

Investment Philosophies: Overview

With a focus on “value” investing and an aside on technical analysis

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What is an investment philosophy?

- *What is it?* An investment philosophy is a coherent way of thinking about markets, how they work (and sometimes do not) and the types of mistakes that you believe consistently underlie investor behavior.
- *Investment philosophy vs. Investment strategy:* An investment strategy is much narrower. It is a way of putting into practice an investment philosophy.
- *In brief:* An investment philosophy is a set of core beliefs that you can go back to in order to generate new strategies when old ones do not work.

Ingredients of an Investment Philosophy

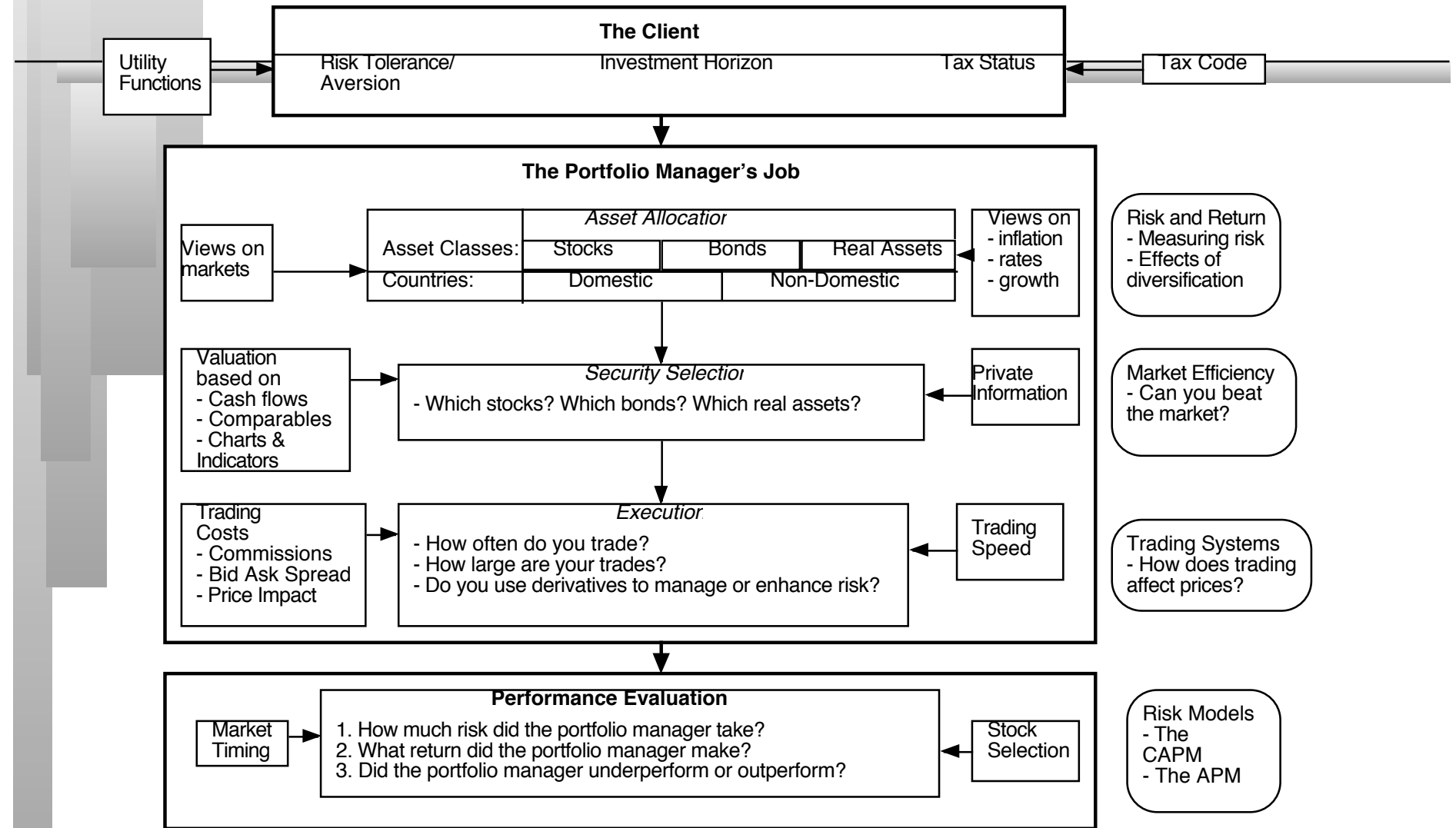
- Step 1: All investment philosophies begin with a view about how human beings learn (or fail to learn). Underlying every philosophy, therefore, is a view of human frailty - that they learn too slowly, learn too fast, tend to crowd behavior etc....
- Step 2: From step 1, you generate a view about how markets behave and perhaps where they fail.... Your views on market efficiency or inefficiency are the foundations for your investment philosophy.
- Step 3: This step is tactical. You take your views about how investors behave and markets work (or fail to work) and try to devise strategies that reflect your beliefs.

Why do you need an investment philosophy?

If you do not have an investment philosophy, you will find yourself:

1. Lacking a rudder or a core set of beliefs, you will be easy prey for charlatans and pretenders, with each one claiming to have found the magic strategy that beats the market.
2. Switching from strategy to strategy, you will have to change your portfolio, resulting in high transactions costs and you will pay more in taxes.
3. With a strategy that may not be appropriate for you, given your objectives, risk aversion and personal characteristics. In addition to having a portfolio that under performs the market, you are likely to find yourself with an ulcer or worse.

Figure 1.1: The Investment Process



Categorizing Investment Philosophies

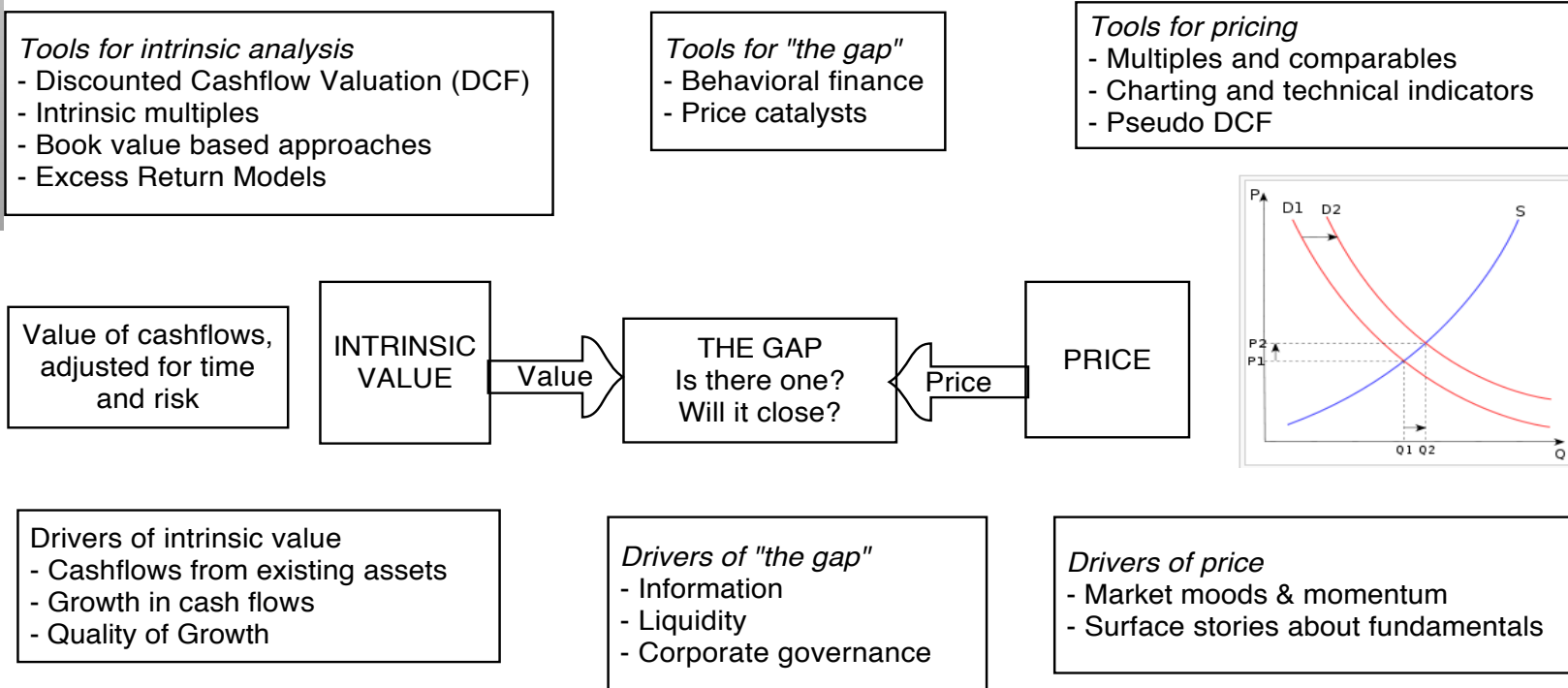
- *Market Timing versus Asset Selection:* With market timing, you bet on the movement of entire markets - financial as well as real assets. With asset selection, you focus on picking good investments within each market.
- *Activist Investing and Passive Investing:* With passive investing, you take positions in companies and hope that the market corrects its mistakes. With activist investing, you play a role (or provide the catalyst) in correcting market mistakes.
- *Time Horizon:* Some philosophies require that you invest for long time periods. Others are based upon short holding periods.



Value and Price

A Framework for investment philosophies

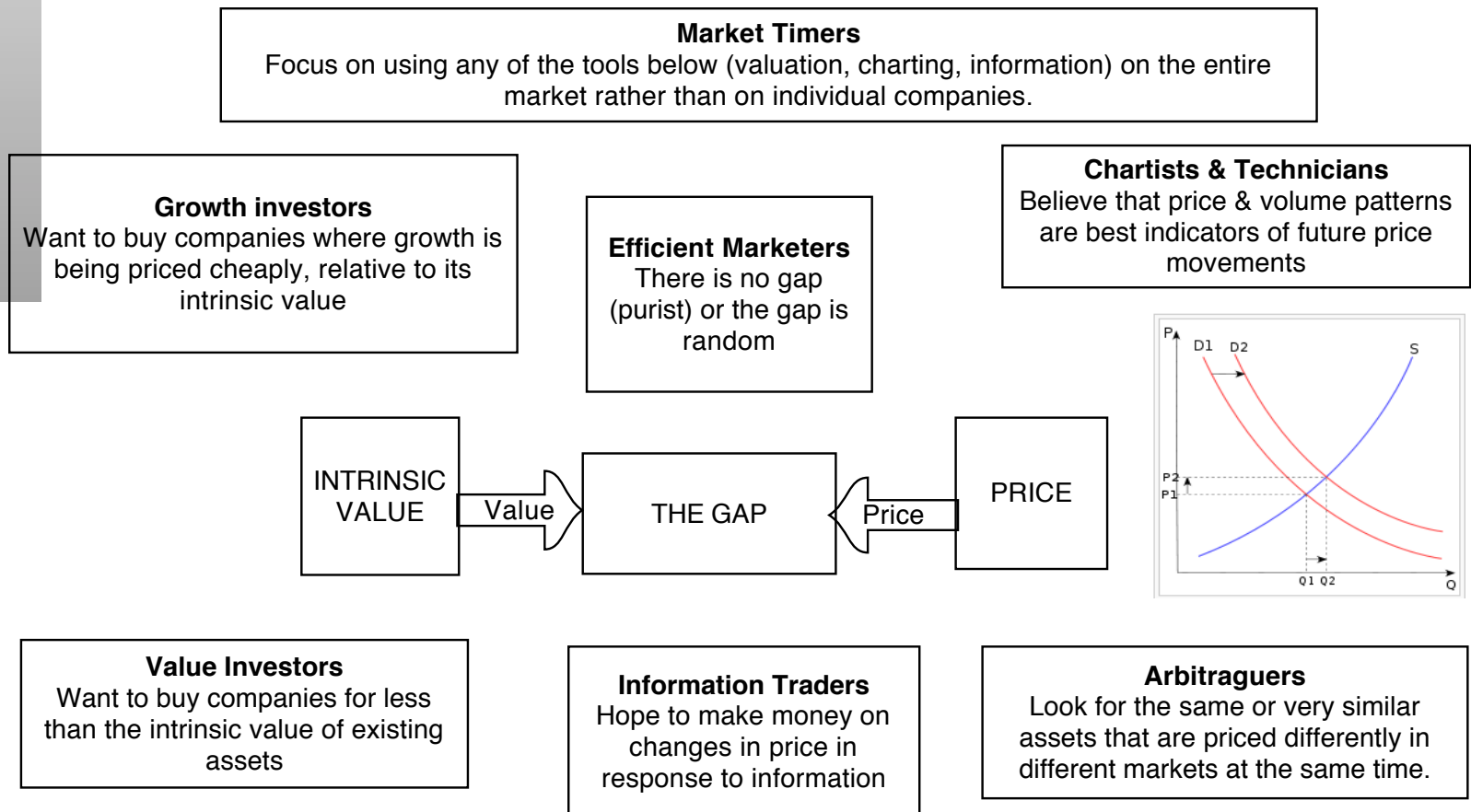
Value Process versus Price Process



Three views of “the gap”

	View of the gap	Investment Strategies
The Efficient Marketer	The gaps between price and value, if they do occur, are random.	Index funds
The “value” extremist	You view pricers as dilettantes who will move on to fad and fad. Eventually, the price will converge on value.	Buy and hold stocks where value < price
The pricing extremist	Value is only in the heads of the “eggheads”. Even if it exists (and it is questionable), price may never converge on value.	(1) Look for mispriced securities. (2) Get ahead of shifts in demand/momentum.

A Bird's Eye View of Investment Philosophies



I. Intrinsic Valuation Investors

Value versus Growth Investing

Intrinsic value investors believe that growth is inherently speculative and that prudent investors should try to buy companies where the market value < intrinsic value of assets in place

Assets		Liabilities	
Value of investments you have already made as a company over your history. Their value is updated to reflect their current cash flow potential.	Assets in Place	Debt	Lenders, both short and long term, get first claim whatever cash flow is generated by the firm.
Value of investments you expect the company to take in the future. This value rests on perceptions of the opportunities you see for the firm.	Growth Assets	Equity	Equity investors get whatever is left over, after meeting the debt obligations.

Intrinsic growth investors believe that growth is more likely to be misvalued because most investors give up. Consequently, they believe that there is more money to be had betting on the value of growth.

