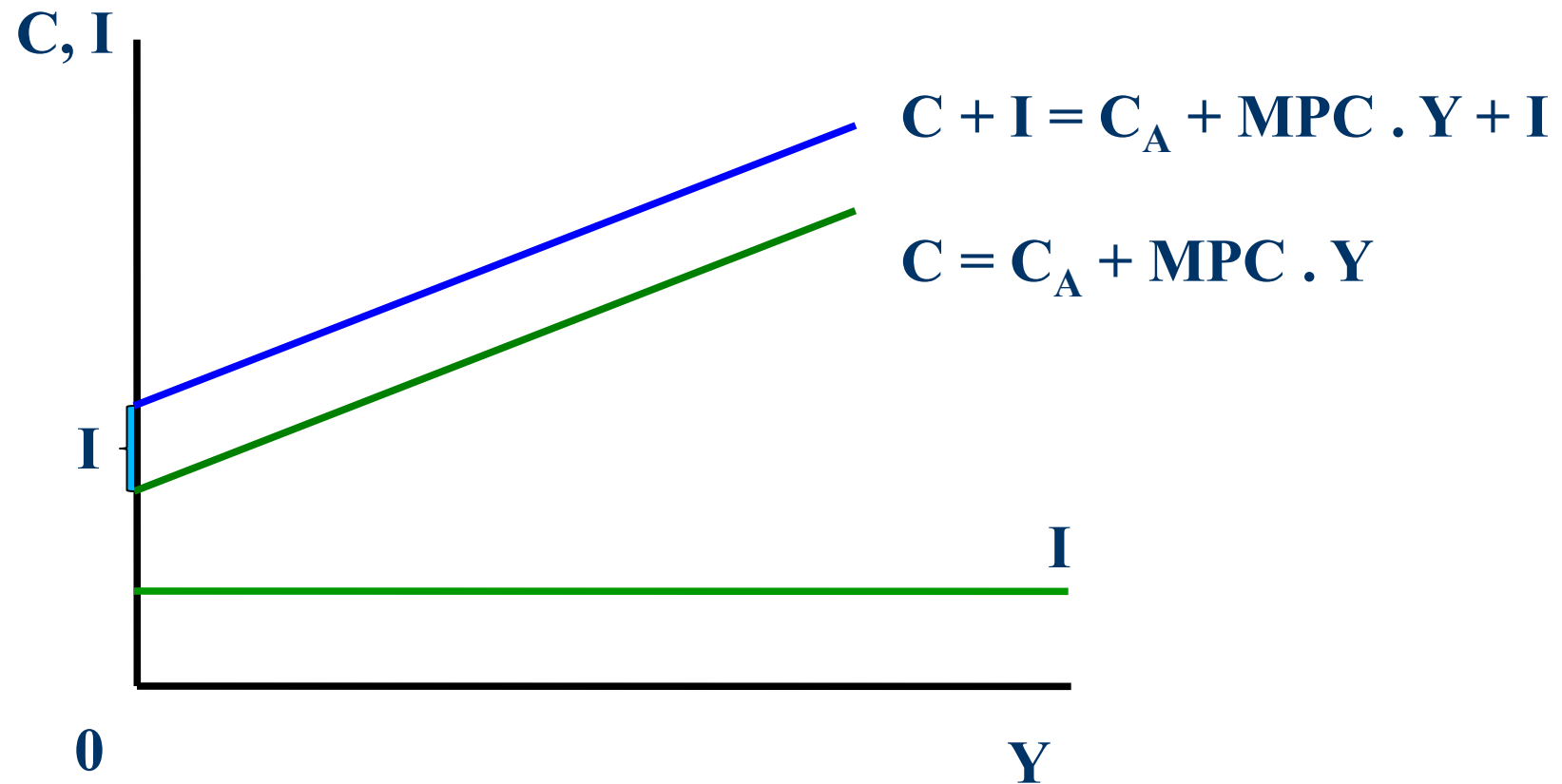


The Investment Function

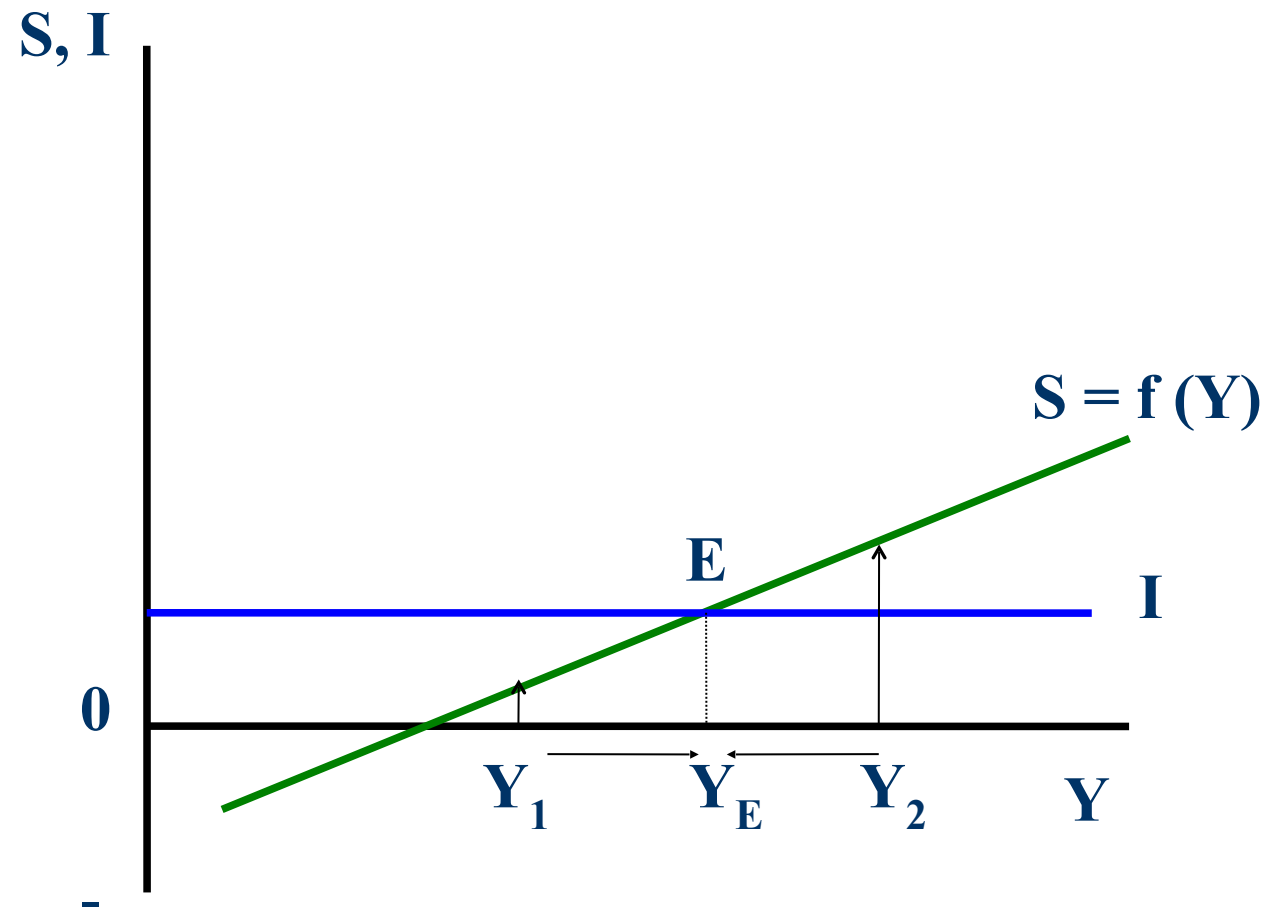


In the short-run it is reasonable to assume that investment is independent of national income.

