Investing Basics

Document Created 11/6/2015

Last Updated 9/18/2016

Overview

Personal Logical Roadmap – My Story

- What am I trying to accomplish? (financial goal?)
  - **BE REALISTIC – YOU ARE POOR (15-year-old realization)**
    - You can't turn $50,000 into a lot of money (even with a very high rate of return)
    - Model out a conservative rate of return – large return strategies exist briefly – mostly discovered by luck and not by a systematic approach
  - **MOST OF YOUR INCOME WILL BE FEE-BASED (SALARY) FOR A LONG TIME**
    - You can make more money **advising people with capital** than trying to grow your own capital
      - No risk – get paid
    - Your advice/approach needs to be worth something (to someone else) – specialize in something
      - Expertise is far scarcer than wealth
      - Eventually you can make money investing your own money and others
      - You can't be an expert in something overnight – takes 5 to 10 years

Planning Your Career

- Why am I trying to accomplish this goal (being a good investor)?
  - Soul-searching and true introspection
  - Is what I want to do sustainable? Is it a “micro-arbitrage”?
  - **What useful skills will I have if the current opportunity disappears? Avoid style-dependency**
- **What are my strengths and weaknesses?**
  - **Socratic and honest attitude**
- **Selecting a mentor/guide**
- **Psychology**

How do I teach myself?

- Learn from other investors (Biographies, News Articles, Interviews)
  - Warren Buffett & Charlie Munger (Berkshire Hathaway) – value investor/private equity
  - **Jim Simons (Renaissance Technologies) – quantitative investor**
  - Seth Klarman (Baupost Group) – value investor / distressed debt
  - Steve Cohen (SAC) – equity trader / fund of funds
  - **Julian Robertson (Tiger) – value investor / fund of funds**
    - **“If you buy 100 great companies and short 100 lousy companies and you don’t make money at the end of the year, you need a new job”**
  - George Soros (Quantum) – FX trader / macroeconomics
  - Carl Icahn (Icahn) – activist investor / value investor / private equity
  - Louis Bacon
  - Paul Tudor Jones
  - Joe Lewis – FX trader
  - Ray Dalio (Bridgewater)
  - **Michael Steinhardt – No Bull**
  - Larry Tisch
  - Real Estate, Private Equity
- Learn about learning (logic, math, science and other areas will assist)
- Learn laterally relevant fields (history, literature)

Theory and Text

- Journal of Finance
  - Scholastic level erudite collection of papers that are inscrutable
- Damodaran: http://people.stern.nyu.edu/adamodar/
- Finance → Brealey & Myers
  - A whole major in one present value formula
  - Not technical, much more philosophical
- Phil Fisher – Common Stocks and Uncommon Profits
- Seth Klarman – Margin of Safety

Most People Should Not Invest

- I view investing as a “zero-sum” game
- The old adage about not being able to spot the sucker at the poker table applies—unless you are willing to work as hard and become as well-trained as the most successful investment groups, why should you assume you will win at a very contested game?
- Do not despair—you can get some return by investing in excellent investment managers—but do not try this at home!
- Focus on creating wealth in your competency instead of gaining an additional competency (investing skill)

Psychology

- Self-Actualization
  - Centering
- Fear
  - *“How big of an impediment is psychological pain to your progress?”*
- Ray Dalio’s Principles (www.principles.com)
  - **“It isn’t easy for me to be confident that my opinions are right.”**
  - **“Bad opinions can be very costly.”**
  - **“The consensus is often wrong, so I have to be an independent thinker.”**

Asset Classes

- **Equity**
  - **Public Equity**
  - **Private Equity**
- “Credit”/Debt
- Currency
- Commodities
- Real Estate
- “Macro”
- Funds?
- Others

Equities Overview

- Almost all corporate activity on the planet is done in the aim of creating **equity value** (or stockowner value) – through increased stock value or dividends
  - Big public companies (Walmart, Google, etc.)
  - Sole, privately-held proprietorship (local deli)
- Equities/Corporations are a useful corporate organization option because they allow for business expansion furnished by the proceeds of selling new equity
  - New equity is **dilutive** to old equity owners but provides cash
  - Equities are very efficient and portable (vs. partnership interests). They are easily listable, tradeable and sellable

