Investing basics

Know thyself
Go long
Diversify, diversify, diversify

Things you need to know

- Know yourself
  - Dare-devil or tree-hugger?
- Know that it's going to take a lot of time and effort
  - Get acquainted with what's out there
- Know there's a risk-return trade-off
  - You want higher returns? Must be willing to accept more risk
  - You want less risk? Must be willing to accept a lower return
- Know when you'll need the money back
  - Retirement? OK to invest in stocks
  - 5 years for down payment? Maturity <= 5 years
- Know when to take a profit (or a loss)
  - Knowing when to sell is harder than knowing when to buy

Know thyself

- How do you feel about taking risks?
- Are you a gambler or a tree-hugger?
  - Are you risk-avoider or a risk-lover?
  - U. S. Treasury securities vs. South African stock market?
    - Some people can handle risk and some can't
  - Simple test: which would you take?
    - Coin flip: heads $1,000 - tails $0
    - Guaranteed $400

Know thyself even more

- Investing on your own takes a lot of time and effort
- Do you want to be an passive or active investor?
  - Passive => spends little time on investments; leaves it to professionals; often buys mutual funds; is in it for the long-haul
  - Active => needs to keep abreast of economic conditions; buys & sells much more frequently

How to start being active

- Begin to familiarize yourself with what's going on in the financial world
  - Watch financial shows on TV
    - MSNBC
    - CNN – MoneyLine (Lou Dobbs Tonight)
  - Read *Wall Street Journal*
    - Not cover to cover
  - Read *Business Week, Forbes* and *Fortune*
    - Not all of them, not every day

Get acquainted with ***stocks***

- Stocks are shares of **ownership** in a company
- "Large cap" stocks – big U. S. Corporations
  - Ford, Microsoft, Coca Cola, DuPont, Walmart
  - S&P 500 is an index that tracks 500 largest companies
  - Safer than smaller, less well-known firms
- "Small cap" stocks
  - Riskier, less well-known, but higher returns
    - Extreme example are penny stocks
      - Very, very risky – AVOID
- "Mid caps" are in between
- International stocks
  - Good way to diversify your portfolio

Get acquainted with ***corporate bonds***

- ❑ Bonds are IOU's of a corporation
  - You don't actually own the company like with stock
  - With bonds you lend the company some money
- ❑ **Coupon** bonds – periodically get interest plus a huge amount at maturity
  - $60 every six months + $1,000 in 25 years
- ❑ **Convertible** bonds – swap them for stock in the company if its profits grow – cool!
- ❑ **Callable** bonds – issuing firm can buy them back whenever it wants to – not cool!

Get acquainted with ***government bonds***

- ❑ U. S. Treasury bills, notes and bonds
  - Backed by federal government
  - Bills (short-term), notes (intermediate term) and bonds (long-term)
  - No *default* risk – government can print money
    - ❑ But still have another type of risk – next module
- ❑ "Munies" – municipal bonds
  - Issued by state and local governments
    - ❑ Exempt from federal and state income taxes - cool

Get acquainted with ***other investments***

- ❑ CD's
  - Fancy savings accounts
  - Earn higher interest rates
  - But you can't get your money back for specified term
    - ❑ Stiff penalty for early withdrawal
- ❑ Mutual funds
  - Stock funds, bond funds, money market funds
  - International stock funds, international bond funds
  - Diversification plus professional management
  - Any kind of investing can be done via a fund

Risk and return

- Almost every investment decision you make is centered around **risk and return**
- We'd better define them before continuing

Risk

- Risk => possibility that **actual** returns will deviate from **expected** returns
  - Over the past 10 years, a mutual fund may have had an average annual return of 15%, but the return has ranged from -12% to +26%
  - So while you expect a return of 15% each year, you need to be prepared for years when you could lose 12% or more
  - Contrast this with another fund whose expected return is only 8% but with a range of +4% to +10%

Types of risk

- Default risk
  - Possibility that the issuer won't be able to pay
- Inflation risk
  - Rising prices will erode purchasing power
- Liquidity risk
  - Risk that you won't be able to sell your investment quickly and without losing significant value
    - 100 shares of IBM vs. Al's Business Machines
    - Selling corporate bonds vs. an office building
- Interest rate risk – much more on this later
  - Rising interest rates cause bond prices to drop

Another way to classify risk

- ❑Unsystematic risk (aka random risk)
  - Risk that's unique to the company
  - Subject to random, uncontrollable events
    - ❑Labor unrest (Bethlehem Steel), lawsuits (tobacco companies), crooks (Enron), product recall (Firestone tires), bad press (Tylenol)
- ❑Systematic risk (aka market risk)
  - Risk that's due to market-wide events, independent of a particular company
    - ❑Terrorist attacks, rising interest rates, panics

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❑Systematic risk?