Consumption and Investment Functions



Saving and Investment Determine Output



Saving and Investment Determine Output

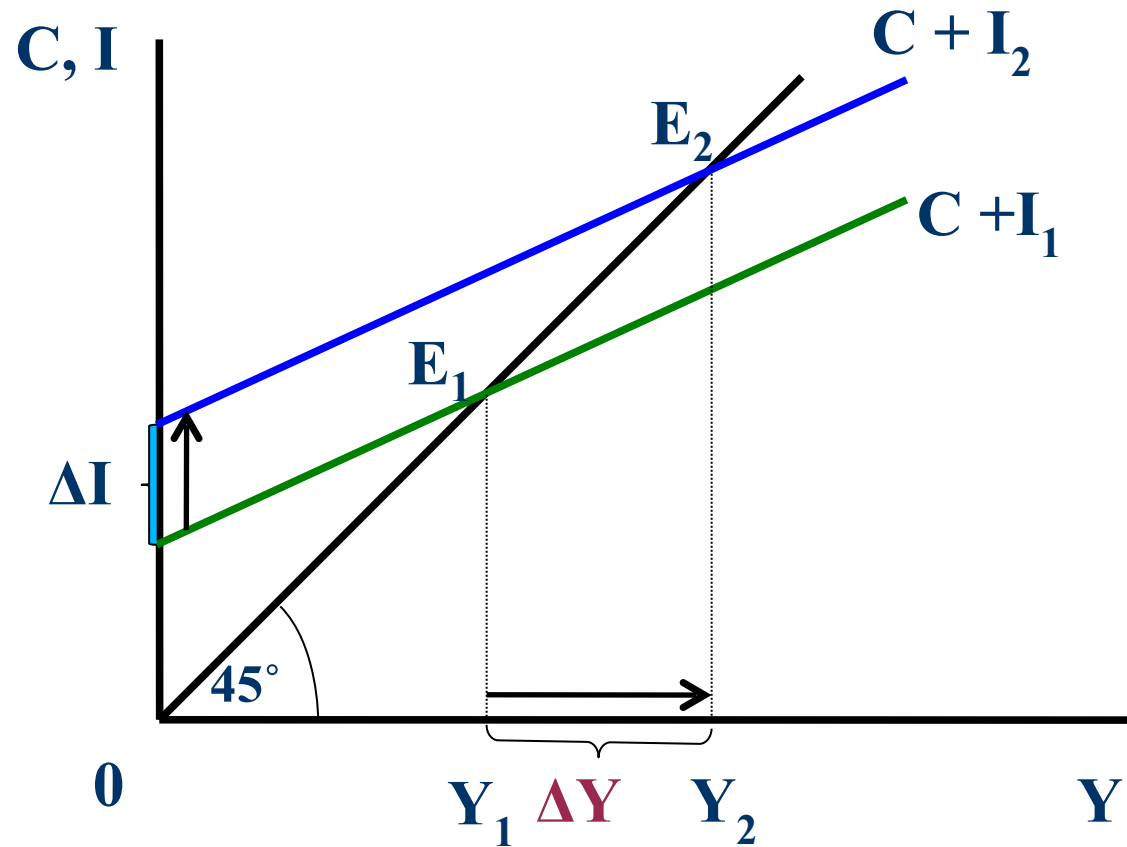
At output level Y_2 families are saving more than businesses are willing to go on investing. Firms will have too few customers and large inventories of unsold goods than they want. Then, businesses will cut back production and lay off workers. This move output gradually downward and economy returns to equilibrium Y_E .

Investment Multiplier

The Keynesian investment multiplier model shows that an increase in investment will increase output by a multiplied amount - by an amount greater than itself.

The multiplier is the number by which the change in investment must be multiplied in order to determine the resulting change in total output.