3M: A Pre-crisis valuation

Current Cashflow to Firm
 EBIT(1-t) = 5344 (1-.35) = 3474
 - Nt CpX = 350
 - Chg WC = 691
 = FCFF = 2433
 Reinvestment Rate = 1041/3474
 = 29.97%
 Return on capital = 25.19%

Reinvestment Rate
30%

Expected Growth in EBIT (1-t)
 $.30 \times .25 = .075$
 7.5%

Return on Capital
25%

Stable Growth
 g = 3%; Beta = 1.10;
 Debt Ratio = 20%; Tax rate = 35%
 Cost of capital = 6.76%
 ROC = 6.76%;
 Reinvestment Rate = $3/6.76 = 44\%$

Terminal Value₅ = $2645 / (.0676 - .03) = 70,409$

Op. Assets 60607
 + Cash: 3253
 - Debt 4920
 = Equity 58400

Year	1	2	3	4	5	Term Yr
EBIT (1-t)	\$3,734	\$4,014	\$4,279	\$4,485	\$4,619	\$4,758
- Reinvestment	\$1,120	\$1,204	\$1,312	\$1,435	\$1,540	\$2,113
= FCFF	\$2,614	\$2,810	\$2,967	\$3,049	\$3,079	\$2,645

Value/Share \$ 83.55

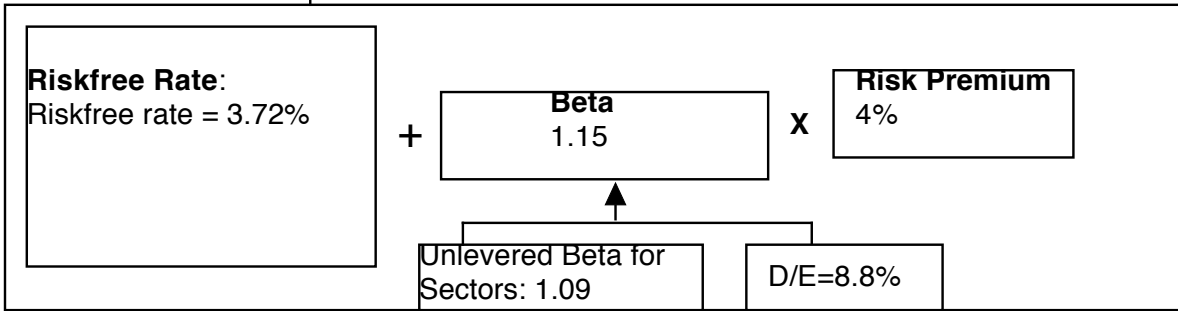
Cost of capital = 8.32% (0.92) + 2.91% (0.08) = 7.88%

Cost of Equity
8.32%

Cost of Debt
 $(3.72\% + .75\%)(1 - .35)$
 = 2.91%

Weights
 E = 92% D = 8%

On September 12, 2008, 3M was trading at \$70/share



Facebook IPO: May 17, 2012

	This year	Last year
Revenues	\$ 3,711.00	\$ 1,974.00
Operating income	\$1,695.00	\$ 1,032.00
Invested Capital	\$ 4,216.11	\$ 694.00
Tax rate	40.00%	
Operating margin	45.68%	
Return on capital	146.54%	
Sales/Capital	88.02%	

Revenue growth of 40% a year for 5 years, tapering down to 2% in year 10

Pre-tax operating margin declines to 35% over the next 10 years

Sales to capital ratio of 1.50 for incremental sales

Stable Growth
 $g = 2\%$; $\text{Beta} = 1.00$;
 Cost of capital = 8%
 $\text{ROC} = 12\%$;
 Reinvestment Rate = $2\%/12\% = 16.67\%$

Terminal Value₁₀ = $7713 / (.08 - .02) = 128,546$

Year	1	2	3	4	5	6	7	8	9	10
Revenues	\$5,195	\$7,274	\$10,183	\$14,256	\$19,959	\$26,425	\$32,979	\$38,651	\$42,362	\$43,209
Operating margin	45.68%	45.68%	45.68%	45.68%	45.68%	45.68%	45.68%	45.68%	45.68%	45.68%
EBIT	\$2,373	\$3,322	\$ 4,651	\$ 6,512	\$ 9,116	\$12,070	\$15,063	\$17,654	\$19,349	\$19,736
EBIT (1-t)	\$1,424	\$1,993	\$ 2,791	\$ 3,907	\$ 5,470	\$ 7,242	\$ 9,038	\$10,592	\$11,609	\$11,841
- Reinvestment	\$ 495	\$ 693	\$ 970	\$ 1,358	\$ 1,901	\$ 2,156	\$ 2,184	\$ 1,891	\$ 1,237	\$ 282
FCFF	\$ 929	\$1,301	\$ 1,821	\$ 2,549	\$ 3,569	\$ 5,086	\$ 6,853	\$ 8,702	\$10,372	\$11,559

Term yr	
EBIT (1-t)	9255
- Reinv	1543
FCFF	7713

Operating assets	62,053
+ Cash	1,512
- Debt	1,219
Value of equity	62,350
Options	3,088
Value in stock	59,262
Value/share	\$25.39

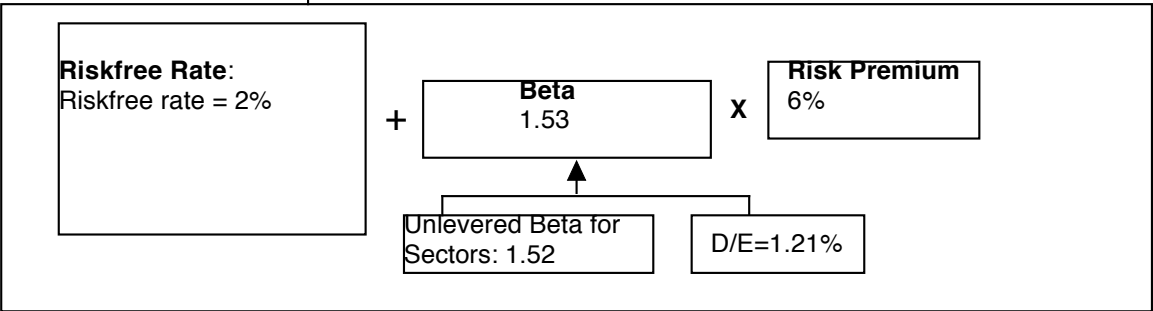
Cost of capital = $11.19\% (.988) + 1.59\% (.012) = 11.07\%$

Cost of capital decreases to 8% from years 6-10

Cost of Equity
11.19%

Cost of Debt
 $(2\% + 0.65\%)(1 - .40) = 1.59\%$

Weights
 $E = 98.8\%$ $D = 1.2\%$



At 4.00 pm, May 17, the offering was priced at \$38/ share for the IPO.
 The stock was trading at \$19 on September 4, 2012

The valuer's dilemma and ways of dealing with it...

- Uncertainty about the magnitude of the gap: Your estimate of value may be incorrect, making the gap a “fiction of your mind”
 - Even the best intrinsic valuers know that they can be wrong (and sometimes very much so) about their estimates of value.
 - Consequently, they may see gaps that don't exist and will therefore never close.
- Uncertainty about gap closing: Even if you are right about value, you still may be uncertain about whether the gap will close and if so, when.
 - You can be right about value, but without a catalyst, the gap may get bigger, rather than smaller.

II. Pricing Investors

- Chartists and Technicians: If price is set by demand and supply (and it is), these investors believe that the clues to future price movements lie in past prices and/or volume. In effect, they believe that poring over a stock's trading history can give you early notice of coming shifts in demand/supply and therefore prices.
- Arbitrageurs: To the extent that the price of an asset is the only known variable, these investors believe that a true bargain requires you to be able to buy an asset at a price today in one market, while selling the same asset in a different market at exactly the same point in time.

The “pricers” dilemma..

- No anchor: If you do not believe in intrinsic value and make no attempt to estimate it, you have no moorings when you invest. You will therefore be pushed back and forth as the price moves from high to low. In other words, everything becomes relative and you can lose perspective.
- Reactive: Without a core measure of value, your investment strategy will often be reactive rather than proactive.
- Crowds are fickle and tough to get a read on: The key to being successful as a pricer is to be able to read the crowd mood and to detect shifts in that mood early in the process. By their nature, crowds are tough to read and almost impossible to model systematically.

III. The Melded Strategy

- Information Traders: While both intrinsic valuation and pricing investors try to make judgments on the level of the price, information traders adopt a more agnostic (and what they feel is a less risky strategy). Rather than guess whether a stock is cheap or expensive, they try to make money by guessing the change in the price, in response to new information. This can take the form of either:
 - Guessing whether the next information announcement will be good or bad news to the market (Example: Trading ahead of earnings reports)
 - Evaluating whether the price response to the latest information announcement was appropriate. (Example: Betting that stocks over react to “bad” earnings reports...)

The information trader's dilemma

- The value danger: If the intrinsic valuation investors are right and a stock is mispriced relative to intrinsic value, the change in the price in response to new information can be drowned out by the overall price correcting towards value.
- The price danger: To the extent that the pricing process has its own dynamics, the effect of information on prices can be unpredictable (and costly).

IV. The Market Timers

- As market timers see it, the big money to be made on investing is not in picking individual stock winners but in getting the direction of the overall market right.
- Market timers come in all forms, and in fact you can have market timers who are
 - Intrinsic valuation investors, who value the entire market, compare to the price and hope that the gap closes.
 - Pricing investors, who believe that the future direction of the market can be gauged by looking at past price movements/ trading volume
 - Information traders, who feel that there is money to be made in looking at the overall market's reactions to news events (usually macro).

The market timers dilemma...

- Everyone does it: Everyone who invests is a market timer, with the only difference being one of degree. We all have views of the market, though we never admit to them, and those views mold how much we invest, in which markets we invest and when we invest. Consequently, it is a game that is played by tens of millions, making it much more difficult to win.
- No competitive advantage: To win at a game, you have to bring something to the table that is unique and difficult to replicate. It is not clear what “that” is, with market timing.

V. The Efficient Marketer

- The true believers: There are a few efficient marketers who took a look at the random walk, read financial market theory and were convinced immediately that there is little or no chance that any of the aforementioned philosophies had any chance of success.
- The school of hard knocks: There are far more efficient marketers who have got there after years of experimenting with different philosophies, with little success with each. They are believers that nothing works because nothing has worked for them.

So, what are you?

- If you were asked to classify your investment philosophy, what would you classify yourself as?
 - Intrinsic value investor
 - Intrinsic growth investor
 - Technical Analyst/ Chartist
 - Arbitrageur
 - Information trader
 - Market Timer
 - Efficient Marketer



An overview of value investing

Aswath Damodaran

Who is a value investor?

- The simplistic definition: The lazy definition (used by services to classify investors into growth and value investors) is that anyone who invests in low PE stocks is a value investor.
- The too broad definition: Another widely used definition of value investors suggests that they are investors interested in buying stocks for less than what they are worth. But that is too broad a definition since you could potentially categorize most active investors as value investors on this basis. After all, growth investors also want to buy stocks for less than what they are worth.
- My definition: As I noted earlier in this presentation, my perspective on value investing is that it is focused on valuing “assets in place” rather than all assets. It is a strand of intrinsic valuation investing, but so is intrinsic growth investing.

Three faces of value investing...

- *Passive Screeners*: Following in the Ben Graham tradition, you screen for stocks that have characteristics that you believe identify undervalued stocks.
- *Contrarian Investors*: These are investors who invest in companies that others have given up on, either because they have done badly in the past or because their future prospects look bleak.
- *Activist Value Investors*: These are investors who invest in poorly managed and poorly run firms but then try to change the way the companies are run.

I. The Passive Screener

- This approach to value investing can be traced back to Ben Graham and his screens to find undervalued stocks.
- With screening, you are looking for companies that are cheap (in the market place) without any of the reasons for being cheap (high risk, low quality growth, low growth).

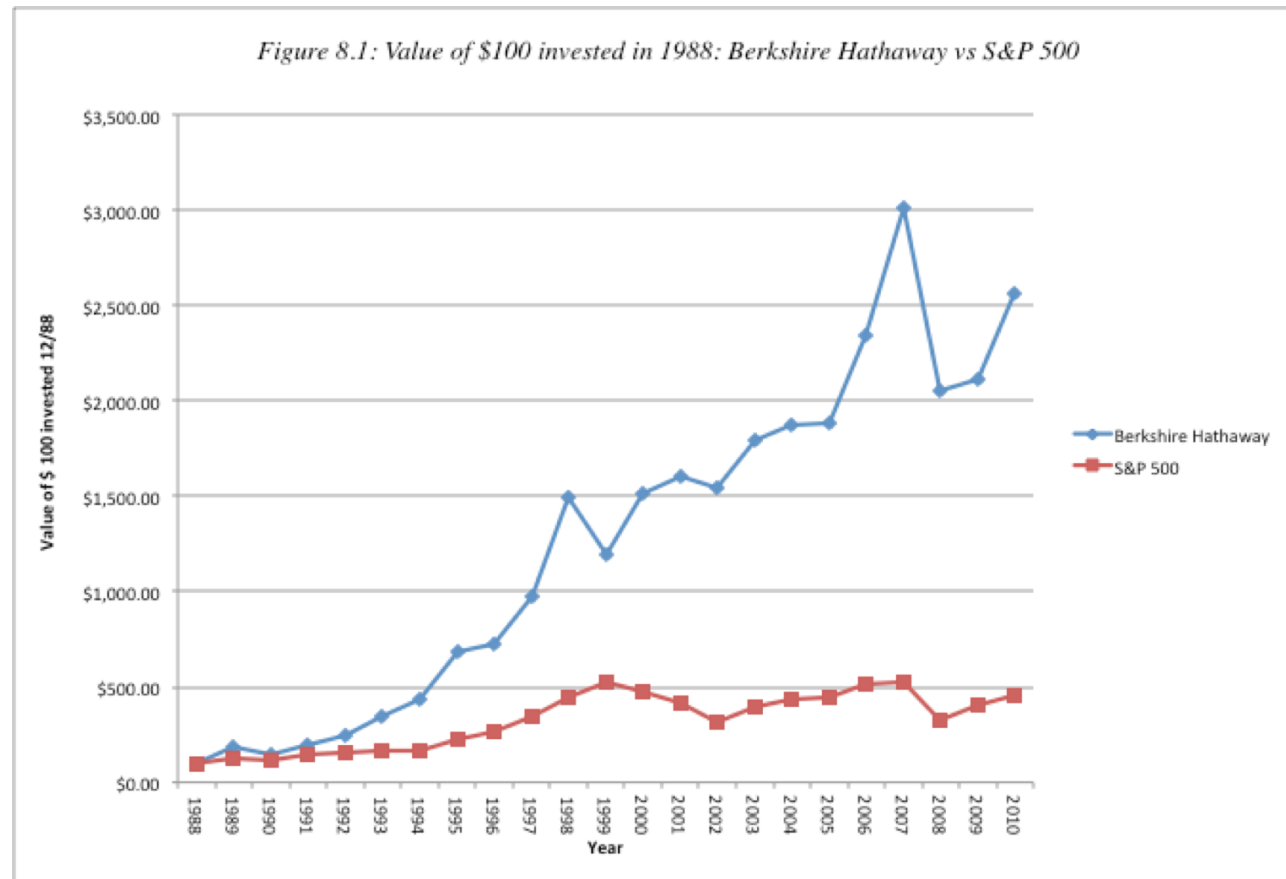
Ben Graham' Screens

1. PE of the stock has to be less than the inverse of the yield on AAA Corporate Bonds:
2. PE of the stock has to be less than 40% of the average PE over the last 5 years.
3. Dividend Yield $>$ Two-thirds of the AAA Corporate Bond Yield
4. Price $<$ Two-thirds of Book Value
5. Price $<$ Two-thirds of Net Current Assets
6. Debt-Equity Ratio (Book Value) has to be less than one.
7. Current Assets $>$ Twice Current Liabilities
8. Debt $<$ Twice Net Current Assets
9. Historical Growth in EPS (over last 10 years) $>$ 7%
10. No more than two years of negative earnings over the previous ten years.

