# KOFA HIGH SCHOOL SOCIAL SCIENCES DEPARTMENT ECONOMICS - PERSONAL FINANCE WORKSHOPS

#10 - THE BASICS OF INVESTING



Vocabulary Keys: Words that are in **bold** = are terms that appear in one of the chapters, Words that are <u>underlined</u> = supplemental vocabulary. Ask questions about these words if you are not familiar with them!

## THE BASICS OF INVESTING

1. Over the long term, **stocks** have historically outperformed all other investments.

From 1926 to 2010, the **S&P 500** returned an average annual 9.8% gain. The next best performing asset class is bonds. Long-term U.S. Treasury bonds returned, on average, 5.4% over the same period.

2. Over the short term, stocks can be hazardous to your financial health.

On Dec. 12, 1914, stocks experienced the worst one-day drop in stock market history --24.4%. Oct. 19, 1987, the stock market lost 22.6%. More recently, the shocks have been prolonged and painful: If you had invested in a Nasdaq index fund around the time of the market's peak in March 2000 you would have lost three-fourths of your money over the next three years. And in 2009, stocks overall lost a whopping 37%.

3. Risky investments generally pay more than safe ones (except when they fail).

Investors demand a higher rate of return for taking greater risks. That's one reason that stocks, which are perceived as riskier than bonds, tend to return more. It also explains why long-term bonds pay more than short-term bonds. The longer investors have to wait for their final payoff on the bond, the greater the chance that something will intervene to erode the investment's value.

4. The biggest single determiner of stock prices is earnings.

Over the short term, stock prices fluctuate based on everything from interest rates to investor sentiment to the weather. But over the long term, what matters are earnings.

5. A bad year for bonds looks like a day at the beach for stocks.

In 1994, the worst year for bonds in recent history, intermediate-term Treasury securities fell just 1.8%, and the following year they bounced back 14.4%. By comparison, in the 1973-74 crash, the **Dow Jones industrial average** fell 44%. It didn't return to its old

highs for more than three years or push significantly above the old highs for more than 10 years.

6. Rising interest rates are bad for bonds.

When interest rates go up, bond prices fall. Why? Because bond buyers won't pay as much for an existing bond with a fixed interest rate of, say, 5% because they know that the fixed interest on a new bond will pay more because rates in general have gone up.

Conversely, when interest rates fall, bond prices go up in <u>lockstep</u> fashion. And the effect is strongest on bonds with the longest term, or time, to **maturity**. That is, long-term bonds get hit harder than short-term bonds when rates climb, and gain the most when rates fall.

7. *Inflation* may be the biggest threat to your long-term investments.

While a stock market crash can knock the stuffing out of your stock investments, so far -- knock wood -- the market has always bounced back and eventually gone on to new heights. However, inflation, which has historically stripped 3.2% a year off the value of your money, rarely gives back what it takes away. That's why it's important to put your retirement investments where they'll earn the highest long-term returns.

8. U.S. Treasury bonds are usually as close to a sure thing as an investor can get.

The conventional wisdom is that the U.S. government is unlikely ever to **default** on its bonds - partly because the American economy has historically been fairly strong and partly because the government can always print more money to pay them off if need be. As a result, the interest rate of Treasuries is considered a risk-free rate, and the **yield** of every other kind of fixed-income investment is higher in proportion to how much riskier that investment is perceived to be. Of course, your return on Treasuries will suffer if interest rates rise, just like all other kinds of bonds.

9. A diversified portfolio is less risky than a portfolio that is concentrated in one or a few investments.

**Diversifying** -- that is, spreading your money among a number of different types of investments -- lessens your risk because even if some of your holdings go down, others may go up ( or at least not go down as much ). On the flip side, a diversified portfolio is unlikely to outperform the market by a big margin for exactly the same reason.

10. Index mutual funds often outperform actively managed funds.

In an index fund, the manager sets up his portfolio to mirror a market index -- such as Standard & Poor's 500-stock index -- rather than actively picking which stocks to

purchase. It is surprising, but true, that index funds often beat the majority of competitors among actively managed funds. One reason: Few actively managed funds can consistently outperform the market by enough to cover the cost of their generally higher expenses.

# **INVESTING IN STOCKS**

1. Stocks aren't just pieces of paper.

When you buy a share of stock, you are taking a share of ownership in a company. Collectively, the company is owned by all the shareholders, and each share represents a claim on **assets** and earnings.