Investment Multiplier



$$I_2 = I_1 + \Delta I$$

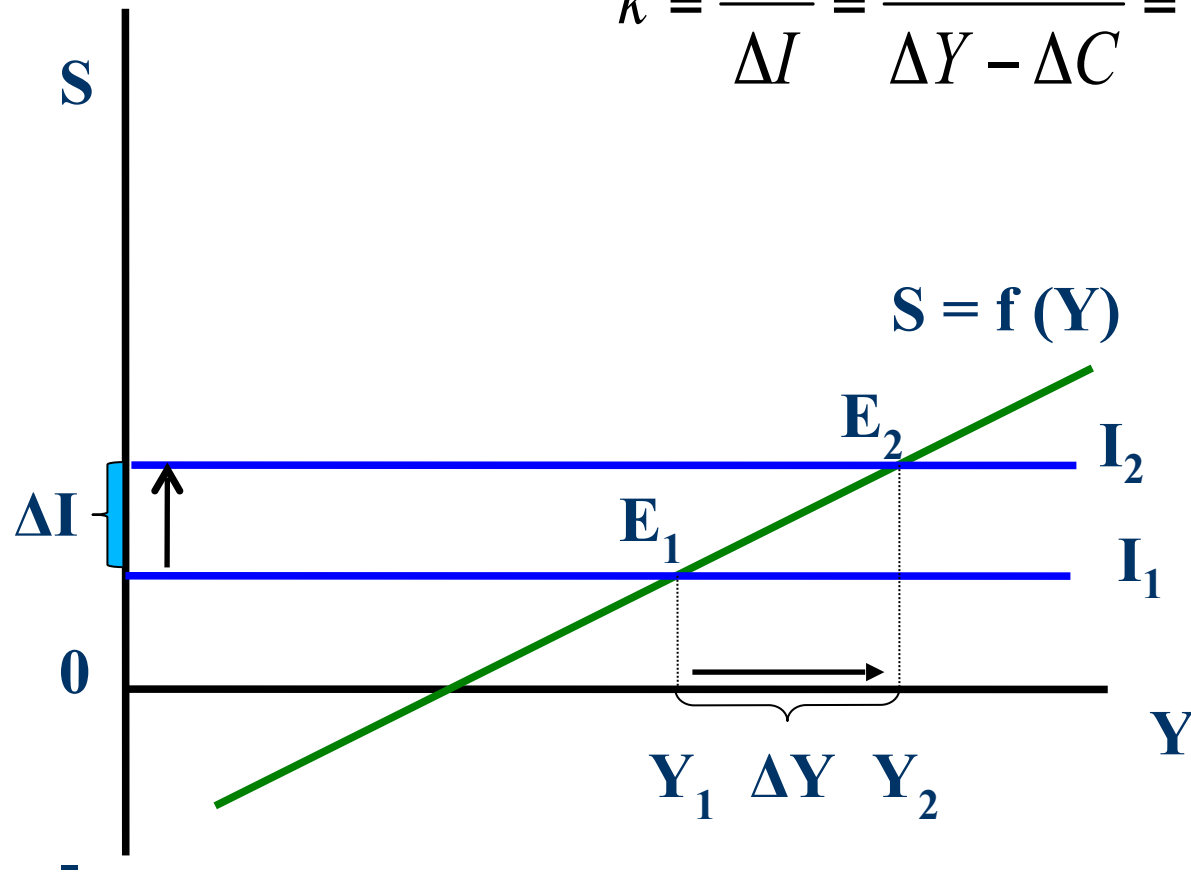
$$\Delta Y = k \cdot \Delta I$$

$$k = \frac{\Delta Y}{\Delta I}$$

Investment Multiplier

The size of the multiplier k depends upon how large the MPC is.

$$k = \frac{\Delta Y}{\Delta I} = \frac{\Delta Y}{\Delta Y - \Delta C} = \frac{1}{1 - \frac{\Delta C}{\Delta Y}} = \frac{1}{1 - MPC} = \frac{1}{MPS}$$



Comparing savings and investment plans

Instrument	Maturity	Risk	Yield	Minimum balance	Taxable?
Savings Account	Immediate	None if insured	Low	\$5	Yes
Certificate of Deposit	90 days or more	None if insured	Moderate	Varies	Yes
Bonds					
Corporate	5–30 years	Some	Moderate	\$1,000	Yes
Municipal	1–20 years	Some	Moderate	\$5,000	No federal, some states
Stocks	Immediate	Low to high	Low to high	Varies	Yes
U.S. Treasury					
Bills	1 year or less	None	Moderate	\$10,000	Federal only
Notes	1–10 years	None		\$1,000	Federal only
Bonds	10–30 years	None		\$1,000	Federal only
Mutual Funds	Varies	Low to high	Moderate	Varies	Usually
Retirement Funds	When buyer is 60 years old	Low	Moderate	Varies	At maturity