How well do Graham's screens perform?

- Graham's best claim to fame comes from the success of the students who took his classes at Columbia University. Among them were Charlie Munger and Warren Buffett. However, none of them adhered to his screens strictly.
- A study by Oppenheimer concluded that stocks that passed the Graham screens would have earned a return well in excess of the market. Mark Hulbert who evaluates investment newsletters concluded that newsletters that used screens similar to Graham's did much better than other newsletters.
- However, an attempt by James Rea to run an actual mutual fund using the Graham screens failed to deliver the promised returns.

The Buffett Mystique



Buffett's Tenets

■ *Business Tenets:*

- The business the company is in should be simple and understandable.
- The firm should have a consistent operating history, manifested in operating earnings that are stable and predictable.
- The firm should be in a business with favorable long term prospects.

■ *Management Tenets:*

- The managers of the company should be candid. As evidenced by the way he treated his own stockholders, Buffett put a premium on managers he trusted.
- The managers of the company should be leaders and not followers.

■ *Financial Tenets:*

- The company should have a high return on equity. Buffett used a modified version of what he called owner earnings

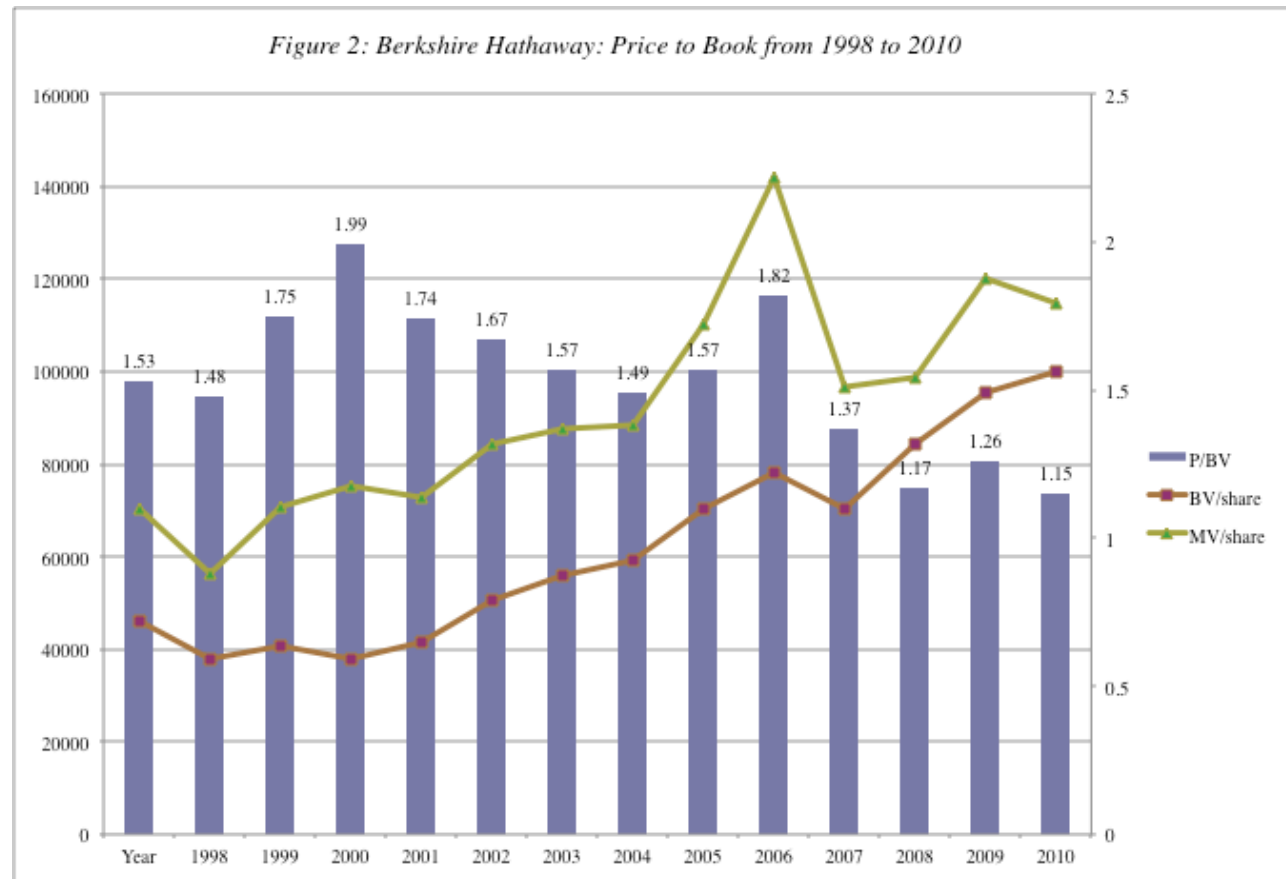
$$\text{Owner Earnings} = \text{Net income} + \text{Depreciation \& Amortization} - \text{Capital Expenditures}$$

- The company should have high and stable profit margins.

■ *Market Tenets:*

- Use conservative estimates of earnings and the riskless rate as the discount rate.
- In keeping with his view of Mr. Market as capricious and moody, even valuable companies can be bought at attractive prices when investors turn away from them.

Updating Buffett's record



So, what happened?

- Imitators: His record of picking winners has attracted publicity and a crowd of imitators who follow his every move, buying everything he buys, making it difficult for him to accumulate large positions at attractive prices.
- Scaling problems: At the same time the larger funds at his disposal imply that he is investing far more than he did two or three decades ago in each of the companies that he takes a position in, creating a larger price impact (and lower profits)
- Macro game? The crises that have beset markets over the last few years have been both a threat and an opportunity for Buffett. As markets have staggered through the crises, the biggest factors driving stock prices and investment success have become macroeconomic unknowns and not the company-specific factors that Buffett has historically viewed as his competitive edge (assessing a company's profitability and cash flows).

Be like Buffett?

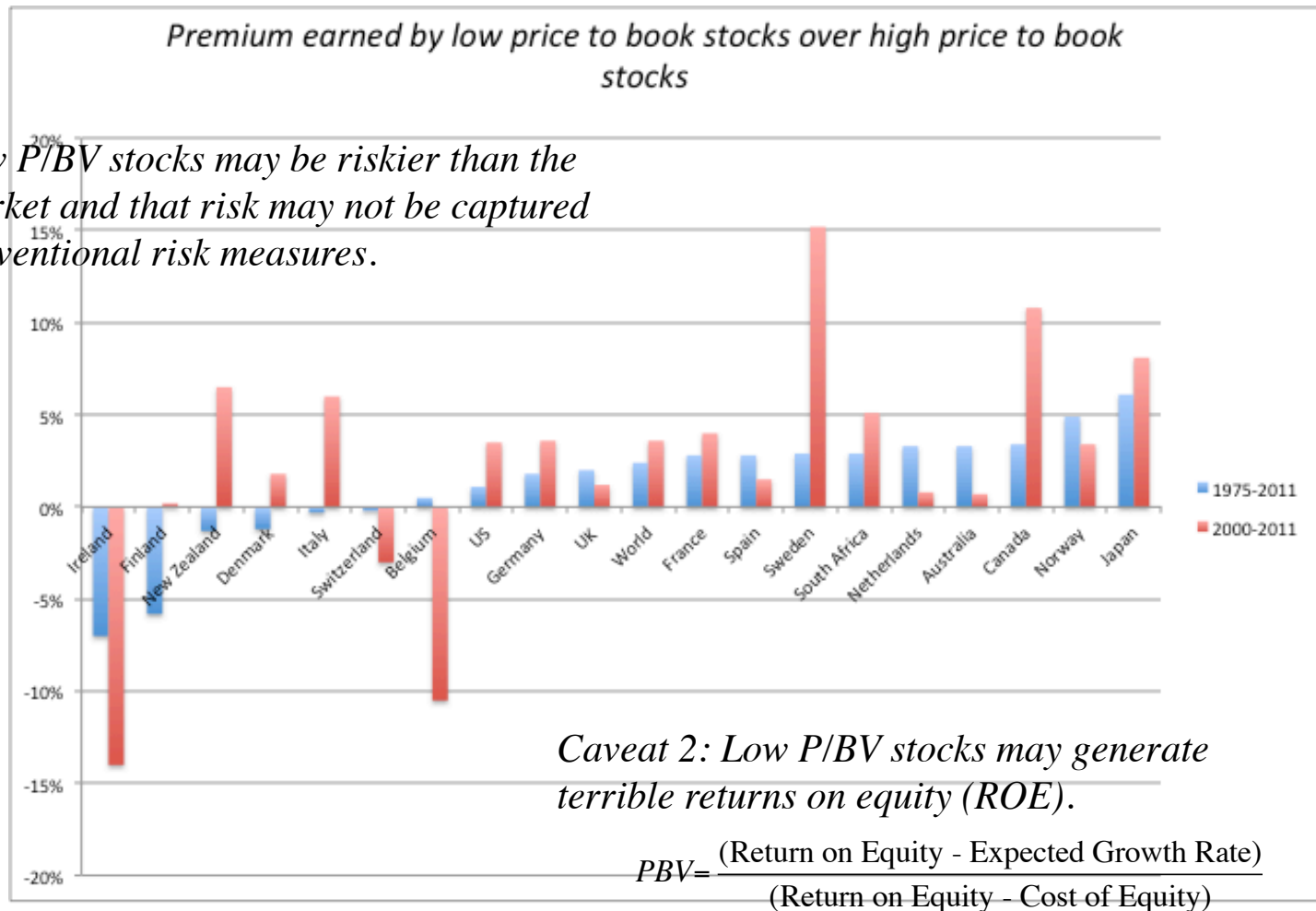
- Markets have changed since Buffett started his first partnership. Even Warren Buffett would have difficulty replicating his success in today's market, where information on companies is widely available and dozens of money managers claim to be looking for bargains in value stocks.
- In recent years, Buffett has adopted a more activist investment style and has succeeded with it. To succeed with this style as an investor, though, you would need substantial resources and have the credibility that comes with investment success. There are few investors, even among successful money managers, who can claim this combination.
- The third ingredient of Buffett's success has been patience. As he has pointed out, he does not buy stocks for the short term but businesses for the long term. He has often been willing to hold stocks that he believes to be under valued through disappointing years. In those same years, he has faced no pressure from impatient investors, since stockholders in Berkshire Hathaway have such high regard for him.

Value Screens

- Price to Book ratios: Buy stocks where equity trades at less than book value or at least a low multiple of the book value of equity.
- Price earnings ratios: Buy stocks where equity trades at a low multiple of equity earnings.
- Dividend Yields: Buy stocks with high dividend yields.

1. Price/Book Value Screens

Caveat 1: Low P/BV stocks may be riskier than the rest of the market and that risk may not be captured in beta or conventional risk measures.



2. PE Ratio Screens

Caveat 1: If companies manage or manipulate earnings, companies with riskier earnings should trade at lower PE ratios

Caveat 3: Low growth & low quality growth companies should trade at lower PE ratios

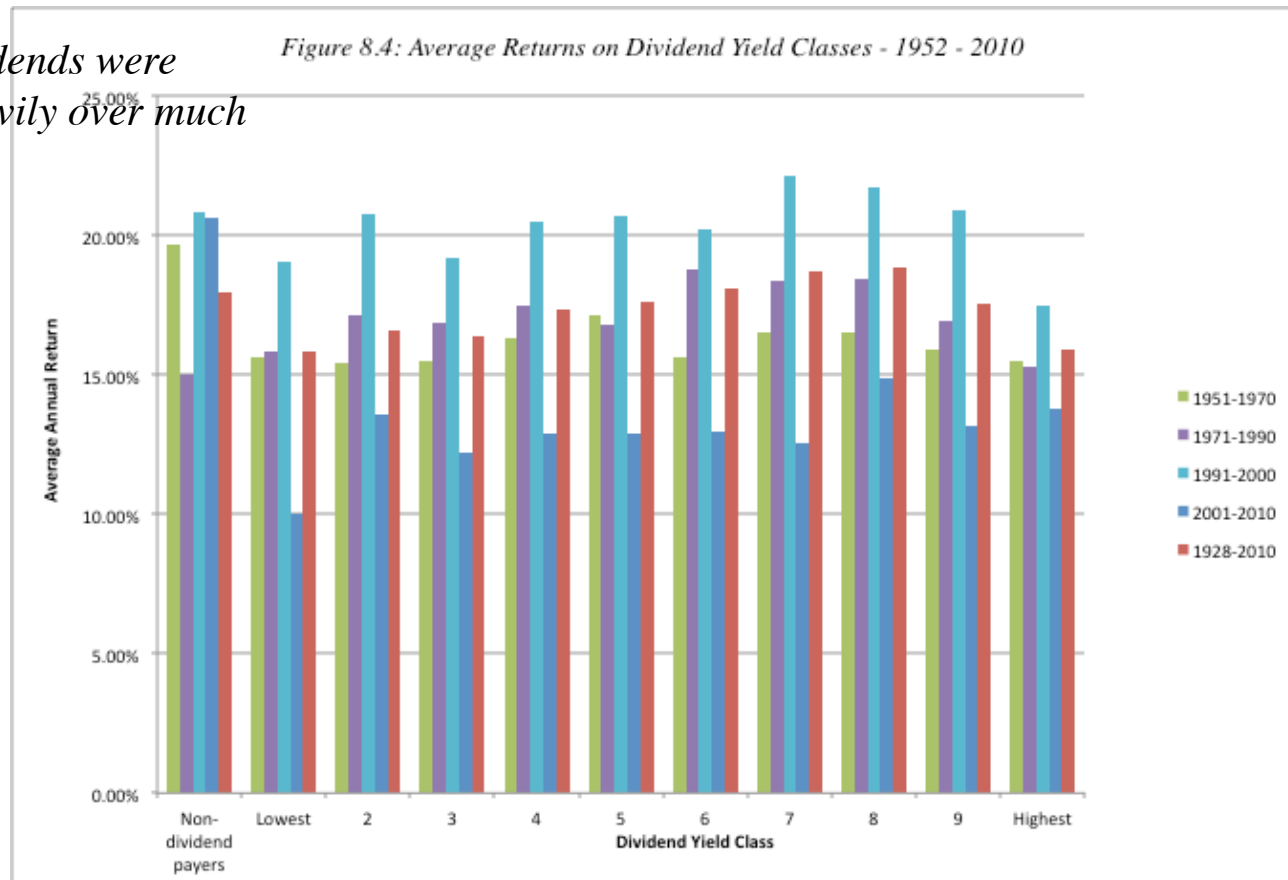


Caveat 2: Low PE ratio stocks generally have large dividend yields, which would have created a larger tax burden for investors during much of this period.

3. Dividend Yields

Caveat 1: Dividends were taxed more heavily over much of this period

Figure 8.4: Average Returns on Dividend Yield Classes - 1952 - 2010



Caveat 2: Dividends at some of the highest dividend yield companies may be unsustainable.

So, if you are going to be a passive screener, follow this sequence..

1. Screen for low price: Start with a market multiple, with either equity or enterprise value and a measure of earnings, book value of operating size in the denominator.
2. Screen for low risk: You can use either market based risk measures (market cap, standard deviation, beta...), balance sheet based measures (low debt ratio, high tangible book assets etc.) or earnings based measures (variability in earnings, no losses...)
3. Screen for high growth: You can use growth in earnings or revenues.
4. Screen for high quality growth: You can use return on equity (if equity earnings) or return on invested capital (if operating earnings).