2. There are many different kinds of stocks.

The most common ways to divide the market are by company size (measured by market <u>capitalization</u>), sector, and types of growth patterns. Investors may talk about large-cap vs. small-cap stocks, energy vs. technology stocks, or growth vs. value stocks, for example.

3. Stock prices track earnings.

Over the short term, the behavior of the market is based on enthusiasm, fear, rumors and news. Over the long term, though, it is mainly company earnings that determine whether a stock's price will go up, down or sideways.

4. Stocks are your best shot for getting a return over and above the pace of inflation.

Since the end of World War II, through many ups and downs, the average large stock has returned close to 10% a year -- well ahead of inflation, and the return of bonds, real estate and other savings vehicles. As a result, stocks are the best way to save money for long-term goals like retirement.

5. Individual stocks are not the market.

A good stock may go up even when the market is going down, while a stinker can go down even when the market is booming.

6. A great track record does not guarantee strong performance in the future.

Stock prices are based on projections of future earnings. A strong track record bodes well, but even the best companies can slip.

7. You can't tell how expensive a stock is by looking only at its price.

Because a stock's value depends on earnings, a \$100 stock can be cheap if the company's earnings prospects are high enough, while a \$2 stock can be expensive if earnings potential is dim.

8. Investors compare stock prices to other factors to assess value.

To get a sense of whether a stock is over- or undervalued, investors compare its price to revenue, earnings, cash flow, and other fundamental criteria. Comparing a company's performance expectations to those of its industry is also common -- firms operating in slow-growth industries are judged differently than those whose sectors are more <u>robust</u>.

9. A smart portfolio positioned for long-term growth includes strong stocks from different industries.

As a general rule, it's best to hold stocks from several different industries. That way, if one area of the economy goes into the dumps, you have something to fall back on.

10. It's smarter to buy and hold good stocks than to engage in rapid-fire trading.

The cost of trading has dropped dramatically -- it's easy to find commissions for less than \$10 a trade. But there are other costs to trading -- including mark-ups by brokers and higher taxes for short-term trades -- that stack the odds against traders. What's more, active trading requires paying close attention to stock-price fluctuations. That's not so easy to do if you've got a full-time job elsewhere. And it's especially difficult if you are a risk-averse person, in which case the shock of quickly losing a substantial amount of your own money may prove extremely nerve-wracking.

What is a stock?

It's more than just a piece of paper ( and sometimes not even that ).

At some point, just about every company needs to raise money, whether to open up a West Coast sales office, build a factory, or hire a crop of engineers.

In each case, they have two choices: 1) Borrow the money, or 2) raise it from investors by selling them a stake (issuing shares of stock) in the company.

When you own a share of stock, you are a part owner in the company with a claim (however small it may be) on every asset and every penny in earnings.

Individual stock buyers rarely think like owners, and it's not as if they actually have a say in how things are done.

Nevertheless, it's that ownership structure that gives a stock its value. If stockowners didn't have a claim on earnings, then stock certificates would be worth no more than the paper they're printed on. As a company's earnings improve, investors are willing to pay more for the stock.

Over time, stocks in general have been solid investments. That is, as the economy has grown, so too have corporate earnings, and so have stock prices.

Since 1926, the average large stock has returned close to 10% a year. If you're saving for retirement, that's a pretty good deal -- much better than U.S. savings bonds, or stashing cash under your mattress.

Of course, "over time" is a relative term. As any stock investor knows, prolonged **bear markets** can decimate a portfolio.

Since World War II, Wall Street has endured several bear markets -- defined as a sustained decline of more than 20% in the value of the Dow Jones Industrial Average.

**Bull markets** eventually follow these downturns, but again, the term "eventually" offers small sustenance in the midst of the downdraft.

The point to consider, then, is that investing must be considered a long-term <u>endeavor</u> if it is to be successful. In order to endure the pain of a bear market, you need to have a stake in the game when the tables turn positive.

Different kinds of stocks:

Not sure what a small cap is or why you should care? Read on.

There are thousands of stocks to choose from, so investors usually like to put stocks into different categories: size, style and sector.

By size:

A company's size refers to its market capitalization, which is the current share price times the total number of shares outstanding. It's how much investors think the whole company is worth.

XYZ Corp., for example, may have 2 billion shares outstanding, and a stock price of \$10. So the company's total market capitalization is \$20 billion. (Technically, if you had an

extra \$20 billion lying around, you could buy each share of stock, and own the whole company.)