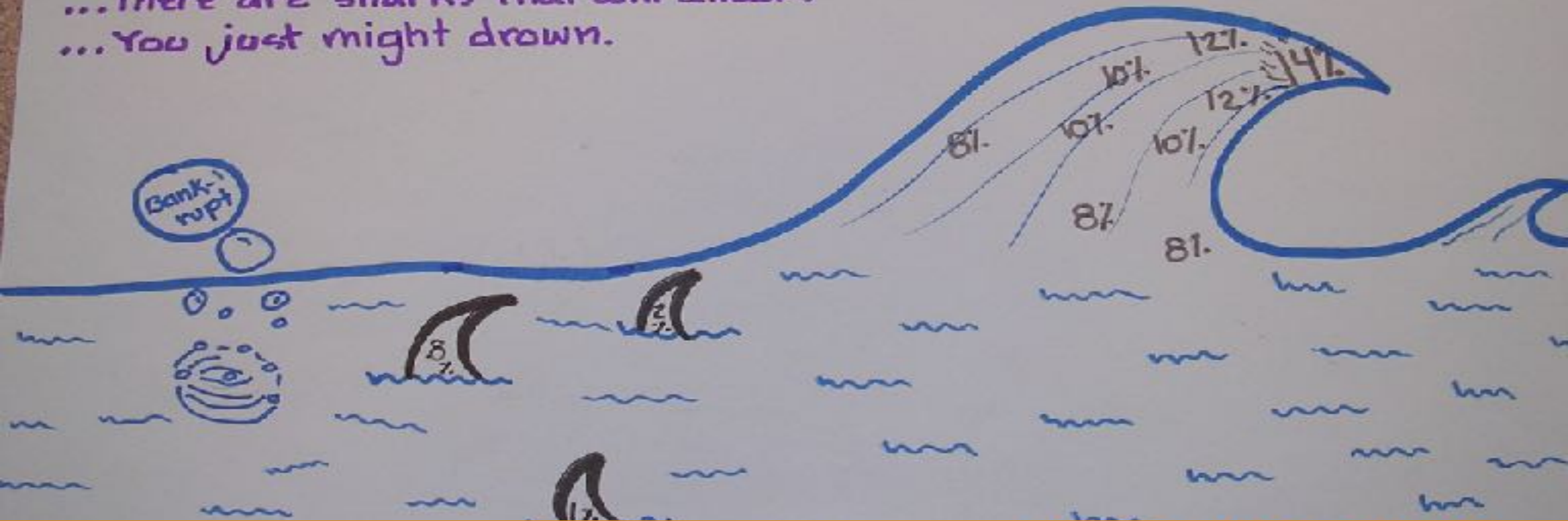
QUESTION

Explain the difference between saving and Investment as defined by a macroeconomist.

Which of the following situations represent Investment? Saving? Explain.

Investing is like the ocean.

- ... Sometimes you can catch good waves, other times they just roll out!
- ... There's always a chance you'll get lost.
- ... There are sharks that will attack.
- ... You just might drown.



SAVING is like a MONEY TREE

They....

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- \$5 bills small but it's guaranteed to grow.
- \$10 bills tend to disappear always has money when you need it
- \$20 bills flourish with regular feeding.
- \$100 bills are like pruning, cut it then...

Investing is like a Flower

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- It could be very pretty like a rose and it could be bad like Poison Ivy.
- It will continue to grow but in the bad times, (the winter) it could survive to just the roots and in the good times (the spring) it will come back.
- It needs nourishing like water (money), Sun (interest) and Soil (which represents you excepting an egg out for an animal).

INVESTING IS LIKE SKYDIVING!

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The initial jump / investment is the hardest part. But once you jump, the Fall / time spent will pay off.

Jumping from the plane is a risk you have to take along with investing, but the memories of it you will have in the long run was a good INVESTMENT

"Savings is like a Rock climber"

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- Always going up... with rate percentage your money goes up.
- Slow and steady... Money goes up slowly but it will always reach a high point as long as more money saved up.
- There is always a risk of falling off the rock.
- ... Fall back for saving is not using

Savings

Savings is like one big piggy bank place to put your money

Savings is like making your mom hold your money for you so you can buy something.

Savings is like taking a tack on your wall.

Savings is like nicelag your money until you need it.

Earned Interest is like a cherry on top

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a phat bowl of Rocky Road icecream with caramel and chocolate syrup and whipped cream

Investings like a box of chocolates

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You never know what your gonna get. It's risky.

Savings is like a Fine Wine.

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1. Like wine gets better over time, you gain interest.

CONCLUSION

Financial system is made up of many types of financial institutions, like the stock and bond markets, banks, and mutual funds.

National saving equals private saving plus public saving.

In a closed economy, national saving equals investment. The financial system makes this happen.

The supply of loanable funds comes from saving. The demand for funds comes from investment. The interest rate adjusts to balance supply and demand in the loanable funds market.

A government budget deficit is negative public saving, so it reduces national saving, the supply of funds available to finance investment.

When a budget deficit crowds out investment, it reduces the growth of productivity and GDP.

THANKS FOR YOUR ATTENTION!