Bottom line: You want to buy cheap companies, that have no reason to be cheap.

Determinants of Success at Passive Screening

1. Have a long time horizon: All the studies quoted above look at returns over time horizons of five years or greater. In fact, low price-book value stocks have underperformed high price-book value stocks over shorter time periods.
2. Choose your screens wisely: Too many screens can undercut the search for excess returns since the screens may end up eliminating just those stocks that create the positive excess returns.
3. Be diversified: The excess returns from these strategies often come from a few holdings in large portfolio. Holding a small portfolio may expose you to extraordinary risk and not deliver the same excess returns.
4. Watch out for taxes and transactions costs: Some of the screens may end up creating a portfolio of low-priced stocks, which, in turn, create larger transactions costs.

The Value Investors' Protective Armor

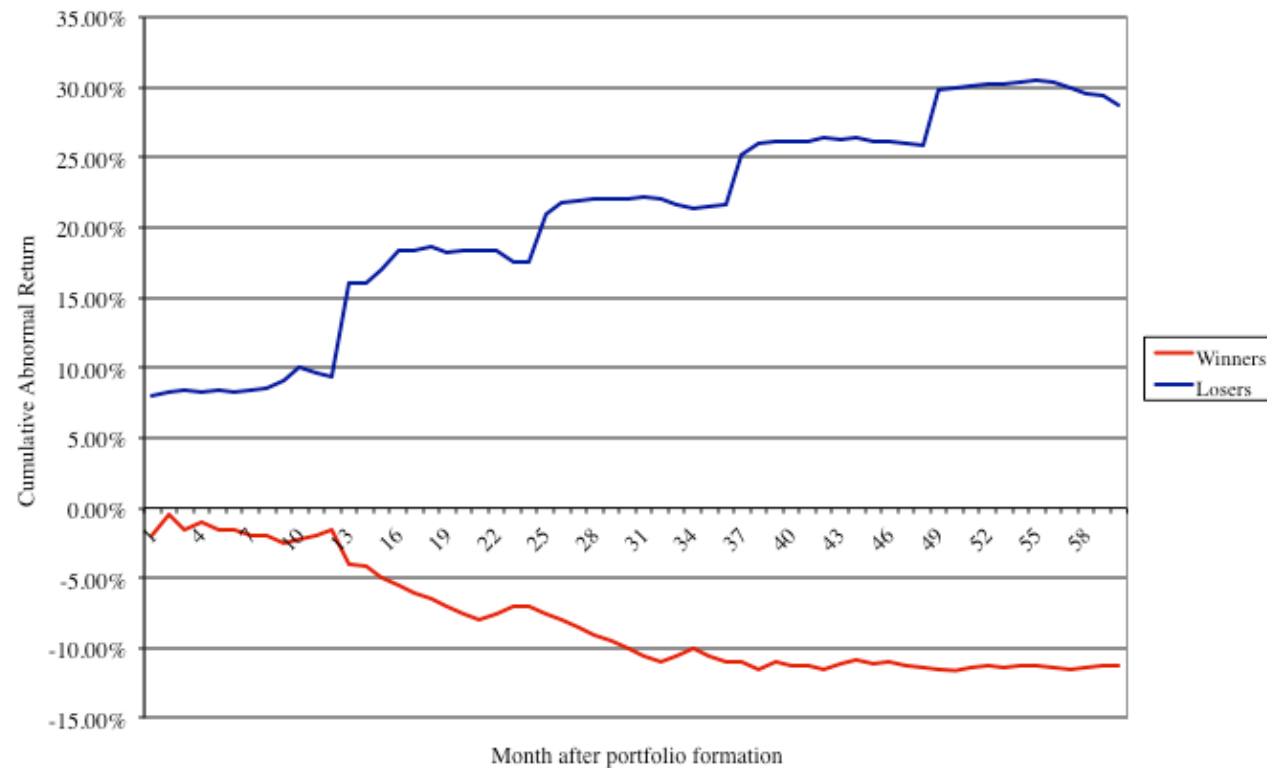
- Accounting checks: Rather than trust the current earnings, value investors often focus on three variants:
 - Normalized earnings, i.e., average earnings over a period of time.
 - Adjusted earnings, where investors devise their corrections to earnings for what they see as shortcomings in conventional accounting earnings.
 - Owner's earnings, where depreciation, amortization and other non-cash charges are added back and capital expenditures to maintain existing assets is subtracted out.
- The Moat: The “moat” is a measure of a company's competitive advantages; the stronger and more sustainable a company's competitive advantages, the more difficult it becomes for others to breach the moat and the safer becomes the earnings stream.

II. Contrarian Value Investing: Buying the Losers

- In contrarian value investing, you begin with the proposition that markets over react to good and bad news. Consequently, stocks that have had bad news come out about them (earnings declines, deals that have gone bad) are likely to be under valued.
- Evidence that Markets Overreact to News Announcements
 - Studies that look at returns on markets over long time periods chronicle that there is significant negative serial correlation in returns, I.e, good years are more likely to be followed by bad years and vice versa.
 - Studies that focus on individual stocks find the same effect, with stocks that have done well more likely to do badly over the next period, and vice versa.

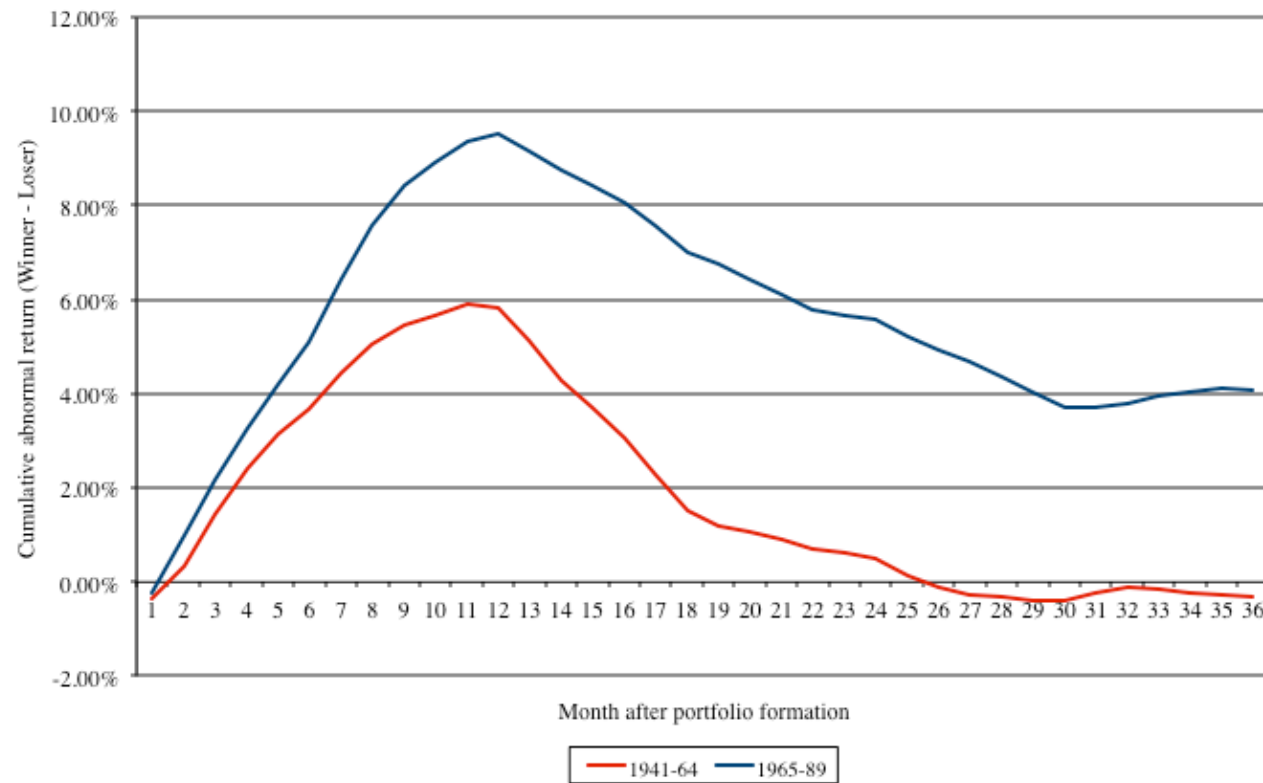
Winner and Loser portfolios

Figure 6: Cumulative Abnormal Returns - Winners versus Losers



Loser Portfolios and Time Horizon

Figure 7: Differential Returns - Winner versus Loser Portfolios



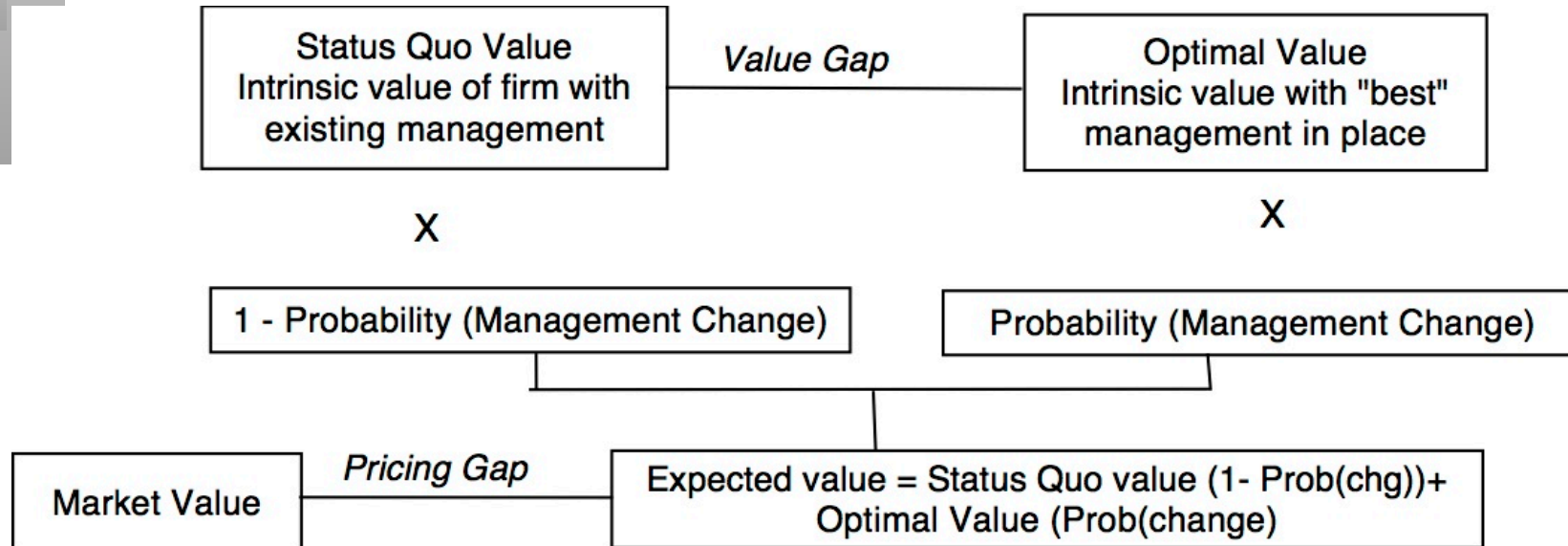
Determinants of Success at “Contrarian Investing”

1. **Self Confidence:** Investing in companies that everybody else views as losers requires a self confidence that comes either from past success, a huge ego or both.
2. **Clients/Investors who believe in you:** You either need clients who think like you do and agree with you, or clients that have made enough money of you in the past that their greed overwhelms any trepidation you might have in your portfolio.
3. **Patience:** These strategies require time to work out. For every three steps forward, you will often take two steps back.
4. **Stomach for Short-term Volatility:** The nature of your investment implies that there will be high short term volatility and high profile failures.
5. **Watch out for transactions costs:** These strategies often lead to portfolios of low priced stocks held by few institutional investors. The transactions costs can wipe out any perceived excess returns quickly.

III. Activist Value Investing

Passive investors buy companies with a pricing gap and hope (and pray) that the pricing gap closes.

Activist investors buy companies with a value and/or pricing gap and provide the catalysts for closing the gaps.



(1) How well do you manage your existing investments/assets?
 a. Cost cutting
 b. Asset divestitures
 c. Tax management
 d. Working capital management

(2) Are you investing optimally fo future growth?
 a. If $ROC < WACC$, invest less
 b. If $ROC > WACC$, invest more

(3) Is there scope for more efficient utilization of existing assets?

Growth from new investments
 Growth created by making new investments;
 function of amount and quality of investments

Efficiency Growth
 Growth generated by using existing assets better

Cashflows from existing assets
 Cashflows before debt payments, but after taxes and reinvestment to maintain existing assets

Expected Growth during high growth period

Stable growth firm, with no or very limited excess returns

(4) Are you building on your competitive advantages?
 a. Augment existing advantages
 b. Find new barriers to entry

Length of the high growth period
 Since value creating growth requires excess returns, this is a function of
 - Magnitude of competitive advantages
 - Sustainability of competitive advantages

(5) Are you using the right amount and kind of debt for your firm?
 a. Change mix of debt and equity
 b. Match debt to assets
 c. Make your products less discretionary
 d. Reduce fixed costs

Cost of capital to apply to discounting cashflows
 Determined by
 - Operating risk of the company
 - Default risk of the company
 - Mix of debt and equity used in financing

With young growth firms, start of the life cycle: Focus on (2)
 With established growth firms, later in life cycle: Focus on (2, (4) and (5)
 With mature firms, middle of life cycle: Focus on (1), (3) and (5)
 With declining firms, end of life cycle: Focus on (1) and (5)

1. Asset Deployment: Why assets may be deployed in sub-optimal uses...

- Ego, overconfidence and bias: The original investment may have been colored by any or all of these factors.
- Failure to adjust for risk: The original risk assessment may have been appropriate but the company failed to factor in changes in the project's risk profile over time.
- Diffuse businesses: By spreading themselves thinly across multiple businesses, it is possible that some of these businesses may be run less efficiently than if they were stand alone businesses, partly because accountability is weak and partly because of cross subsidies.
- Changes in business: Even firms that make unbiased and well reasoned judgments about their investments, at the time that they make them, can find that unanticipated changes in the business or sector can make good investments into bad ones.
- Macroeconomic changes: Value creating investments made in assets when the economy is doing well can reverse course quickly, if the economy slows down or goes into a recession.

Redeploying assets: Shut down or divestiture

- Shut down: If an investment is losing money and/or the company can reclaim the capital it originally invested in an investment that earns less than its cost of capital, you should shut it down.
- Divestiture: Divesting bad businesses will enhance value if and only if the divestiture value > continuing value of the bad business. The market reaction to asset divestitures is generally positive, but more so if the motive for the divestiture and the consequences are transparent.

