

## INVESTING TERMS

**Capital Gain:** An increase in an investment's value compared to the purchase price.\*

**Capital Loss:** A decrease in an investment's value compared to the purchase price.\*

*\*You realize a capital gain or loss when you sell the investment.*

**Dividends:** A portion of a company's profits paid to shareholders.

**Face Value:** The "face value" (or par value) is the value a bond was issued at and is the value the investor receives when the bond matures.

**Interest:** The amount someone pays to use someone else's money.

**Return:** A gain or loss on an investment.

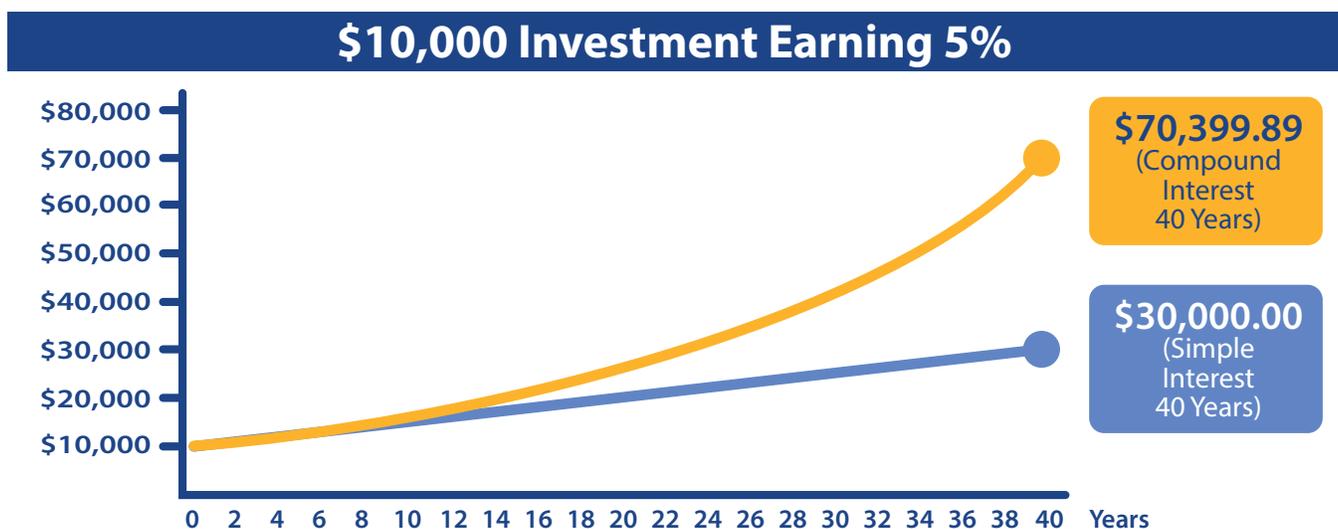
**Risk:** A measure of the chance that an investment's actual returns will be different than what is expected. It includes the possibility that you may lose the money you invested, but also the possibility that returns will be higher than expected. Risk is a measure of standard deviation.

**Liquidity:** How easily and quickly you can convert an asset or investment into cash without impacting its price.

## SIMPLE VS. COMPOUND INTEREST

**Simple interest** is paid only on your original deposit.

**Compound interest** is paid on the original deposit and any interest earned in previous periods. *Compound interest has a bigger impact on returns when the term is longer and interest compounds more frequently.*



## ASSET CLASSES AND INVESTMENT PRODUCTS

### Cash and Cash Equivalents

These investments are like cash because they are very safe and give you quick access to your money.

- **Guaranteed Investment Certificate (GIC):** A loan to a bank or other financial institution (like a credit union).
- **Savings Bond:** A loan to a government that is secured by the government that issued (sold) it.
- **Treasury bill (T-Bill):** A short-term loan to a government. Terms are less than one year.

**Is it risky?** Low to medium risk.

**How can the investment make money?** Interest.

### Fixed Income Securities (ex: Bonds)

Fixed income securities are like a loan – you lend your money to a government or company for a certain period of time. In return they promise to pay you a fixed rate of interest throughout the life of the security.

A common type of Fixed Income Security is a Bond. When you buy a bond you are lending your money to a government or company for a set period of time (term). In return, the company promises to pay you interest throughout the term and repay the **face value** at the end of the bond's term (maturity date).

**Is it risky?** Low to high risk.

**How can the investment make money?** Interest + capital gains.

### Equities (ex: Shares)

When you buy a stock you become part owner in a business. Whether you make or lose money depends on the business' success.

**Is it risky?** High Risk.

**How can the investment make money?** Capital gains + dividends.

### Investment Funds (ex: Mutual Funds)

Investment funds are a collection of investments from one or more asset classes.

Mutual funds are an example. When you buy a mutual fund you are pooling your money with many other investors to invest in a variety of investments at a relatively lower cost.

**Is it risky?** Low to high risk. It depends on what type of investments are in the fund.

**How can the investment make money?** Interest + capital gains + dividends.

## Alternative Investment (ex: Hedge Funds)

These are some of the most complicated types of investments. They have higher-than-average risk in return for higher-than-average potential returns. They are typically meant for very knowledgeable or affluent investors who can afford to take higher risk and get specialized advice. The fees may also be higher because these investments involve more hands-on research and on-going monitoring.

## FORMULAS

### Future Value (Simple Interest)

$$A = P + Prt$$

or

$$A = P(1 + rt)$$

**A**= Future Value; **P**= Principal; **t**= time in years; **r**= interest rate

### Future Value (Compound Interest)

$$A = P(1+i)^n$$

**A**= Future Value; **P**= Principal; **t**= time in years; **i**= interest rate per compounding period ( $r/n$ ), **n**= number of compounding periods

### Future Value (Regular Payments)

$$A = R(1 + i)^0 + R(1 + i)^1 + R(1 + i)^2 + R(1 + i)^3 + R(1 + i)^{n-1}$$

**A**= Future Value; **R**= Regular Payment; **P**= Principal; **t**= time in years; **i**= interest rate per compounding period ( $r/n$ ), **n**= number of compounding periods

### Present Value (Compound Interest)

$$P = A / (1+i)^n$$

**A**= Future Value; **P**= Principal; **i**= Interest Rate per compounding period; **n**= number of compounding periods

Don't forget:

**i**= annual interest rate ( $r$ ) / compounding periods per year.

**n**= compounding periods per year  $\times$  number of years invested

Use this formula if you need to solve for a variable other than **A**. Want to figure out how long it will take to reach your investment goal? Simple, make **A** the amount of money you will need and solve for **t**!

Use this formula to figure out how much you need to invest TODAY to reach your investment goals.

## Interest Earned

$$I = A - P$$

I= Interest Earned;

A= Value of the investment at that time;

P= Principal

## Rate of return

$$= \text{Interest earned} / \text{Principal}$$

$$A - P / P$$

This formula tells you the ratio of money earned (or lost) on an investment relative to the amount of money invested, usually expressed as a decimal or percentage.

## Rule of 72

$$\text{ESTIMATE time to double an investment} = 72 / \text{annual interest rate}$$

Don't forget: Do not express the interest rate as a decimal. If the annual interest rate is 8% use 8, not 0.08. This formula is most accurate when interest is compounded annually.

## Ratio of Future Value to Present Value

$$= A / P$$

or

$$= (1 + i)^n$$

A= Future Value; P= Principal; i= interest rate per compounding period (r/n), n= number of compounding periods

Don't forget:

i= annual interest rate (r) / compounding periods per year.

n= (compounding periods per year) × (number of years invested)

Use this formula to determine how much your original investment will grow and compare different investment options!