Equities Example: A New Company

- Imagine you and your partners have decided to start a new business, Deez.Com
  - You are the CEO of Deez, and your two partners are the CFO and General Counsel
  - You have decided to split the ownership of the company into 50% for yourself and 25% each for your two partners
- Incorporating Deez.Com in Delaware with a law firm's assistance, you decide to have 1,000,000 shares outstanding of Deez.com
  - You own 500,000 shares of Deez.com
  - Your two partners each own 250,000 shares of Deez.com
- Of course, you have not yet contributed any cash (capital) to the company
  - To do so, you must seek investors!
  - Your pitch is exciting and investors have agreed to invest $1,000,000 into the company at a price of $1 per share
    - You bargained very hard for $2 per share, and the investors proposed $0.50 per share, but you agreed on $1
  - Deez.Com will now <u>**issue**</u> one million new shares to the investors
  - The new <u>**capitalization**</u> of the company is:
    - 1,000,000 shares for the new investors
    - 500,000 shares for you
    - 250,000 shares for the CFO
    - 250,000 shares for the General Counsel
    - 2,000,000 <u>**TOTAL SHARES OUTSTANDING**</u>
  - <u>**Notice how your stake in the company dropped from 50% to 25% after the capital raise—you were DILUTED in the transaction**</u>

Equity (Stocks) Basics

<u>The first six things I look at for any equity</u>

- 1. Stock Price
- 2. Shares Outstanding
- **3. Market Capitalization (Stock Price X Shares Outstanding)**
  - **In essence, this is the value of the company!**
- (4. Cash – 5. Debt) or Net Cash
- **6. Enterprise Value**
  - **This is the value of the company on a “cash-neutral” basis**

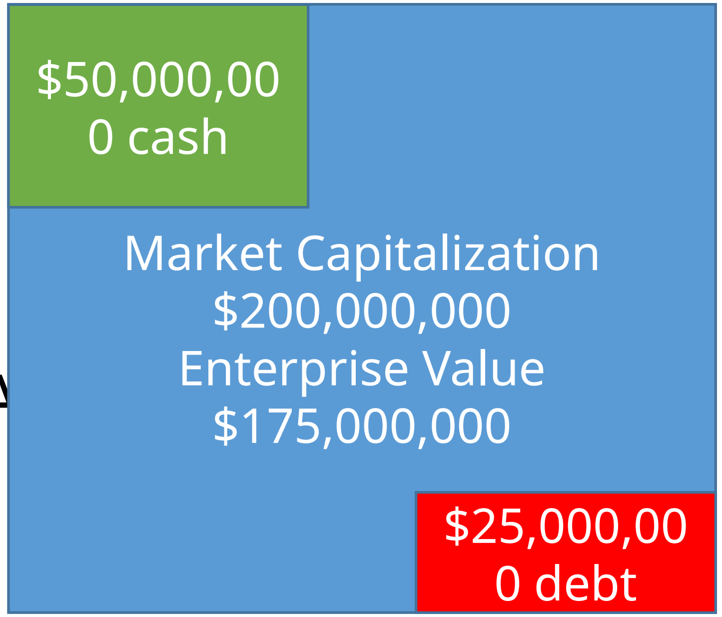
Financial Statements

- **<u>“The Holy Trinity”</u>**

- <u>Income Statement</u> – Total **<u>operational</u>** results for any given period
  - Revenue Recognition (“rev rec”) - GAAP
  - **Revenue – Expenses = Profit/Losses**
  - Matching Principle and other GAAP applies – may not reflect cash reality
- <u>Balance Sheet</u> – A snapshot (like a photograph) of a company’s financial position (balances) at any given time – usually at the end of an important period such as a quarter or year
  - Assets – Liabilities = Stockholders’ Equity
- <u>Cash Flow Statement</u> – Reconciles GAAP Income Statement to Cash

Illustrated Concept of Enterprise Value

- Company A has 10 million shares outstanding.
- Company A stock recently has been fluctuating between $20 and $21.
- The market capitalization of Company A is therefore approximately $200,000,000.
- The balance sheet of Company A shows $50,000,000 in cash and $25,000,000 in debt.
- Therefore, the enterprise value of Company A is $175,000,000.
  - Another way to think of it is enterprise value is a “cash-neutral” market cap



Company A “Capital Structure”

Accounting – The Language of Business

- Generally Accepted Accounting Principles are our rules
  - FASB is the group that promulgates GAAP

- Non-GAAP financials are sometimes useful!
  - Excluding “one-time” and especially “non-cash” costs can give us a better understanding of a business

- The Cash Flow statement is critical to reconcile the expensing or capitalization (putting an expense on the balance sheet instead of the income statement) of costs

Accounting

- Revenue Recognition – a difficult but important concept – when is revenue realized?
  - General concept is when title has passed and risk is born by purchaser
  - Cash need not be collected yet!
- Matching Principle
  - Costs are recognized in the period they are incurred and matched to the revenue recognized
- Non-Cash Expenses
  - Depreciation & Amortization
    - Writing off of a capital expenditure (D) and the writing off of an intangible asset (amortization)
- Expenses: expensed or capitalized?
  - Some expenses are “capitalized” and they do not flow through the income statement!!!
  - Capital expenditures (long-term assets with over 12 months of usable life) will be capitalized on the balance sheet and recorded in the cash flow statement
- Cash Flow vs. Net Income
  - Reconciled by comparing Cash Flow statement and Income statement
- Consolidate all the income statements of the entities you own more than 50% of
  - VIE, MI