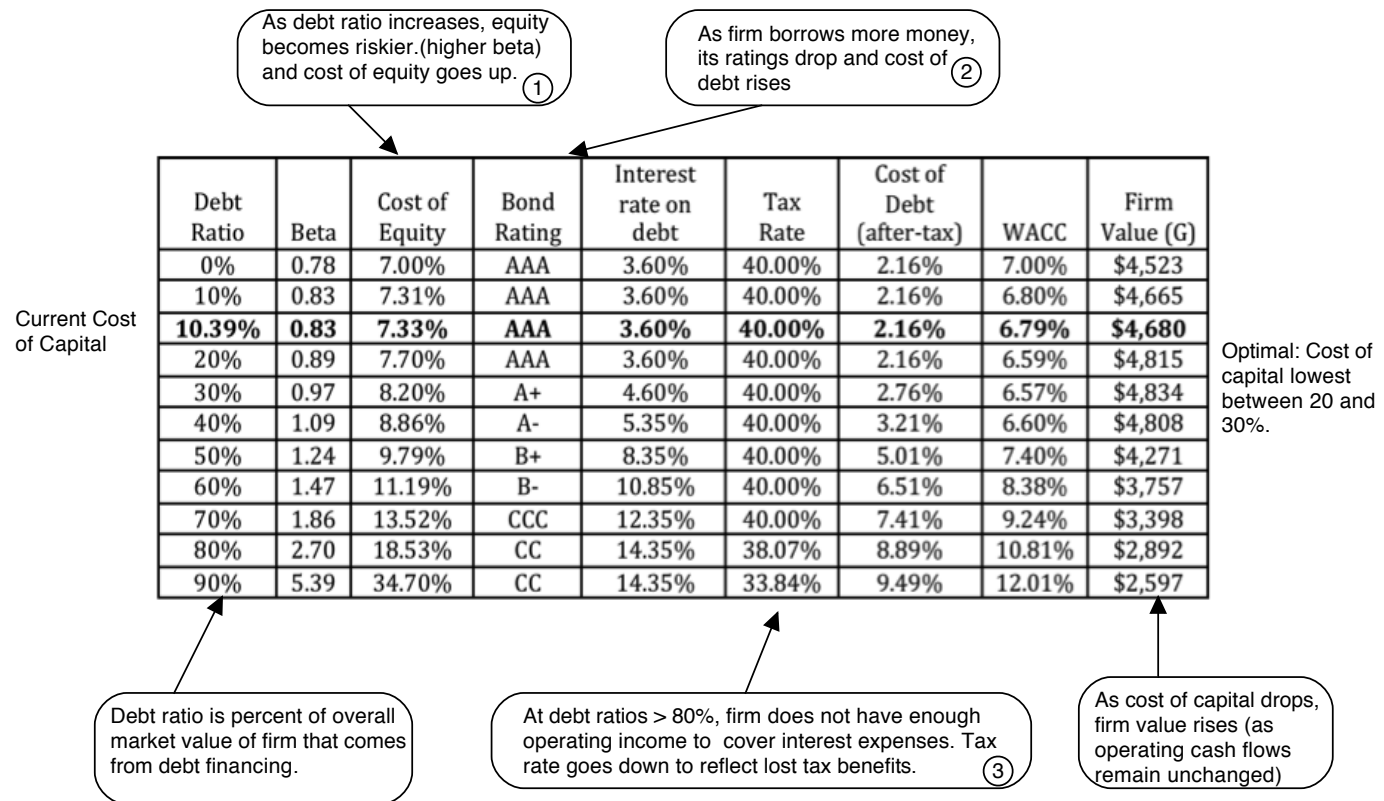
<i>Price Announced</i>	<i>Motive Announced</i>	
	Yes	No
Yes	3.92%	2.30%
No	0.70%	0.37%

2. Capital Structure/ Financing

<i>Advantages of Debt</i>	<i>Disadvantages of debt</i>
<p>1. Tax Benefit: Interest expenses on debt are tax deductible but cash flows to equity are generally not. <i>Implication: The higher the marginal tax rate, the greater the benefits of debt.</i></p>	<p>1. Expected Bankruptcy Cost: The expected cost of going bankrupt is a product of the probability of going bankrupt and the cost of going bankrupt. The latter includes both direct and indirect costs. The probability of going bankrupt will be higher in businesses with more volatile earnings and the cost of bankruptcy will also vary across businesses. <i>Implication:</i> 1. <i>Firms with more stable earnings should borrow more, for any given level of earnings.</i> 2. <i>Firms with lower bankruptcy costs should borrow more, for any given level of earnings.</i></p>
<p>2. Added Discipline: Borrowing money may force managers to think about the consequences of the investment decisions a little more carefully and reduce bad investments. <i>Implication: As the separation between managers and stockholders increases, the benefits to using debt will go up.</i></p>	<p>2. Agency Costs: Actions that benefit equity investors may hurt lenders. The greater the potential for this conflict of interest, the greater the cost borne by the borrower (as higher interest rates or more covenants). <i>Implication: Firms where lenders can monitor/ control how their money is being used should be able to borrow more than firms where this is difficult to do.</i></p>
	<p>3. Loss of flexibility: Using up available debt capacity today will mean that you cannot draw on it in the future. This loss of flexibility can be disastrous if funds are needed and access to capital is shut off. <i>Implication:</i> 1. <i>Firms that can forecast future funding needs better should be able to borrow more.</i> 2. <i>Firms with better access to capital markets should be more willing to borrow more today.</i></p>

Cost of capital as a tool for assessing the optimal mix

Exhibit 7.1: Optimal Financing Mix: Hormel Foods in January 2009

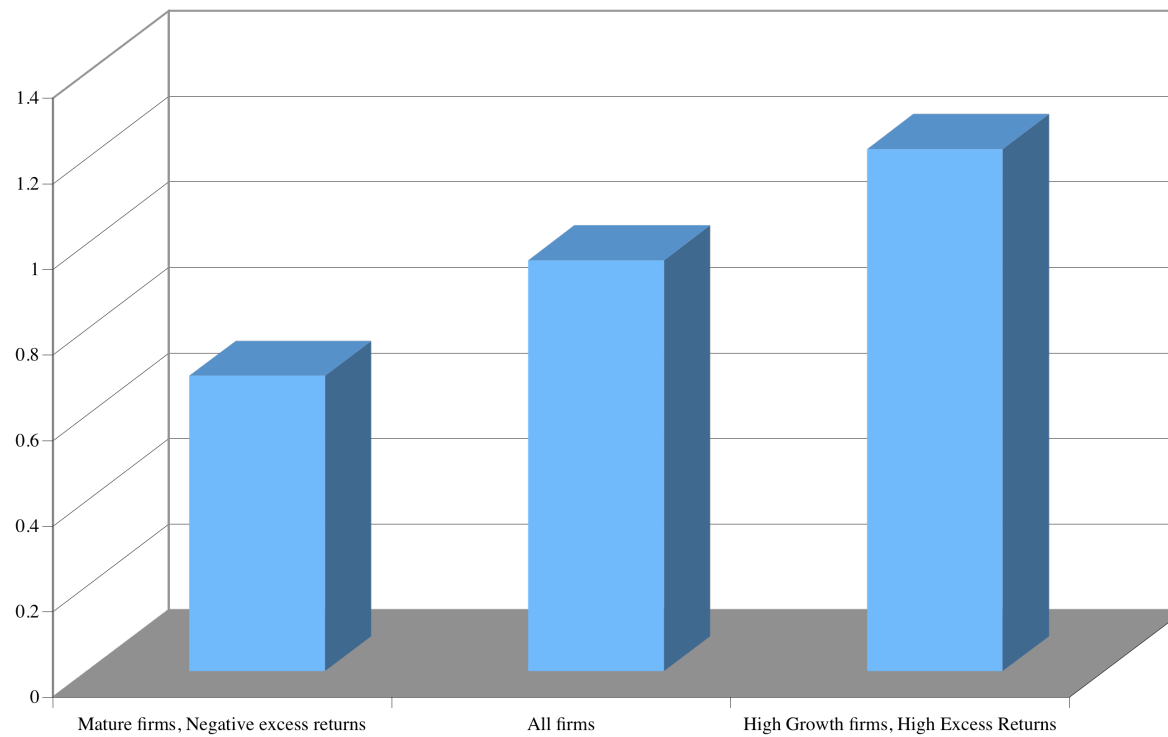


Ways of adjusting financing mix

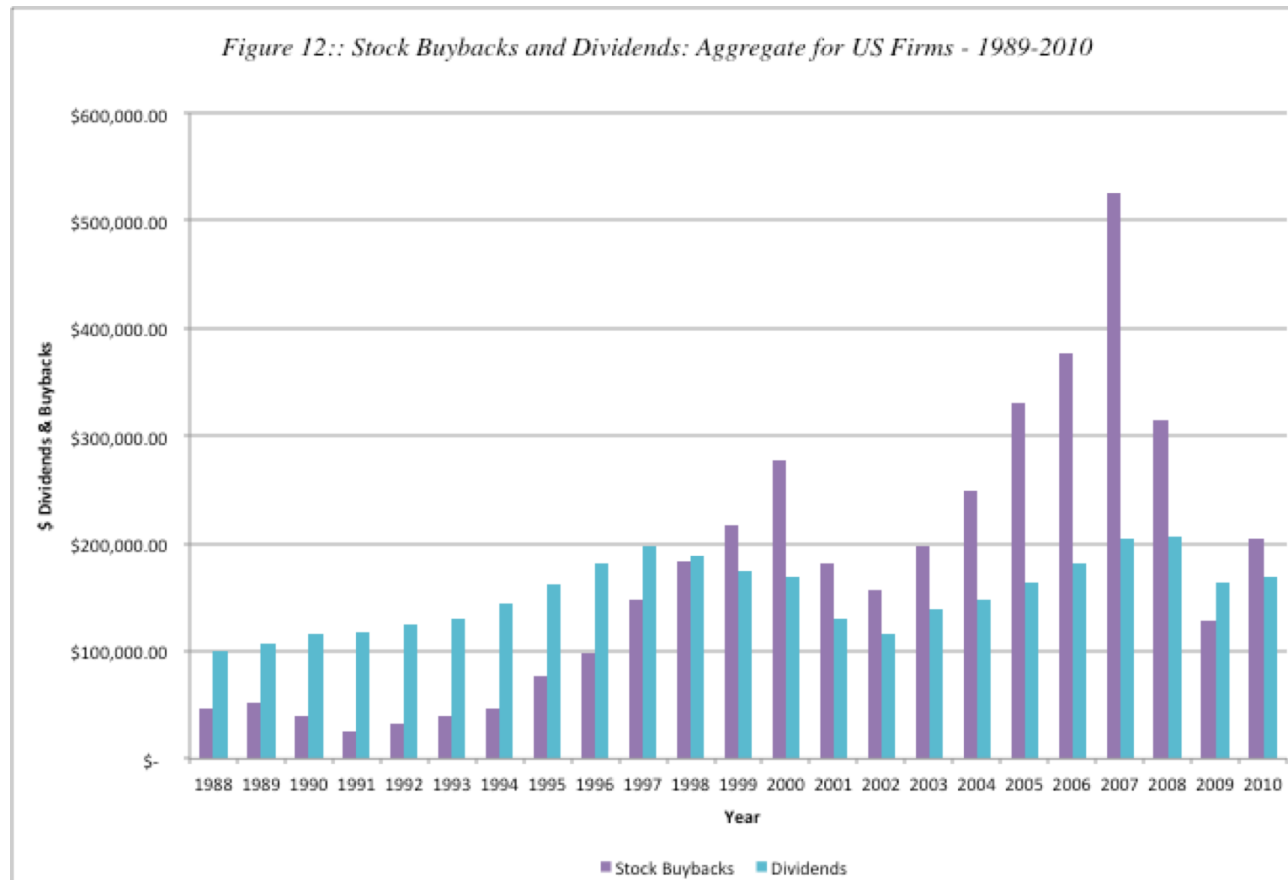
- Marginal recapitalization: A firm that is under (over) levered can use a disproportionately high (low) debt ratio to fund new investments.
- Total recapitalization: In a recapitalization, a firm changes its financial mix of debt and equity, without substantially altering its investments or asset holdings. If under levered, the firm can borrow money and buy back stock or do a debt for equity swap. If over levered, it can issue new equity to retire debt or offer its debt holders equity positions in the company.
- Leveraged acquisition: If a firm is under levered and the existing management is too conservative and stubborn to change, there is an extreme alternative. An acquirer can borrow money, implicitly using the target firm's debt capacity, and buy out the firm.

3. Dividend policy

*Market Value of \$ 1 in cash:
Estimates obtained by regressing Enterprise Value against Cash Balances*



If you have too much cash...



4. Corporate Governance

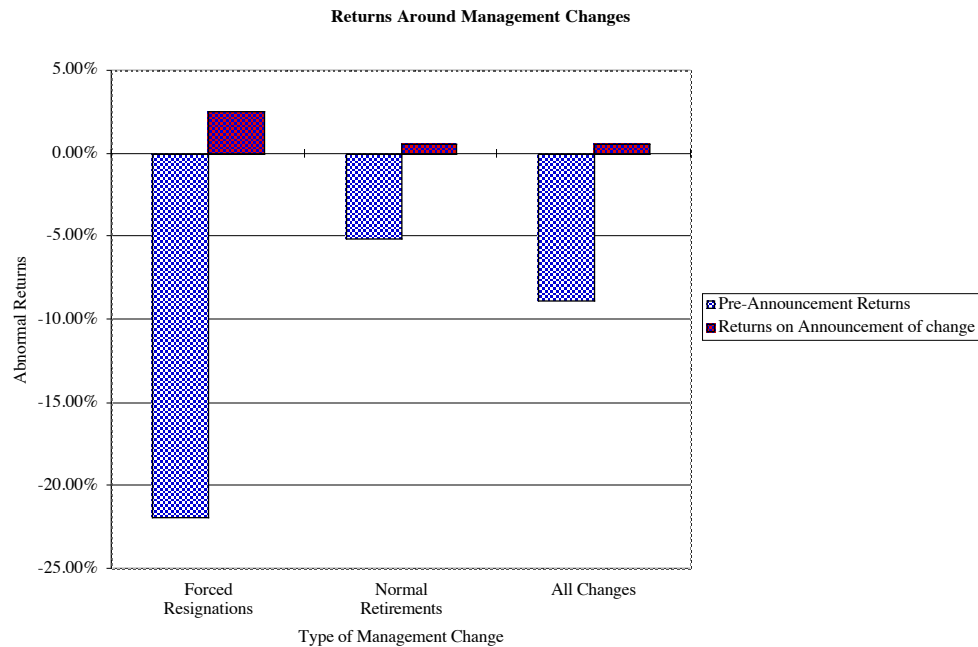
- To value corporate governance, consider two estimates of value for the same firm:
 - In the first, you value the company run by the existing managers,warts and all, and call this the status quo value.
 - In the second, you value the company run by “optimal” management and term this the “optimal” value.
- To the extent that there are at least some dimensions where the incumbent managers are falling short, the latter should be higher than the former. The price at which the stock will trade in a reasonably efficient market will be a weighted average of these two value:
 - Expected value = (Probability of no change in management) (Status quo value) + Probability of change in management) (Optimal value)

a. Proxy contests

- At large publicly traded firms with widely dispersed stock ownership, annual meetings are lightly attended. For the most part, stockholders in these companies tend to stay away from meetings and incumbent managers usually get their votes by default, thus ensuring management approved boards.
- Activist investors compete with incumbent managers for the proxies of individual investors, with the intent of getting their nominees for the board elected. While they may not always succeed at winning majority votes, they do put managers on notice that they are accountable to stockholders.
- There is evidence that proxy contests occur more often in companies that are poorly run, and that they sometimes create significant changes in management policy and improvements in operating performance.