Is \$20 billion a lot or a little? No official rules govern these distinctions, but below are some useful guidelines for assessing size.

Large-cap companies tend to be established and stable, but because of their size, they have lower growth potential than small caps.

Over the long run, small-cap stocks have tended to rise at a faster pace. It's much easier to expand **revenues** and **earnings** quickly when you start at, say, \$10 million than \$10 billion. When profitability rises, stock prices follow.

There is a **trade-off**, though. With less developed management structures, small caps are more likely to run into troubles as they grow -- expanding into new areas and beefing up staff are examples of potential pitfalls. Of course, even corporate titans get into trouble.

By style:

A "growth" company is one that is expanding at an above-average rate, much as tech companies did in the 1990s.

Catch a successful growth stock early on, and the ride can be spectacular. But again, the greater the potential, the bigger the risk. Growth stocks race higher when times are good, but as soon as growth slows, those stocks tank.

The opposite of growth is "value." There is no one definition of a value stock, but in general, it trades at a lower-than-average earnings multiple than the overall market. Maybe the company has messed up, causing the stock to <u>plummet</u> -- a value investor might think the underlying business is still sound and its true worth not reflected in the depressed stock price.

A "cyclical" company makes something that isn't in constant demand throughout the business cycle. For example, steel makers see sales rise when the economy heats up, spurring builders to put up new skyscrapers and consumers to buy new cars.

But when the economy slows, their sales lag too. Cyclical stocks bounce around a lot as investors try to guess when the next upturn and downturn will come.

# By sector:

Standard & Poor's breaks stocks into 10 sectors and dozens of industries. Generally speaking, different sectors are affected by different things. So at any given time, some are doing well while others are not.

In most cases, finance, health care and technology tend to be the fastest growing sectors, while consumer staples and utilities offer stability with moderate growth. The other sectors tend to be cyclical, expanding quickly in good times and contracting during recessions.

How much should you pay?

The right way to use P/E and other valuation tools.

When times are good, investors think the happy days will last forever, and they are willing to pay exorbitant amounts for earnings.

When times are bad, they assume the world is ending and refuse to pay much of anything. In assessing how much a stock is worth, investors talk about "valuation," the stock price relative to any number of criteria.

Price/earnings (P/E) ratio:

Everybody uses it, but not everybody understands it. The actual P/E calculation is easy:

Just divide the current price per share by earnings per share. But what number should you use for earnings per share? The sum of the past four quarters? Estimates for next year? There is no right answer. The P/E based on the past four quarters provides the most accurate reflection of the current valuation, because those earnings have already been booked.

But investors are always looking ahead, so most also pay attention to estimates, which also are widely available at financial Web sites.

Wall Street analysts generally compute earnings-per-share estimates for the current <u>fiscal year</u> and the next fiscal year and use those estimates to assign a P/E, though there is no guarantee that the company will meet those estimates.

The P/E can't tell you whether to buy or sell. It is merely a gauge to tell you whether a stock is overvalued or undervalued. Assuming they have the same total shares outstanding, is a \$100 stock more expensive than a \$50 stock?

Not exactly. Where valuation is concerned, price is dictated by expectations of future performance. If the earnings of the higher-priced company are growing considerably faster than the other, the higher price may be justified.

What's an appropriate P/E? Different types of stocks win different valuations. Generally, the market pays up for growth or enormous profitability. Consider a slow-growing industrial **conglomerate** and a tech company with fat profit margins and enormous growth potential.

The market will typically reward the second company with a higher P/E.

To quickly compare P/Es and growth rates, use the PEG ratio -- the P/E (based on estimates for the current year) divided by the long-term growth rate. A company with a P/E of 36 and a growth rate of 20% has a PEG of 1.8.

In general, you want a stock with a PEG that's close to 1.0 (or lower), which means it is trading in line with its growth rate. But for a quality company, you can pay more.

Also, don't get excited by rock-bottom P/Es -- some companies are doomed to low valuations. One group the market tends to penalize is cyclicals, companies whose performance rises and falls with the economy.

### Price/Sales ratio:

Just as investors like to know how much they're paying for earnings, it's also useful to know how much they're paying for revenue (the terms "sales" and "revenue" are used interchangeably).

To calculate the Price/Sales ratio, divide the stock price by the total sales per share for the past 12 months. You could also use revenue estimates for the next fiscal year, which are being published more frequently on financial Web sites.

Like P/Es, Price/Sales ratios are all over the map, with fast-growers tending to get the highest valuations.