Balance Sheet

- Assets – Liabilities = Stockholders’ Equity
- Assets = Liabilities + Stockholders’ Equity

Liquidity

- Current Assets/Liabilities = become cash within 12 months
- Long-Term Assets/Liabilities become cash after 12 months or never
- Order in liquidity

- Accounts Receivable – Cash your customers owe you
- Deferred Revenue – Product you owe your customers
- Property Plant & Equipment (PP&E) – Assets with a useful life of longer than 1 year

Income Statement

- Revenue Recognition
- Cost of Goods Sold (COGS) – Direct and indirect (!) costs of the product recognized as revenue (can include people!)
- Selling & Marketing – Promotional costs, including people!
- Research & Development – Project costs, includes people
- General & Administrative – Legal Costs, Audit Costs, Rent, Headquarters, Employees, etc.

The Value of a Company - Theory

- <u>**Finance 101**</u>
  - Discounting cash flow series
  - Discount Rate is the embodiment of the concept that "a dollar today is worth more than a dollar tomorrow" – but how much?
  - What discount rate to use?
    - Risk = reward
    - Risk free rate
    - Equity risk premium
    - Bond markets, equity yields
  - Monitoring DR across potential investments
- Why do this?
  - **Forecasting those cash flows, assessing risk to cash flows is the job of an investor**

<u>**"A company is worth the discounted sum of its cash flows from today until eternity"**</u>

Discounting Cash Flow

- Why is one dollar today worth more than one dollar promised tomorrow?
  - Risk that you may not receive that dollar
  - Inflation (consider risk/benefit of deflation)
  - Opportunities to invest that dollar in higher-returning projects

Simple Example

- Q: John is a NFL quarterback who believes he can return 5% per annum investing in bond funds. Should he take a $75 million upfront payment or a $25 million per annum payment for 3 years? Assume his probability of collecting over 3 years is the same as the upfront payment (not at risk)
- A: The $75 million is vastly preferential as John will have $86.8 million ($75m X 1.05^3) at the end of three years, as opposed to only $82.5 million ($25m X 0.05 + $50m X 0.05 + $75m X 1.05) if he receives payment in installments. It is obvious to see that the ability to invest cash flow as soon as possible is desired

The Value of a Company - Practice

- Bonds and Equities have a parity concept (Shkreli Theory)
  - Bonds have an annual “cash flow” in the same sense equities have net income that shareholders may claim. This cash flow is interest and the amortized principal (even if it is a balloon repayment)
- Bonds are theoretically safer than equities as they are senior to equity in the repayment “waterfall”
  - However, for very large companies where the default risk is very low, the bonds and equity should have a much closer parity than in a riskier enterprise

Fundamental Research

- Phil Fisher – Common Stocks and Uncommon Profits
  - “Channel Check”
- Management
  - Update – Quarterly Conference calls and meetings
- **Press Releases – Read at least 1 year of prior releases and update your model with them**
  - Sign up for company press releases OR create google alerts
- **Forecasting**
  - Traditional
  - Lateral
  - True Costs / One-Time Costs / Economic Reality
- The Opinion of Others
  - Ignore other investors
  - Ignore Wall Street research
  - Ignore TV/CNBC
- **Value vs. Growth / Risk**

Fundamental Research - Expectations

- 1 hour – barely any familiarity with the company
  - Company history, current products, etc.
- 10 hours – slight familiarity with the company
  - Basic working model, etc.
- 100 hours – reasonable familiarity with the company
  - Listened to/met with management, etc.
- 1000 hours – decision-making familiarity with the company

It (should) take a lot of time and thinking before you make the decision to invest!

Fundamental Research - Forecasting

- Revenue forecasts
  - Management guidance and other company results/guidance
  - Currency adjustments
- Parallels
  - Relate something hard to forecast to some phenomenon that has happened in the past. E.g. transition from black & white TV to color TV might mirror the transition from TV ads to internet ads
    - Anything that is more realistic than a “law of larger numbers” forecast—avoid these
- Surveys
  - Surveys are a very cheap way to keep your finger on the pulse of business

Primary Research

- Relevant interviews/contacts (“Channel Checks” vs. “Due Diligence”)
  - Who they are
    - Current and former employees
    - Competitors
  - How to get them
    - Gerson Lehrman Group/similar “matchmaker” services
    - Linkedin/”smile and dial”
  - What to say
    - **CIA/KGB interrogation methods**
    - Phil Fisher, Common Stocks and Uncommon Profits (Chapter 2)
- Secondary Research: Other People’s Research (Investment Banks, Investors, News articles)
- Pitfalls: Misleading conclusions from poor sample size, confirmation bias, **possible insider information**

Capital Efficiency

- Capital efficiency is a concept that compares a business’ required assets to generate profit with that profit
  - Is capital efficiency desirable?
    - Volatility
  - What does it mean to investors?