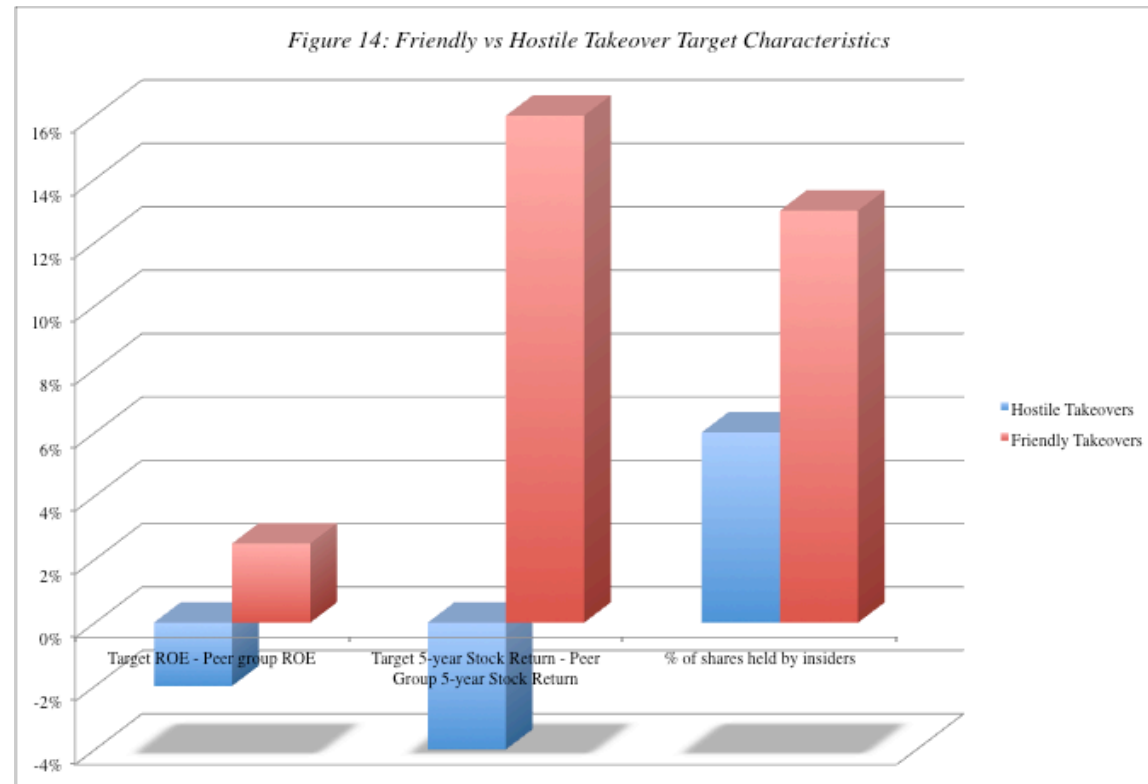
b. Change top management

- The overall empirical evidence suggests that changes in management are generally viewed as good news.



c. The Effects of Hostile Acquisitions on the Target Firm

- Badly managed firms are much more likely to be targets of acquisitions than well managed firms

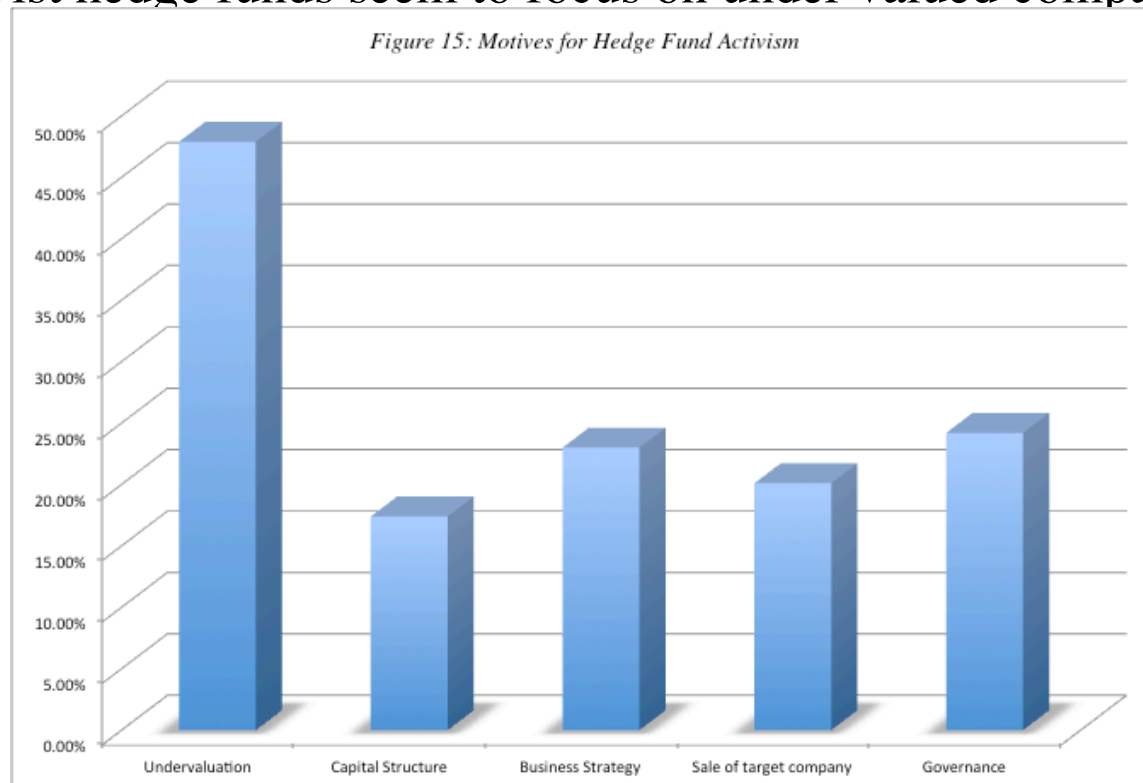


Classes of Activist Investors

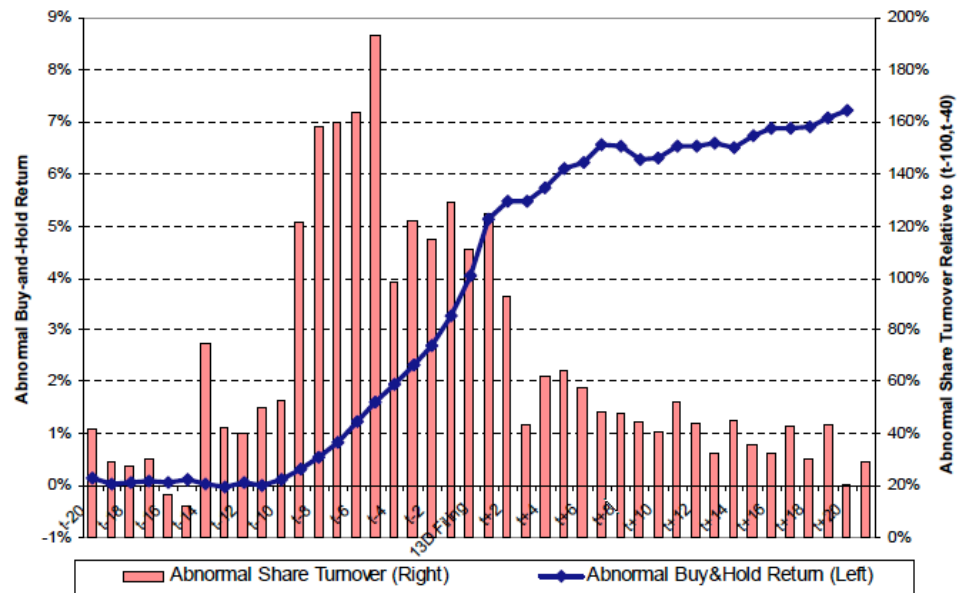
- Lone wolves: These are individual investors, with substantial resources and a willingness to challenge incumbent managers.
- Institutional investors: While most institutional investors prefer to vote with their feet (selling stock in companies that are poorly managed), a few have been willing to challenge managers at these companies and push for change.
- Activist hedge & private equity funds: . A subset of private equity funds have made their reputations (and wealth) at least in part by investing in (and sometimes buying outright) publicly traded companies that they feel are managed less than optimally, changing the way they managed and cashing out in the market place. A key difference between these funds and the other two classes of activist investors is that rather than challenge incumbent managers as incompetent, they often team up with them in taking public companies into the private domain, at least temporarily.

Who do they target?

- Individual and institutional investors target poorly managed firms that are under performing their peer group (in accounting & stock returns).
- Activist hedge funds seem to focus on under valued companies:



How do markets react?



Note: The solid line (left axis) plots the average buy-and-hold return around the Schedule 13D filing, in excess of the buy-and-hold return of the value-weight market, from 20 days prior the 13D file date to 20 days afterwards. The bars (right axis) plot the increase (in percentage points) in the share trading turnover during the same time window compared to the average turnover rate during the preceding (-100, -40) event window.

What returns do activist investors make for themselves?

- Overall returns: Activist mutual funds seem to have had the lowest payoff to their activism, with little change accruing to the corporate governance, performance or stock prices of targeted firms. Activist hedge funds, on the other hand, seem to earn substantial excess returns, ranging from 7-8% on an annualized basis at the low end to 20% or more at the high end. Individual activists seem to fall somewhere in the middle, earning higher returns than institutions but lower returns than hedge funds.
- Volatility in returns: While the average excess returns earned by hedge funds and individual activists is positive, there is substantial volatility in these returns and the magnitude of the excess return is sensitive to the benchmark used and the risk adjustment process.
- Skewed distributions: The average returns across activist investors obscures a key component, which is that the distribution is skewed with the most positive returns being delivered by the activist investors in the top quartile; the median activist investor may very well just break even, especially after accounting for the cost of activism.

Can you make money following the activists?

- Reactive strategy: Since the bulk of the excess returns are earned in the days before the announcement of activism, there is little to be gained in the short term by investing in a stock, after it has been targeted by activist investors. You may be able to improve your returns by following the right activists, looking for performance cues at the targeted companies and hoping for a hostile acquisition windfall. Overall, though, a strategy of following activist investors is likely to yield modest returns, at best, because you will be getting the scraps from the table.
- Proactive strategy: There is an alternate strategy worth considering, that may offer higher returns, that also draws on activist investing. You can try to identify companies that are poorly managed and run, and thus most likely to be targeted by activist investors. In effect, you are screening firms for low returns on capital, low debt ratios and large cash balances, representing screens for potential value enhancement, and ageing CEOs, corporate scandals and/or shifts in voting rights operating as screens for the management change.

Determinants of Success at Activist Investing

1. **Have lots of capital:** Since this strategy requires that you be able to put pressure on incumbent management, you have to be able to take significant stakes in the companies.
2. **Know your company well:** Since this strategy is going to lead a smaller portfolio, you need to know much more about your companies than you would need to in a screening model.
3. **Understand corporate finance:** You have to know enough corporate finance to understand not only that the company is doing badly (which will be reflected in the stock price) but what it is doing badly.
4. **Be persistent:** Incumbent managers are unlikely to roll over and play dead just because you say so. They will fight (and fight dirty) to win. You have to be prepared to counter.
5. **Do your homework:** You have to form coalitions with other investors and to organize to create the change you are pushing for.



If value investors are the “grown ups”, where is the beef?

The three biggest Rs of modern value investing

- Rigid: The strategies that have come to characterize a great deal of value investing reveal an astonishing faith in accounting numbers and an equally stunning lack of faith in markets getting anything right. Value investors may be the last believers in book value. The rigidity extends to the types of companies that you buy (avoiding entire sectors...)
- Righteous: Value investors have convinced themselves that they are better people than other investors. Index fund investors are viewed as “academic stooges”, growth investors are considered to be “dilettantes” and momentum investors are “lemmings”. Value investors consider themselves to be the grown ups in the investing game.
- Ritualistic: Modern day value investing has a whole menu of rituals that investors have to perform to meet be “value investors”. The rituals range from the benign (claim to have read “Security Analysis” by Ben Graham and every Berkshire Hathaway annual report) to the not-so-benign...

Myth 1: DCF valuation is an academic exercise...

The value of an asset is the present value of the expected cash flows on that asset, over its expected life:

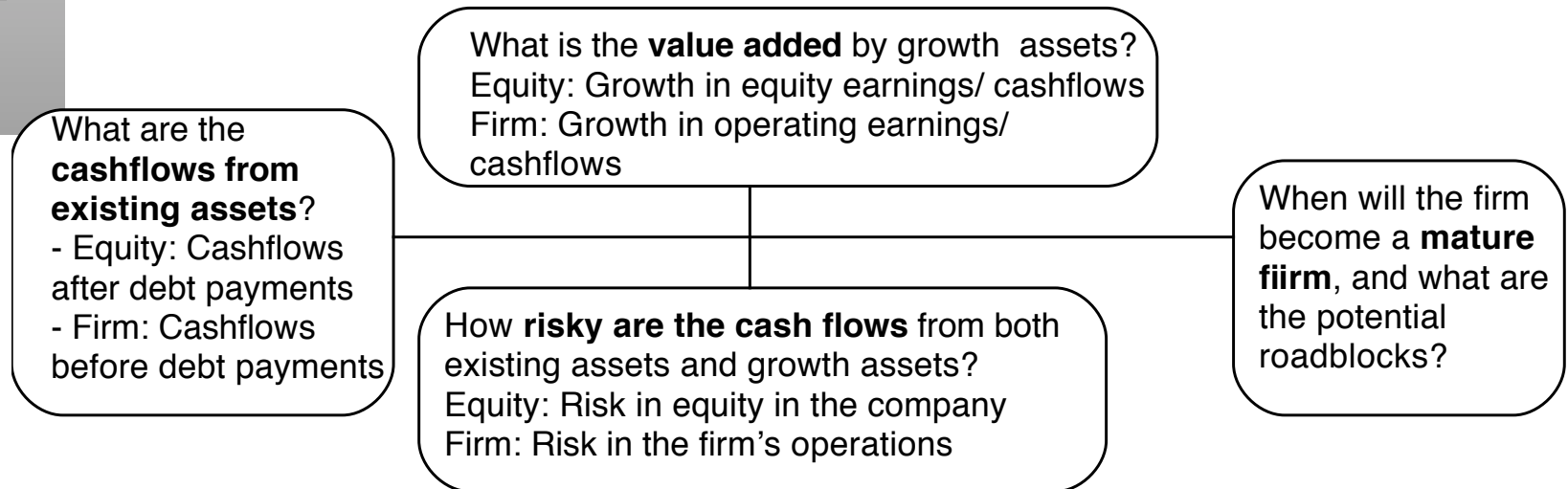
$$\text{Value of asset} = \frac{E(\text{CF}_1)}{(1+r)} + \frac{E(\text{CF}_2)}{(1+r)^2} + \frac{E(\text{CF}_3)}{(1+r)^3} \dots + \frac{E(\text{CF}_n)}{(1+r)^n}$$

Proposition 1: If “it” does not affect the cash flows or alter risk (thus changing discount rates), “it” cannot affect value.

Proposition 2: For an asset to have value, the expected cash flows have to be positive some time over the life of the asset.

