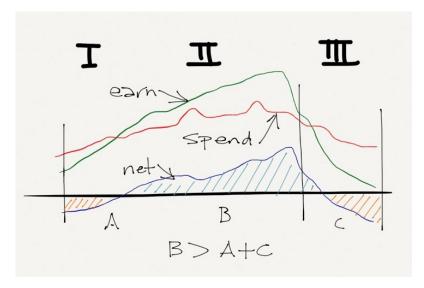
# Personal Finance and Investing

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# Life Cycle Personal Finance

- Stages: childhood, education, work, retirement
- Borrowing Saving Dis-saving Bequest



 Life Cycle model tells us that financial assets can be used to move money/wealth around in time.

# A time to save, a time to not

- The Life Cycle model makes some things obvious:
  - There are times when you need to borrow money.
  - Borrowing money is not BAD
  - Credit cards are not BAD
  - Earnings (income) are somewhat predictable
  - Expenses are mostly controllable, but some are unexpected
  - o Retirement age is a choice
  - Retirement means many different things (not as simple as LC Model)
  - Dying with no surplus is a choice (most people die with a surplus)

# Budgets = diets

- Many people become financially literate in order to monitor, predict and control their income, expenses and wealth
- Building and maintaining a budget is as hard as dieting, and about as successful...
- Goals and plans are wonderful. The clearer they are the more achievable they become. Be realistic.
- Financial literacy is not about being an expert, but about being aware, and smarter.

# Timing

- Many events are predictable, some are not
- Plans must account for both the predictable, and the unexpected
- Often income and savings are not aligned with expenses
- You will need to move \$s from the future
- You have the opportunity to move \$s into the future
- "Investing" is using financial assets (bought and sold in markets) to move \$s through time

#### The Investment Problem

- There are thousands of ways of "investing"
  - o (Borrowing is just the opposite of saving and investing)
- All have some things in common:
  - All have an average return (could be negative!)
  - All have risk associated with that return
  - o Risk is the variation in the return (this is the definition of risk)
  - o Risk is not BAD
  - All investing involves giving up something certain today for something uncertain in the future
- Apart from the timing issue, the "investment problem" is matching your risk attitudes to the return/risk profiles of the opportunities

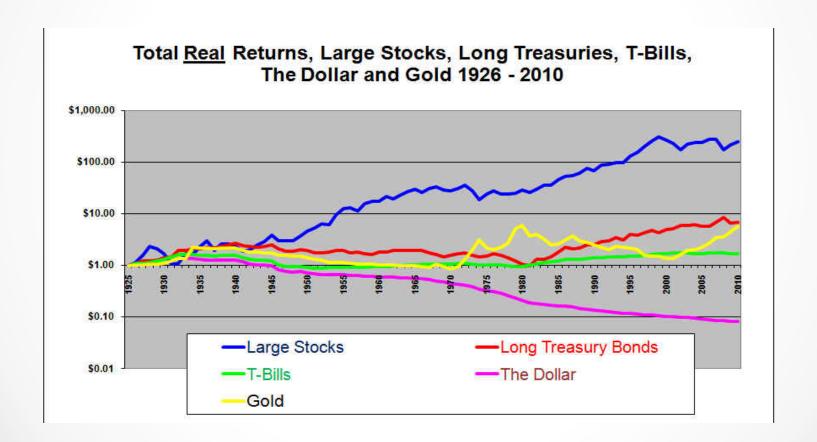
#### Risk

- As commonly used, the word risk means BAD
- Risk is neither good, nor bad, but a reflection of uncertainty (which is everywhere)
- Without uncertainty, markets for financial assets such as stocks would be far less interesting
- Financial markets work because people hold different views about the value of the asset

# Types of Financial Assets

- Bonds (debt of companies or governments)
- Periodic income, not capital gains, fixed term
- Stocks (equity shares in companies)
- No income, capital gains/losses, perpetual
  - o Privately held
  - Publicly traded
- "Real" assets
  - o Real estate
  - Tangible goods (metals, oil, collectibles)
- Capital gains/losses, storage/delivery costs, depreciation
- Derivatives
  - Contracts based on financial assets. Options, futures
- Zero sum game

## Long Run Performance Various Assets



## Bonds

- Fixed Income security
  - o (face/par value is fixed, coupon rate is fixed)
  - o \$1000 bond face value, coupon rate of 4%, 10 year maturity
  - o will pay \$20 every six months to the holder, then \$1000 after 10 years
- Bonds can be traded. The value of a bond depends upon the interest rate, and time to maturity
- Bond issuers are rated (Moody's, Standard and Poor's)
- Corporate bonds riskier than government bonds

## Stocks

- Part ownership of company (hence "share")
- Share in the profits and the losses!
- Traded in markets
  - Buyers think the price is going to go up
  - Sellers think the price is going to go down Ooops...
- Dividends
  - About 80% of all S&P500 companies pay dividends
- Capital Gains Rules:
- #1 buy low, sell high
- #2 sell high, buy low (shorting a stock)

## Some Issues\*

- Investor psychology
  - o Biases including over-confidence,
- Investment strategy
  - o Buy/sell rules
  - Buy and hold advantages
  - Trading costs, taxes on short term gains/losses
- Diversification why it's a good idea
  - Diversify in many dimensions
- Beating the market is it possible?
  - Random walk on Wall Street (Malkiel)
- Value investing
  - The Intelligent Investor (Ben. Graham)

(\*More on these in next session)

## Funds

- Actively managed funds perform badly
  - 4 out of 5 underperform the market
  - Low fee actively managed funds don't do much better
  - o Portfolios with multiple AM funds do even worse
  - AM funds do worse over longer periods
- Individual investment requires effort
- Most people choose to invest via funds
  - o Employer 401 (k), pension plans, IRAs
- Trading costs, management fees, churn, reduce returns from funds