  <u>Some examples</u>
  - Intel
  - Coca-Cola
  - Ford
  - WalMart
  - Facebook
  - Apple: 253%
  - Best Buy

Return Ratios

- Return on Equity – ROE
  - What does it tell us about Brand/Moat
- Return on Tangible Book – ROTB
- Return on Assets – ROA
- Return on Invested Capital – ROIC
- Buffett Return

Ratios & Fundamental Research

- Almost all of an equity analyst’s job is measuring long-term earnings potential
  - Short-term focus is problematic if myopic…
  - …but short-term results can give us hints on the long run (e.g. NOK missing earnings in 2000)
- Barriers to competition are a significant part of this exercise
  - Warren Buffett defined the “m” word: “moat”, to describe assets with protection from “competition”
- What is competition, really?
  - Competition is the interloping company’s attempt to mimic excess ROIC above WACC
  - No one wants to consume capital to emulate low returns

P/E Ratios (they are almost always useless)

- Many professional investors put too much stock into P/E ratios
  - P/Es are overly simplistic in that they represent a quotient which relates the value of a company to an earnings period
    - They do not reflect the forthcoming changes to the earnings in that period, including the possible end of cash flows, etc.
    - Some attempt is made in that high-growth companies get “high P/Es” and vice versa
    - The concept of “multiple expansion” is a fallacy
    - P/E ratios ignore sub-scale or super-scale dynamics
    - P/E ratios worthless in the case of cash flow-negative companies demonstrate its limit
  - P/E ratios are partially valuable in large-cap companies where scale and earnings are unlikely to change
- NPV is far superior method which represents the entire “area under the curve” of cumulative cash flows
  - P/E is a simple quotient which contains little-to-no information

Keeping Track of News

- Watching the news on companies in your universe is critical – here are some tools to use
  - Google Alerts – set up “as-it-happens” alerts for the company name, key products, executive names, etc.
    - Update your model with any new information as it occurs
  - **Sign up for press release alerts at the company’s website**
  - Use the Bloomberg function NLRT
  - Make a “last updated” column in your universe spreadsheet to force yourself to update any model that is one month old – “STAY CURRENT”
  - Sign up for all “sell-side research” on the company
  - Talk to the company as frequently as possible

Scale

- The concept of scale is very important in business
  - Sub-scale companies tend to either
    - Gain scale
    - Get acquired by a company with scale
- We can define scale as “the reasonable spreading of costs on a revenue base”
  - For instance, it would appear to be unreasonable to build the entire infrastructure for a pharmaceutical company (which requires diverse organization groups: HR, Legal & Compliance, IT, etc.) but only have one product generating revenue when a second product would not create substantial incremental costs
- We can assume that sub-scale companies will not exist in perpetuity, either attempting to sell themselves or acquire scale
  - Therefore, it is unfair to punish a company for its subscale nature in a DCF!

Other Metrics

- Deferred Revenue
  - Cash that will be recognized as revenue when service is provided/good is delivered
  - Very useful for forecasting subscription-type businesses as it will be a leading indicator/predictor of future revenue (think about it!)
- Bookings
- Billings
- Book-to-Bill

Management

- How do we access management?
  - Access is easier than it appears

- How do we judge management?
  - Experience
  - Are they thinking about the long-run the way we would like?
  - Personal preferences can be both telling and misleading

Growth Stocks

- **Law of larger numbers… does it really apply?**
  - **Ignore law of larger numbers**
  - **Focus on total market size**

Debt, Bonds & Credit

4/23/16

Bonds

- Bonds are debts, loans, notes, etc. which a lender advances to a borrower and expects to be paid back, with interest
  - Detailed terms of the loan are extremely important!
    - Principal – the amount borrowed
    - Coupon – the interest payment
      - Paid annually? Biannually? Quarterly? With interest on original principle or current principle?
    - Payback period – balloon payback at the end? Prepayment anytime? Payment schedule?
    - Maturity – date amounts borrowed are due
- BONDS ARE ALMOST ALWAYS **SENIOR** TO EQUITY
  - If the borrower is unable to pay the lender, the lender can typically force the borrower into bankruptcy

Types of Debt

- Convertible Bonds (Equity-Like)
    - Debt can convert to equity at the Conversion Price
        - Negotiation over how much higher than stock price (typically 20-50%)
    - Typically same senior “first-position” credit
    - Hedge feature creates an attractive security for buyer
    - Lower coupon than normal debt creates attractive security for issuer