Proposition 3: Assets that generate cash flows early in their life will be worth more than assets that generate cash flows later; the latter may however have greater growth and higher cash flows to compensate.

Here is what the value of a business rests on... in DCF valuation



Myth 2: Beta is greek from geeks...and essential to DCF valuation

- Dispensing with all of the noise, here are the underpinnings for using beta as a measure of risk:
 - Risk is measured in volatility in asset prices
 - The risk in an individual investment is the risk that it adds to the investor's portfolio
 - That risk can be measured with a beta (CAPM) or with multiple betas (in the APM or Multi-factor models)
 1. Beta is a measure of relative risk: Beta is a way of scaled risk, with the scaling around one. Thus, a beta of 1.50 is an indication that a stock is 1.50 times as risky as the average stock, with risk measured as risk added to a portfolio.
 2. Beta measures exposure to macroeconomic risk: Risk that is specific to individual companies will get averaged out (some companies do better than expected and others do worse). The only risk that you cannot diversify away is exposure to macroeconomic risk, which cuts across most or all investments.

If you don't like betas, here are your alternatives

- Market price based alternatives
 - Relative volatility: The ratio of a company's standard deviation to standard deviation of average company in market
 - Implied costs of equity and capital: Backed out of current stock prices...
 - *If you don't like betas because they are based on stock prices, you won't like these alternatives either.*
- Accounting information based alternatives
 - Accounting earnings volatility: The ratio of the stability in earnings in your company, relative to other companies.
 - Accounting ratios: Ratios that capture financial leverage (debt ratios) and liquidity of assets (current ratios).
 - *Accountants are better at measuring default risk than equity risk.*
- Proxies for risk
 - Dividend Yield: Higher dividend yields -> Less risk
 - Sector: Technology is risky, consumer product companies are not...
 - Company size: Small companies are risky, big companies are not...

And doing your homework is not going to make the big risks go away...

- There is a widely held view among value investors that they are not as exposed to risk as the rest of the market, because they do their homework, poring over financial statements or using ratios to screen for risky stocks. Put simply, they are assuming that the more they know about an investment, the less risky it becomes.
- That may be true from some peripheral risks and a few firm specific risks, but it definitely is not for the macro risks (which is all that you bring into the discount rate in a conventional risk and return model). You cannot make a cyclical company less cyclical by studying it more or take the nationalization risk out of Venezuelan company by doing more research.

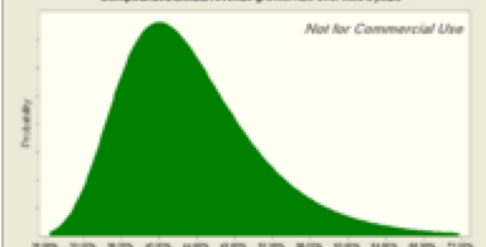


Implication 1: The need for diversification does not decrease just because you are a value investor who picks stocks with much research and care.

Implication 2: You can be a good value investor and your picks can still lose money.

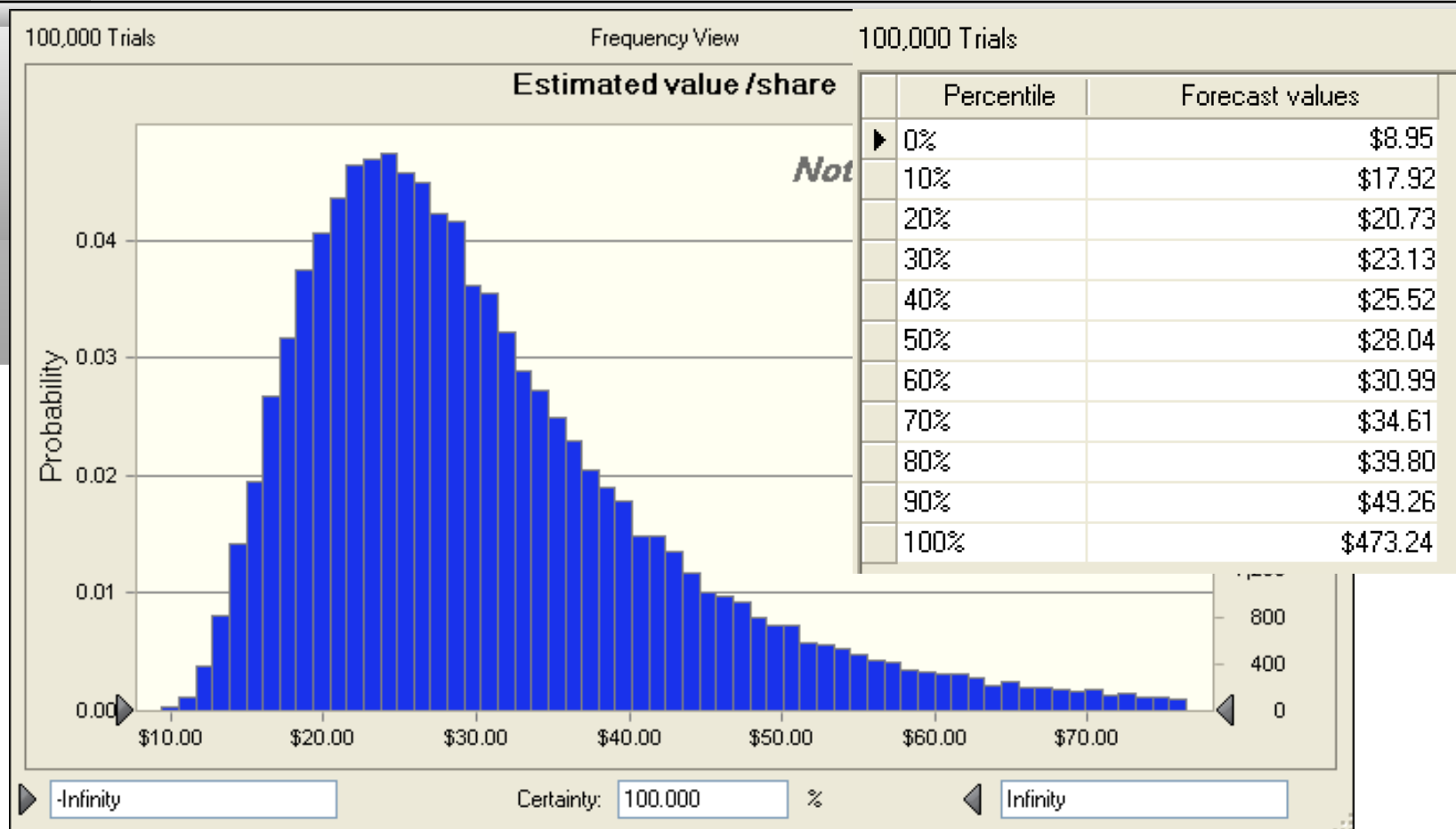
Myth 3: The “Margin of Safety” is an alternative to beta and works better

- The margin of safety is a buffer that you build into your investment decisions to protect yourself from investment mistakes. Thus, if your margin of safety is 30%, you will buy a stock only if the price is more than 30% below its “intrinsic” value. There is nothing wrong with using the margin of safety as an additional risk measure, as long as the following are kept in mind:
 - **Proposition 1: MOS comes into play at the end of the investment process, not at the beginning.**
 - **Proposition 2: MOS does not substitute for risk assessment and intrinsic valuation, but augments them.**
 - **Proposition 3: The MOS cannot and should not be a fixed number, but should be reflective of the uncertainty in the assessment of intrinsic value.**
 - **Proposition 4: Being too conservative can be damaging to your long term investment prospects. Too high a MOS can hurt you as an investor.**

If you need a MOS, here is one way to get it and use it...

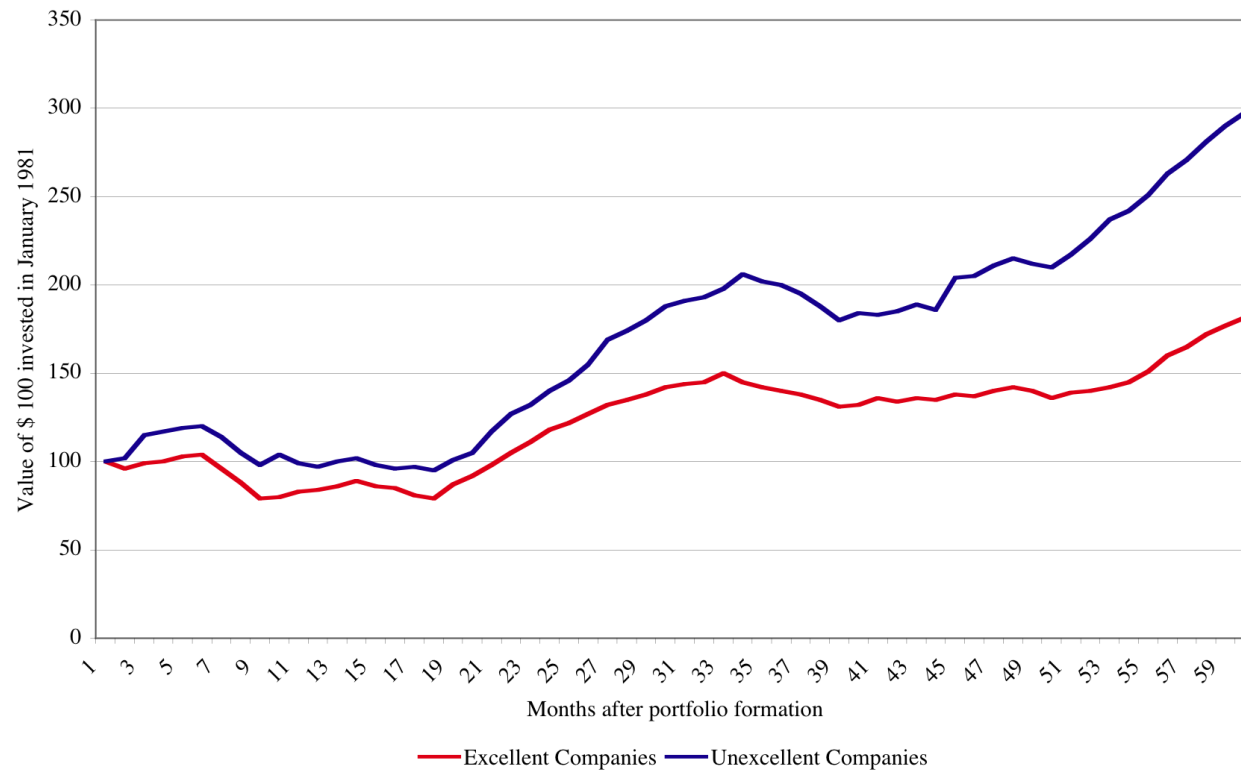
<p>Revenue Growth rate Expected growth rate = 40% Distribution: Lognormal Standard deviation = 6%</p>	<p>Compounded annual revenue growth rate over next 5 years =</p>  <p><i>Not for Commercial Use</i></p>
<p>Pre-tax Operating Margin Expected margin = 35% Distribution: Uniform Minimum = 25% Maximum = 45%</p>	<p>Target pre-tax operating margin (EBIT as % of sales in year 5) =</p>  <p><i>Not for Commercial Use</i></p>
<p>Sales to Capital Ratio Distribution: Normal Expected value = 1.50 Standard deviation = 0.15</p>	<p>Sales to capital ratios (for computing investments) =</p>  <p><i>Not for Commercial Use</i></p>

With the consequences...



Myth 4: Good management = Low Risk

Figure 8.7: Excellent versus Unexcellent Companies



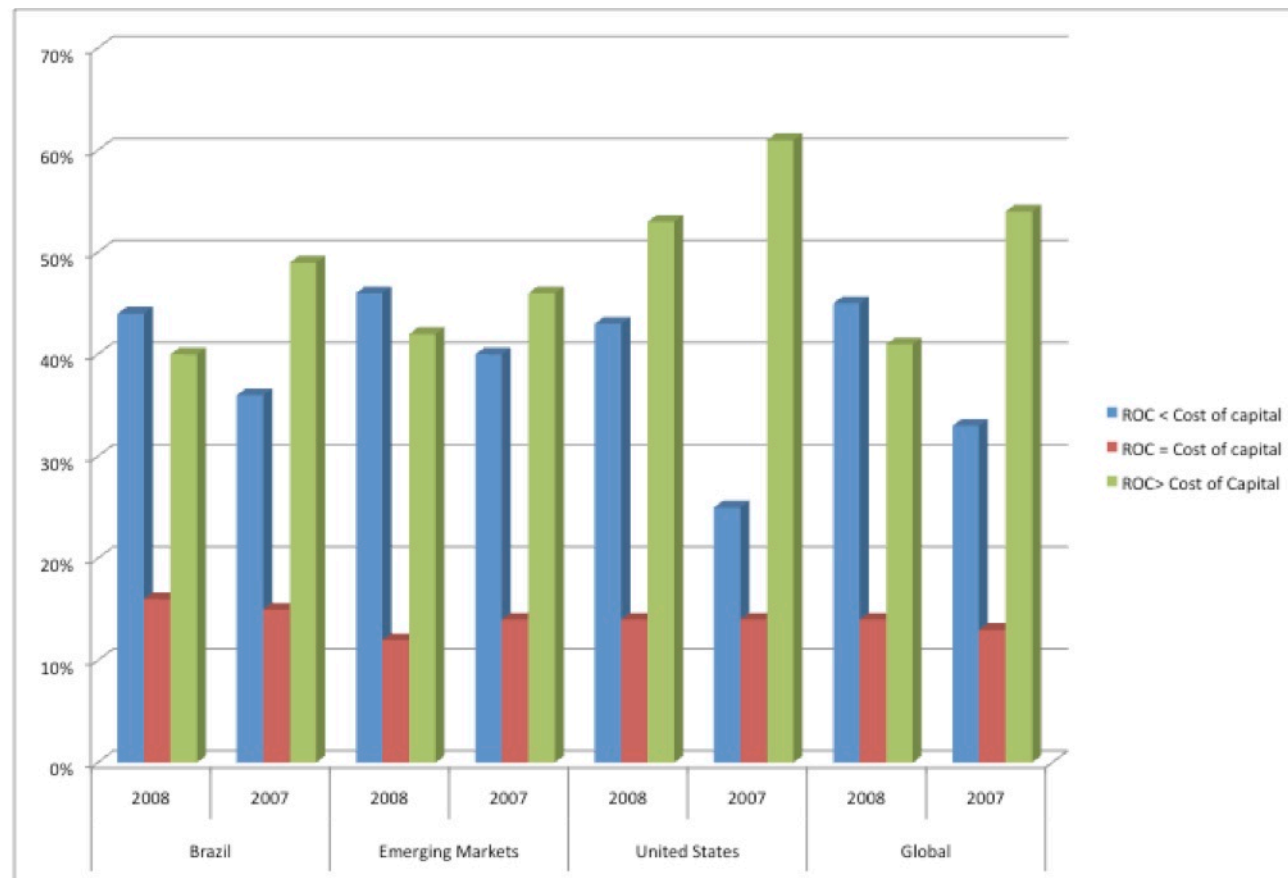
And it is time to get specific about what comprises “good” management...