- ❑Due to worries about economic growth and a big sell off in Chinese stocks…
  - The Dow falls 546 points
  - The Dow falls 178 points in a minute
  - Stocks lose $626 billion in market value
  - 498 stocks in the S&P 500 decline
    - ❑Questar and Radio Shack rise

Rate of return

- ❑Rate of return = (current income + capital gains) / price
  - Buy a share of IBM for $100 and during the year IBM pays a dividend of $5.00. At the end of the year you sell it for $104.50.
    - ❑Rate of return = [5.00+(104.50–100)]/100 =9.50%
  - Suppose instead you had sold it for 85.50
    - ❑Rare of return = [5.00+(85.50-100)]/100= -9.50%
- ❑Capital gains (or losses) only if you sell
  - Otherwise just paper gain or loss

Risk-return trade-off

- ❑ **Investing is a trade-off between how well you want to sleep vs. how well you want to eat**
- ❑ To get a higher rate of return, you normally need to expose your savings to higher risk
  - Is it worth it? Yes for some, no for others
  - Match your investments with your temperament
  - But there is a simple way to reduce your risk while still earning a solid, steady return
- ❑ The three most important things to do are

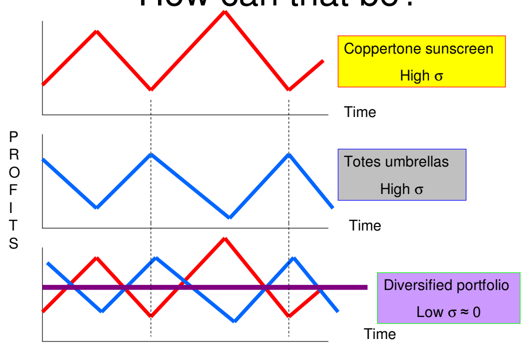
Diversify, diversify, diversify

- ❑ Don't keep all your eggs in one basket
- ❑ Classic example: own only two stocks
  - Coppertone (sunscreen) + Totes (umbrellas)
  - Very high **negative** correlation
    - ❑ Rainy weather – umbrella sales are up but sunscreen sales are down
    - ❑ Sunny weather – sunscreen sells like crazy but umbrella company struggles
- ❑ Weather can't hurt you – you'll make a consistent return – no big volatility

Measuring risk

- ❑ Standard deviation, σ, statistical measure of the fluctuations or volatility of returns
- ❑ The higher the σ, the greater the risk
  - You can make a lot but you can lose a lot too
- ❑ Whole can be a lot less than sum of the parts
  - By itself, Totes is very volatile (high σ)
    - ❑ High unsystematic risk due to random weather
  - By itself, Coppertone is very volatile (high σ)
    - ❑ High unsystematic risk due to random weather
  - Together they are very safe (low $\sigma \approx 0$)

How can that be?



Takes more than 2 to tango

- It takes more than just two stocks to be really diversified but you can almost replicate the S&P500 index with a lot fewer than 500 stocks
  - 15 (diverse) stocks can eliminate unsystematic risk
  - 5 (diverse) stocks can cut it in half
- Krispy Kreme, Microsoft, GM, Target, Exxon-Mobil, PPL and GlaxoSmithKline would be a pretty well-diversified **stock** portfolio
- Or you can just buy a mutual fund

Diversify the diversification

- Need to also diversify on a portfolio level
  - Need several kinds of investment categories
  - All stocks and stock market crashes, you lose
  - All bonds and interest rates rise, you're dead
- Own stock portfolio and bond portfolio
  - If corporate profits are falling and stock prices drop, interest rates fall to stimulate economy and bond prices rise – just like sunscreen and totes – you're covered

When will you need the money?

- The value of financial assets fluctuates (some lots more than others) and you don't want to have to liquidate your holdings when prices are temporarily depressed
- Usually good idea to match the maturity with your expected holding period
- Don't put your 16-year old daughter's college fund into the stock market

Some basic dos and don'ts

- Don't invest in stocks for less than 5 years
  - Fluctuations are too great and unpredictable
- Do invest in stocks for the long-term
  - You're young, so go for it – but with funds you don't need until retirement
  - Invest aggressively only with money you can lose
- Don't invest in long-term bonds for short-term
  - Bond prices fall as interest rates rise
  - Going to buy a house in 5 years?
    - Buy 5-year bonds - You'll get $1,000 in 5 years
    - Don't buy 30-year bonds - who knows what they'll be worth?

History lesson

	Average return	Risk σ
Small cap stocks	13%	30%
Large cap stocks	11%	20%
Corporate bonds	6%	8%
Treasury bonds	5%	3%

Don't get greedy

- ❑Bulls and bears make money; pigs don't
  - Possible to make money when markets are going up or down but don't get greedy
  - **Know when to take a profit**
- ❑Many investors buy at the peak and sell at the trough
  - Often you should buy when others are selling and sell when others are buying – courage!
  - Timing is very difficult

Ready, let's invest

- ❑First you'll need a broker
  - You can use a bricks and mortar brokerage firm or an internet broker
    - ❑Just bring some money to open an account
    - ❑You can buy and sell stocks – each time broker gets a commission (up to $25 per trade)
      - Internet is cheaper
      - Some brokers discount if you're a big trader

Range of brokers

- ❑Discount brokers
  - Give no advice
  - Make no recommendations
  - Just facilitate trading
  - Least expensive
  - DT AMERITRADE
  - E*TRADE
- ❑Full service brokers
  - Give strategy and advice
  - Recommend which stocks to buy and sell
  - Most expensive
  - Merrill Lynch
  - Morgan Stanley - Dean Witter

Fidelity and Vanguard

- Fidelity and Vanguard are two mega firms that provide brokerage services and offer their own internally managed mutual funds
- Good idea to have an account with one of them because later we're going to really recommend investing some of your money in their mutual funds

Sobering theory of investing

- Efficient markets theory
  - There is so much information out there the **stock market is totally efficient**
    - All stocks are fairly priced and there are no good or bad deals
    - Therefore, you can't consistently beat the market
    - Monkey throwing darts at WSJ will pick a portfolio of stocks just as good as those chosen by professional stock advisors
    - Therefore go with an **index mutual fund**

Index mutual funds

- Rather than beat the market, they match the market
  - Charge much lower fees because you don't pay lots for unneeded professional (and often crappy) advice

Coming up

- Next two modules are more on investing in stocks and bonds
- After that is investing in mutual funds