- Revolver
- Term Loan

Markets and Portfolios

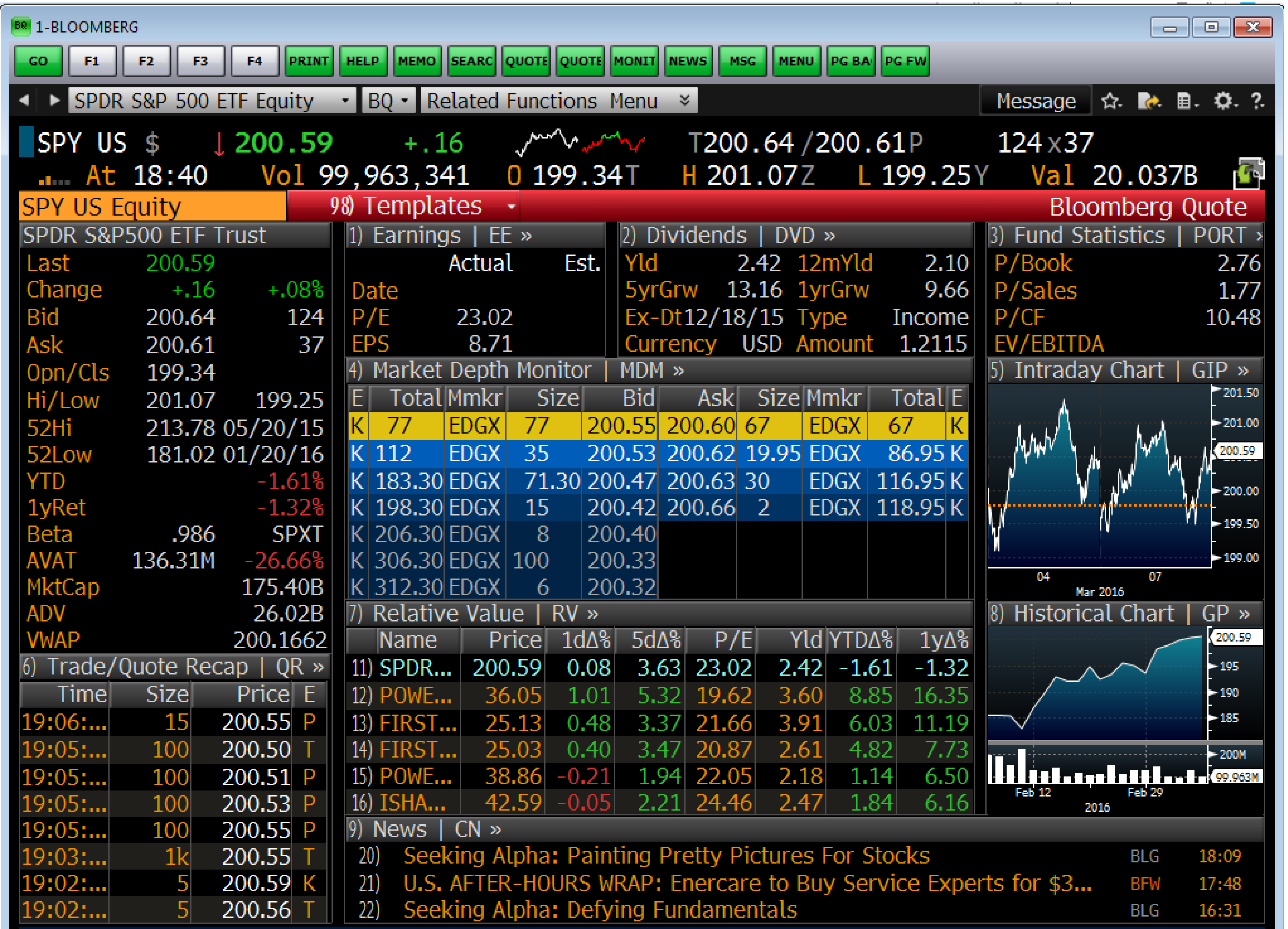
Markets & Trading

- Stocks are traded on **stock exchanges**

- In the U.S., several stock exchanges exist (NASDAQ, NYSE, etc.)
  - The U.S. exchanges are sufficiently electronic/computerized that the differences between them are largely irrelevant

- The concept of a trade: FOR EVERY BUYER THERE MUST BE A SELLER
  - One cannot simply “sell” a stock without there being a corresponding buyer
  - A trade happens when a buyer, who is “bidding” agrees with a

Trading Basics



Important Terms

- Last Price
  - Last traded price is often used in both private and public value as a valuation tool
- Bid, Bid Size (x100)
- Ask, Ask Size (x100)
- 52-Week High/Low
- **Beta**
  - Correlation to the market
- Average Daily Value

BUY/SELL vs. SHORT/COVER

- Everyone understands the concept of BUYING a stock and receiving a positive return if it appreciates in value. E.g. buying 100 shares of GOOG for $100 and SELLING it at $200 would yield a profit of $100 per share (in this case, you own 100 shares), for a total profit of $10,000.