## Price/Book Value ratio:

Defined simply, book value equals a company's total assets minus its total <u>liabilities</u> and intangible assets. In other words, if you **liquidated** a firm, this is what the leftover assets would be worth after paying off all your creditors.

On the balance sheet, book value is represented as "shareholders' equity." (Dividing this aggregate total by the number of shares outstanding will give you a per-share book value.)

This is a more conservative measure, which embraces a "bird-in-hand" philosophy of valuation. Investors use it to spot cases in which the market is over- or undervaluing a company's true strength.

For example, a retailer that owns the buildings its stores are housed in might be sitting on unrealized real estate gains.

Picking stocks for your portfolio:

Although there are more than 6,000 publicly traded companies, the core of your stock portfolio should consist of financially strong companies with above-average earnings growth.

Surprisingly, there are only about 200 stocks that fit that description. A well-balanced stock portfolio should consist of 15 to 20 stocks, across seven or more different industries -- but you don't have to buy them all at once.

Since you want to be able to hold your stocks for a long time, they should offer a total return higher than the 10% historical market average. You can estimate the likely return by adding the **dividend** yield to the projected earnings growth rate -- a stock with 11% earnings growth and a 2% yield could provide a 13% annual total return.

As a general rule, stocks with moderately above-average growth rates and reasonable valuations are the best buys. Statistically, high-growth stocks are usually overpriced and have a harder time meeting inflated investor expectations.

The first thing to look at is the stock's price/earnings ratio compared with its projected total return. Ideally, the P/E should be less than double the projected return (a P/E of no more than 30 for a stock with 15% total return potential).

A well-balanced portfolio might include a couple of industrials with 9% growth rates and 3% yields, selling at 17 P/Es, as well as consumer growth stocks with 13% growth rates and 1% yields, at 23 P/Es. Add a couple of tech stocks with 25% growth rates and high P/Es (don't overdo it on those).

If you can average a 14% return over the next 10 to 20 years, you'll reach your financial goals -- and probably outperform most pros as well.

How to buy stocks:

When you're looking for a **broker**, you have three distinct choices. From the most to the least expensive, they are: full-service brokers, discount brokers and online brokers. What differentiates them is the advice they provide and cost.

Full-service brokers will call with stock ideas and back this advice with reports from their firm's research department. They'll keep an eye on your picks and let you know when they think changes are necessary.

Discounters do less of this. While there's typically plenty of research available on the best online brokerage sites, it's up to you to dig for it.

You may want to choose different kinds of brokers for different purposes. I believe that full-service brokers should get paid for their stock ideas. That seems only fair. But if you've done your research yourself, I don't see any reason to pay a hefty commission -- discounters probably are fine.

The nice thing about the way the brokerage world is shaping up is that you may be able to have both of those things in one account at one firm.

Merrill Lynch and most other full-service brokers have come around to the fact that they need an online component -- and need to charge you lower commissions when you use it. Discounters like Schwab and Fidelity have both started offering a fuller range of services in recent years, while retaining their low-cost structure.

If you decide to sign on with a full-service broker, you should make sure that person has nothing to hide. To get a report on any broker, call the National Association of Securities Dealers at 800-289-9999, or visit the broker's Web site.

Full-service brokers
Cost: Commissions are typically based on a percentage of your purchase ( or sale price.
Discount brokers
Cost: Between \$10 and \$20 for a trade of 1,000 shares or less, and on average, discounters charge one-third the price of full-service brokers.
Online brokers

Cost: At \$9 to \$15 a trade, it doesn't get any cheaper than this.

When trying to place a buy or sell order, you'll be faced with all sorts of questions: Market or limit order? "Day only" or "Good 'till cancelled." Here's the vocabulary you need to know to place a trade.

If you place a market order with your broker, then you are saying that you're willing to buy at whatever happens to be the prevailing price for the stock. If you have a specific price in mind, you can set a limit order specifying the price you're willing to pay. If the stock dips down to that level, your order will be automatically filled. Limit orders can be left open for a single day (a day order) or indefinitely (good until canceled).

After you've bought a stock, you can instruct your broker to sell it if the price drops to a level you specify (a stop loss order). That's a kind of insurance; it means that no matter what happens to a stock's price you'll never lose more than a specified amount.

In a volatile market, however, setting a stop-loss order at 10% or 20% below the purchase price will sometimes cause you to cash out of the stock on a momentary dip -- thus locking in a loss even though the shares may immediately head back upward.