- SHORTING is the opposite phenomenon where you first sell and buy later. This is naturally confusing but there exists a pool of stock owners who will LEND you their stock as long as you promise to eventually return it. In this case you would SHORT 100 shares of GM for $50 and then BUY TO COVER (or simply COVER) the shares at $25 per share. Your profit would be $25 per share, or $2,500, in this case.

Fund Basics

- Using a collection of stocks (also known as a portfolio), fund managers create funds intended to outperform each other
- Two general approaches are **passive** (or index) and **active** investing
  - Passive investing involves selecting a pre-determined portfolio of stocks according to a list or metric
    - Example: S&P 500, Russell Mid-Cap Index
  - Active managers attempt to select their securities based on their potential ability to outperform their “benchmark” passive index using skill
- Some funds can short, invest in private securities and conduct other advanced operations
  - Mutual fund
  - Hedge fund
  - VC fund
  - PE fund

Portfolio Construction

- **<u>Market Neutral</u>**
  - No market exposure – long and short an equal amount
  - THIS IS NOT THE CONSENSUS
  - The consensus is to be long-biased
    - Long = you own the stock (buy first, sell later)
    - Short = you are the short (sell first, buy later)

- **<u>Long-Biased</u>**
  - Popular due to the belief that stock prices go up over time

- **<u>Universe</u>**
  - List of securities that we will focus on
    - Sector-focused (tech, healthcare, energy)
    - Market-cap focused (small cap, medium-cap or large-cap)
    - Style-focused (growth vs. value)
    - Geographical (U.S. vs. Global)

Portfolio Construction (Part 2)

- **Shkreli's First Rule – Realistic Expectations**
  - **For every 10 stocks you look at, in general:**
    - 8 will be fairly valued by the market
    - 1 will be overvalued by the market
    - 1 will be undervalued by the market

- **CONCENTRATION VS. DIVERSIFICATION**
  - Concentration → as few stocks "as necessary" and as large as possible % investment in those positions
    - Buffett's first partnership WEB had just 3 stocks
  - Diversified → as many stocks "as possible" and as small as realistic % investment in those positions

Portfolio Construction (Part 3)

- **<u>You don't need to invest if you don't have good investment ideas</u>**
  - No one is forcing you to make a bet
  - No third strikes in investing – Buffett
- **<u>Turnover & IRR</u>**
  - **<u>We want our investments to work as quickly as possible</u>**
  - **<u>There is no such thing as an investor who would prefer to wait years, even if that investor is a "long-term" investor</u>**
- **<u>Shkreli's Conjecture</u>**
  - As time→0, alpha→0
  - As time→inf, alpha→inf

IRR Details

Portfolio Monitoring

- Drawdown
  - Peak-to-trough loss should be constantly monitored
    - Just because you were up 100% for 3 years in a row does not excuse you from a 50% loss in year 4!
- Stop-Loss
  - Absolute portfolio stop-loss of 10%-20% is reasonable
    - Reassess whether this is for you, start again in 3-6 months
    - Diagnose what happened: bad skill, bad luck, too much risk, etc.?
  - Individual position stop loss
- Concentration Rules
  - No investment should be more than x% of portfolio (usually 5-10%)

Sample Portfolio

- Long
  - Microsoft (7%), IBM (6%), Facebook (5%), Oracle (5%), Alarm.Com (3%), SAP (3%), Tata (3%), Alibaba (3%), Softbank (2.5%), Baidu (2.5%), Canon (2.5%), Wipro (2%)
    - Total “gross long exposure” = 44.5%, or $44,500,000 of a $100,000,000 portfolio

- Short
  - AT&T (7%), Apple (6%), Amazon.Com (5%), Intel (5%), Cisco (3%), Google (3%), Salesforce.com (3%), Nokia (3%), Infosys (3%), Qualcomm (2.5%), VMWare (2.5%), Applied Materials (2%)
    - Total “gross short exposure” of 45.0% or $45,000,000 of a $100,000,000 portfolio

- This is a “market neutral” portfolio with 89.5% “gross exposure” and -0.5% “net exposure”

Stocks in Foreign Companies

- “Local Shares”
  - Shares that are traded on a local exchange
  - Example: Roche, Nestle, Novartis (NOVN VX) etc.
    - Local shares are always traded in local currencies
- ADRs (American Depository Receipts)
  - Alibaba, Novartis (NVS)
  - ADRs often have a ratio of 1:1 (1 ADR:1 local share—but not always!!!)
    - Level 1 ADR – sponsored by the company
    - Level 3 ADR – not sponsored by the company, the company does not make American filings

Equities Over The Long-Term

- It is my contention that equities do **not** rise over the long-term, as opposed to conventional wisdom
  - Our study found, **at best**, U.S. equities deliver +2% (performance net of taxes and inflation) but harbor **substantial survivorship bias**

Wall Street

Buy-Side, Sell-Side, Investment Banking

"BUY-SIDE" or simply "INVESTORS"

Mutual Funds (LONG-ONLY)
Fidelity
Wellington
State Street
Putnam
Capital
Research

Hedge Funds
Renaissance
Och-Ziff
Citadel
Millennium
Oaktree
Paulson

Other
Pension Funds, Insurance Companies, Corporate America, Sovereign Wealth, Individuals

"SELL-SIDE" or "INVESTMENT BANKS"

Securities Research
Buy and sell "recommendations" on securities

Investment Banking
Lending
M&A Advice
Underwriting

Securities Services
Prime Brokerage
Trading

Bank of America
Citigroup
Credit Suisse
Deutsche Bank
Goldman Sachs
JPMorgan
Morgan Stanley
RBC
Wells Fargo

Stock Recommendations…

- …are worth ignoring **no matter who** they come from
  - They're not worthless—but you can spend your time more efficiently reaching an independent opinion
  - DO NOT LOOK AT
    - Investment bank opinions
    - Other investors' opinions
    - Investment fund's holdings – INCLUDING "shareholder activism"
  - DO
    - Look at as many securities as you can
    - Learn lateral skills

Win the long-short game of how to use your time. Shorting others' thoughts and long your own

Hedge Funds Overview

- Typically structured as “Limited Partnerships” or LP entity
  - Typically formed in both Delaware (onshore) and typically in the Caribbean (offshore)
- Most hedge funds charge a management fee as well as a performance fee
  - Mutual funds typically only charge a management fee
- For example, if a hedge fund returns 20% on its $100 million in investments in a given year, and has a 2% management fee and a 20% performance fee:
  - $20 million in gross profits for investors
  - $2 million in management fees (2% X $100,000,000)
  - $4 million in performance fees (20% X $20,000,000)
  - GROSS RETURN of 20% and **NET RETURN of 14%**
    - HEDGE FUND FEES GREATLY IMPACT PERFORMANCE – Management fees are independent of profits while performance fees require profits

Hedge Funds Overview

- Hedge funds typically report results **monthly**
  - Most hedge funds have a goal of not having a year of losses
  - This expectation has changed dramatically—the “good old days” of Soros, Steinhardt, Tiger, etc. are over
  - Hedge funds try to avoid “beta”—aka exposure to the market—investors can buy beta without fees through other instruments (SPY)
    - They often fail at this
- Hedge fund investors typically have limited liquidity with substantial restrictions in their ability to withdraw funds
  - Generally governed by various legal documents

Hedge Funds Today

- More focused on fees than performance (makes sense!!!)
- Pedigree important predictor of success
- More involved in private equity
  - 2011-2020: source of extra alpha?
- Activism no longer a source of alpha?
  - 2000-2010: source of extra alpha?

Renaissance Technologies

- Renaissance's Medallion Fund is probably the most successful fund of all time
  - Fully automated (computerized) and quantitative
  - Mean-reversion, Hidden Markov Model (Baum-Welch), HFT
- Dr. Jim Simons, founder of Renaissance
  - Started fund at 40 years of age
- Assets under management (Form ADV): $43,297,173,710
- Latest reported equities holdings (13-F): $45,891,877,000
  - 40-80% annualized gross returns since inception?
  - +98% in 2008 (after a 40% fee)

- 290 employees
  - Mostly PhD mathematician/scientist background

Steinhardt Partners

- Variant Perception, Careful risk management, Greater Fool Theory, Information Arbitrage, Wall Street Arbitrage, Macro/Net Short
- $7.7 million initial capital in 1967
- 30% average annual returns for 28 years
- “No Bull”

<u>Steinhardt Process</u>
1. The Idea
2. The Consensus View
3. His Variant Perception
4. Trigger Event

Bridgewater

- Largest hedge fund in the world ($150bn AUM)
  - Founded in 1975 in NYC apartment by Ray Dalio
- “Macro” style hedge fund—does not trade stocks
- “Radical transparency”, “principles”, etc.
- Risk parity
  - https://www.aqr.com/~/media/files/papers/aqr-understanding-risk-parity.pdf
- $45,000,000,000 in total cumulative gains since inception (#1)

Tiger Complex

- Julian Robertson's Tiger
  - Original fund closed in 1980-2000, +31.7% CAGR over 20 years
  - New fund Tiger Technology → Tiger Global (Chase Coleman)
  - Original "Tiger Cubs" → Maverick, Lone Pine, Viking

- Value-focused, equities-focused & macro-focused fund
- Invest in people
  - 6 things to look for: **functional intelligence**, ethics, **sports**, **charity**, sense of humor, resume
  - Younger people, often right out of college
- Decentralized management from time to time??? Viking
- Sole trigger puller from time to time??? Lone Pine
- http://www.books.mec.biz/downloads/Julian_Robertson_A_Tiger_in_the_Land_of_Bulls_and_Bears/NzAyOTExODM5

Tiger Management
Julian Robertson
1980-2000

Lone Pine
Stephen Mandel
2000-Present

Viking
Andreas Halvorsen

Maverick
Lee Ainslie

Blue Ridge
John Griffin

Deerfield
Arnold Snider

Coatue
Phillipe Lafonte

Conatus
David Stemerman

Impala
Bob Bishop

Bridger
Roberto Mignone

JAT
John Thaler

Tiger → SAC →

Samlyn
Rob Pohly

Healthcor
Art Cohen

Shumway
Chris Shumway

Bowman
Larry Bowman

Intrepid
Steve Shapiro

North Sound
Tom McAuley

Viking Global Investors

- Andreas Halvorsen, former senior manager at Tiger
  - Former competitive skier, Norwegian Navy Seal
- $33B AUM, 148 employees, 50 investment-related
- 18% net returns since inception 1999-Present
  - Two down years, both -0.9%!!!
- Equity-focused
  - Doesn’t shy from **global**, illiquid/private/VC
  - Concentrated
- Value investor, but understands “growth stocks” (see Lone Pine)
- Team-run
- Low-net (net exposure)

Lone Pine

- Stephen Mandel
- $26B, 93 employees, 1997 launch, equities-only, some long-only
- +25% average annual returns since inception
- Values and invests in high-growth companies better than anyone
  - Largest holder of Google at IPO!
  - Shorts disrupted companies like retailers
- Q216 13F: **PCLN**, **DLTR**, FB, **AMZN**, STZ, CHTR, NKE all over $1bn
- 18 analysts – Steve is the only “trigger puller”/PM

Warren Buffett

- GOAT
  - Similar to “Annus Mirabilis” of Einstein, Buffett introduced the following concepts:
    - Use/abuse of float-generative businesses
    - **Private equity as the ultimate arbitrage**
    - Moats result in close-to-zero discount rate
- Image/reputation
- Graham & Dodd

Macroeconomics

What an investor needs to know

Inflation

- Probably the most important concept as it ties discount rates to a firm reality

Measures of inflation

- PCE
- CPI, PPI
- Not terribly accurate as inflation in its broadest sense must account for the price of **everything** – an investor isn't terribly concerned with the price of a quart of milk
- Sovereign bond prices of large countries with no default risk

Asset Class Long-Term Prices

- US Public Equities
  - After inflation and taxes, excess return on US equities are minimal
  - Post hoc ergo propter hoc fallacy – “the good times are permanent, the bad times don’t count”
- Bonds
- Real Estate
- Commodities

GDP and other Economic Measures

- Total amount of goods and services produced in a period, but what does it really mean?
  - Per-capita adjustment
  - Revisions
  - Calculus
  - Short-term, transactional nature
- Housing Starts, U. Mich Survey, Philly Fed, Durable Goods, ISM

Employment

- Employment has been one of the best indicators of economic health
  - Some change to this given disruptive technologies in the US
  - Still holds for most other countries
- Pay careful attention to how everything is calculated
  - Job reports from BLS

Credit

- Federal Reserve
  - Federal Funds Rate, QE, TARP, etc. all ways to control the money supply
- Money Supply
  - Broad concept of supply/demand of money
  - “M” measurements
- Yields
  - Sovereign, TIPS/”real”
  - Corporates
  - Mortgages, Munis

Instruments

- Yield Curve, Interest Rate Trades, Libor, Eurodollar
  - 2v10s (steepner, flattner)
  - Swaptions
  - http://www.icap.com/what-we-do/global-broking/~/media/Files/I/Icap-Corp/pdfs/icap-interest-rates.pdf
  - http://www2.gsu.edu/~fncgdg/material/Swaps.pdf
- Credit Spreads
  - Low-rated vs. high-rated vs. sovereigns
- CDS, CDO/CLO, MBS, CMBS, ABS, Cat Bonds
- **Futures – Equity, Commodity, Weather**
- **Currency**
  - **USD/EUR, USD/JPY, USD/basket**
  - **Typical relationship is direct with inflation (see USD/GBP in 1980s) due to “carry trade” phenomenon**
- Exotics, Volatility, Swaps

Macro Funds

- Advantages: Liquidity, Talent
- Disadvantages: Few unique ideas

Example Macro Funds

- Bridgewater
- Soros
- Moore
- Caxton
- Tudor
- Joe Lewis

Entrepreneurship (Starting a Company)

Bibliography

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    - Information Arbitrage basics
- Barbarians At The Gate (Bryan Burrough)
- Den of Thieves (James Stewart)
- The Smartest Guys In The Room (Bethany McLean)
- Confidence Game (Christine Richard)
- Fooling Some of the People All of the Time (David Einhorn)
- Trading to Win (Kiev)
- The Money Masters

Autobiography

- No Bull (Michael Steinhardt)
- Snowball (Alice Schroeder)
- Principles (Ray Dalio)
- Confessions of a Street Addict (Jim Cramer)