- Which of the following characteristics would you look for in a good manager?
 - Stable Earnings
 - High Growth
 - Low Risk
 - High Dividends
 - Other: _____

Myth 5: Wide moats = Good investments

- Moats are the competitive advantages that allow companies to generate keep the competition out. In the process, they can keep their margins and returns high and improve the quality of their growth.
- Intrinsic value people and value investors do agree that moats matter to value: the wider the moat, the higher the value added by growth. But there are two places where they might disagree:
 - Moats matter more for growth companies than mature companies: Wide moats increase the value of companies and the value increase is proportional to the growth at these companies.
 - The returns on stocks are not a function of the width, but the rate of change in that width. So, companies with wide moats can be bad investments if the width shrinks and companies with no moats can be good investments if the width opens to a sliver.
 - It is easier to talk about moats than it is to measure their width...

The “one” number....

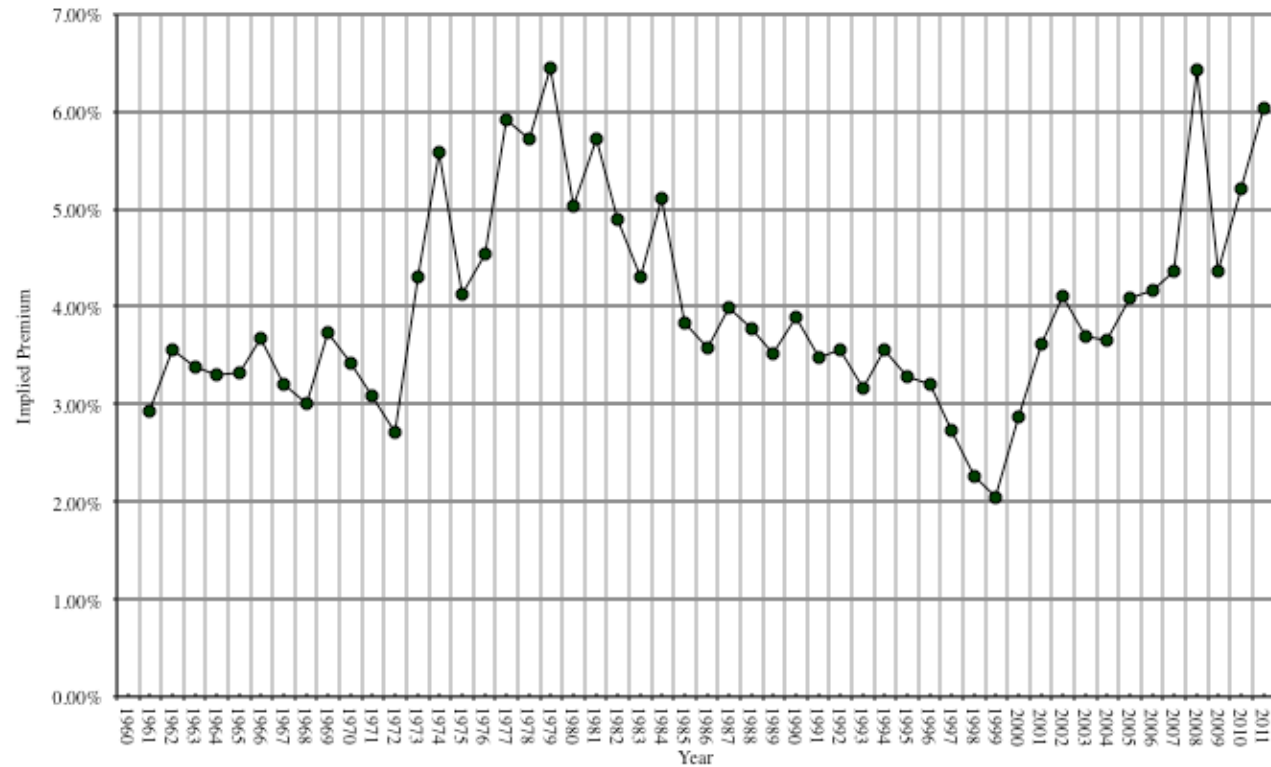


Myth 6: Intrinsic value is stable and unchangeable..

- There is a widely held belief that the intrinsic value of an investment, if computed correctly, should be stable over time. It is the market that is viewed as the volatile component in the equation. As a consequence, here is what we tend to do:
 - We make a decision on whether to buy or sell the stock and never revisit the intrinsic valuation.
 - We view market price changes as random, arbitrary and completely unjustified and ignore the fact that even there is information in market price changes in even the most unstable market.
- The intrinsic value of a company is viewed as a given, with investors having little impact on value (though they affect price)
 - We do not consider the feedback effects on intrinsic value, from changing stockholder bases and management teams.
 - We ignore the fact that the “intrinsic value” of a company can be different to different investors.

The intrinsic value of a company can change over time... even if the company does not...

Implied Premium for US Equity Market



Hormel Foods: The Value of Control Changing

Hormel Foods sells packaged meat and other food products and has been in existence as a publicly traded company for almost 80 years. In 2008, the firm reported after-tax operating income of \$315 million, reflecting a compounded growth of 5% over the previous 5 years.

The Status Quo

Run by existing management, with conservative reinvestment policies (reinvestment rate = 14.34% and debt ratio = 10.4%.

Anemic growth rate and short growth period, due to reinvestment policy

Low debt ratio affects cost of capital

Year	Operating income after taxes	Expected growth rate	ROC	Reinvestment Rate	Reinvestment	FCFF	Cost of capital	Present Value
Trailing 12 months	\$315							
1	\$324	2.75%	14.34%	19.14%	\$62	\$262	6.79%	\$245
2	\$333	2.75%	14.34%	19.14%	\$64	\$269	6.79%	\$236
3	\$342	2.75%	14.34%	19.14%	\$65	\$276	6.79%	\$227
Beyond	\$350	2.35%	7.23%	32.52%	\$114	\$4,840	7.23%	\$3,974
Value of operating assets								\$4,682
(Add) Cash								\$155
(Subtract) Debt								\$491
(Subtract) Management Options								\$53
Value of equity in common stock								\$4,293
Value per share								\$31.91

New and better management

More aggressive reinvestment which increases the reinvestment rate (to 40%) and length of growth (to 5 years), and higher debt ratio (20%).

Operating Restructuring ①

Expected growth rate = $ROC \times \text{Reinvestment Rate}$
 Expected growth rate (status quo) = $14.34\% \times 19.14\% = 2.75\%$
 Expected growth rate (optimal) = $14.00\% \times 40\% = 5.60\%$
 ROC drops, reinvestment rises and growth goes up.

Financial restructuring ②

Cost of capital = Cost of equity (1-Debt ratio) + Cost of debt (Debt ratio)
 Status quo = $7.33\% (1-.104) + 3.60\% (1-.40) (.104) = 6.79\%$
 Optimal = $7.75\% (1-.20) + 3.60\% (1-.40) (.20) = 6.63\%$
 Cost of equity rises but cost of capital drops.

Year	Operating income after taxes	Expected growth rate	ROC	Reinvestment Rate	Reinvestment	FCFF	Cost of capital	Present Value
Trailing 12 months	\$315							
1	\$333	5.60%	14.00%	40.00%	\$133	\$200	6.63%	\$187
2	\$351	5.60%	14.00%	40.00%	\$141	\$211	6.63%	\$185
3	\$371	5.60%	14.00%	40.00%	\$148	\$223	6.63%	\$184
4	\$392	5.60%	14.00%	40.00%	\$260	\$235	6.63%	\$182
5	\$414	5.60%	14.00%	40.00%	\$223	\$248	6.63%	\$180
Beyond	\$423	2.35%	6.74%	34.87%	\$148	\$6,282	6.74%	\$4,557
Value of operating assets								\$5,475
(Add) Cash								\$155
(Subtract) Debt								\$491
(Subtract) Management Options								\$53
Value of equity in common stock								\$5,085
Value per share								\$37.80

Probability of management change = 10%
 Expected value = $\$31.91 (.90) + \$37.80 (.10) = \$32.50$

Myth 7: Value investors get a bigger payoff from “active” investing than growth investors...

*Excess returns relative to appropriate index
(based on capitalization and philosophy)*

	<i>Value</i>	<i>Blend</i>	<i>Growth</i>
Large Cap	-2.90%	-1.03%	0.49%
Mid Cap	-1.30%	0.25%	2.08%
Small Cap	-0.37%	-0.08%	1.08%

If value investing is the “best way to invest”, how do we explain the fact that active growth investors beat a passive growth index fund far more frequently and by far more than active value investors do, relative to a passive value fund?

Myth 8: If your assessment of value is right, you will make money

- Replace the karmic approach: In this one, you buy (sell short) under (over) valued companies and sit back and wait for the gap to close. You are implicitly assuming that given time, the market will see the error of its ways and fix that error.
- With the catalyst approach: For the gap to close, the price has to converge on value. For that convergence to occur, there usually has to be a catalyst.
 - If you are an activist investor, you may be the catalyst yourself. In fact, your act of buying the stock may be a sufficient signal for the market to reassess the price.
 - If you are not, you have to look for other catalysts. Here are some to watch for: a new CEO or management team, a “blockbuster” new product or an acquisition bid where the firm is targeted.



Smoke and Mirrors Charting & Technical Analysis

Aswath Damodaran

The Random Walk Hypothesis

Information

All information about the firm is publicly available and traded on.

New information comes out about the firm.

Current

Next period

Market Expectations

Investors form unbiased expectations about the future

Since expectations are unbiased, there is a 50% chance of good or bad news.

Price Assessment

Stock price is an unbiased estimate of the value of the stock.

The price changes in accordance with the information. If it contains good (bad) news, relative to expectations, the stock price will increase (decrease).

Implications for Investors

No approach or model will allow us to identify under or over valued assets.

Reflecting the 50/50 chance of the news being good or bad, there is an equal probability of a price increase and a price decrease.

The Basis for Price Patterns

1. Investors are not always rational in the way they set expectations. These irrationalities may lead to expectations being set too low for some assets at some times and too high for other assets at other times. Thus, the next piece of information is more likely to contain good news for the first asset and bad news for the second.
2. Price changes themselves may provide information to markets. Thus, the fact that a stock has gone up strongly the last four days may be viewed as good news by investors, making it more likely that the price will go up today then down.

Serial correlation

- Serial correlation **measures the correlation between price changes in consecutive time periods**
- Measure of how much price change in any period depends upon price change over prior time period.
 - 0**: imply that price changes in consecutive time periods are uncorrelated with each other
 - >0**: evidence of price momentum in markets
 - <0**: Evidence of price reversals

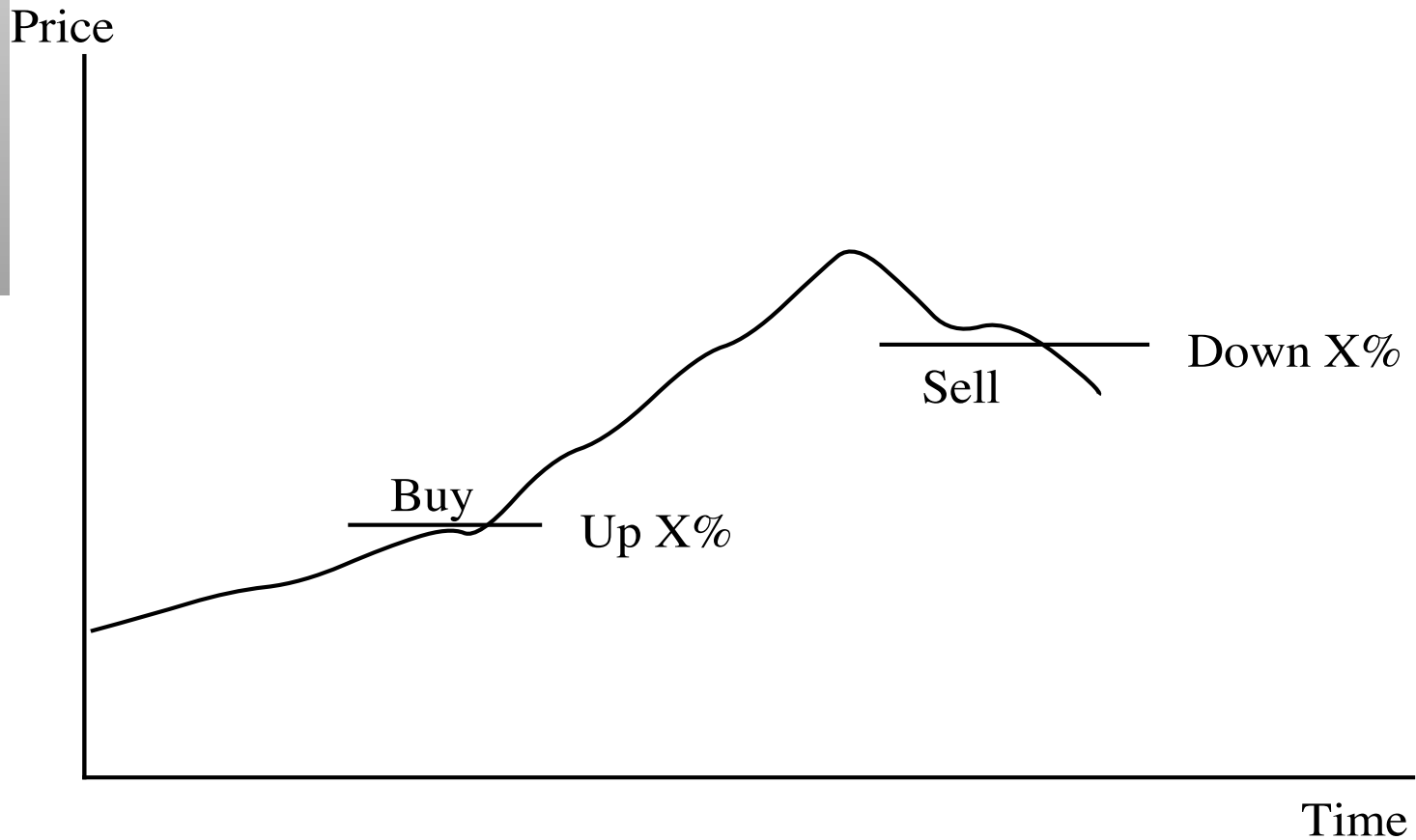
Serial Correlation and Excess Returns

- Serial correlation **measures the correlation between price changes in consecutive time periods:**
 - 0: price changes carry no information for future price changes
 - >0: evidence of price momentum in markets
 - <0: Evidence of price reversals
- From viewpoint of investment strategy, **serial correlations can be exploited** to earn excess returns.
 - A **positive serial correlation** would be exploited by a strategy of buying after periods with positive returns and selling after periods with negative returns.
 - A **negative serial correlation** would suggest a strategy of buying after periods with negative returns and selling after periods with positive returns.

1. Serial Correlation in really short-term returns (minutes, hours)

- There is low or no serial correlation: The earliest studies of serial correlation all looked at large U.S. stocks and concluded that the serial correlation in stock prices was small. Other studies confirmed these findings – of very low correlation, positive or negative - not only for smaller stocks in the United States, but also for other markets.
- The correlation that exists has more to do with market microstructure than inefficiency
 - Market liquidity effect: If markets are not liquid, you will see serial correlation in index returns.
 - Bid-ask spread effect: The bid-ask spread creates a bias in the opposite direction, if transactions prices are used to compute returns, since prices have a equal chance of ending up at the bid or the ask price. The bounce that this induces in prices will result in negative serial correlations in returns.

And it is really difficult to make money off really short term correlations..



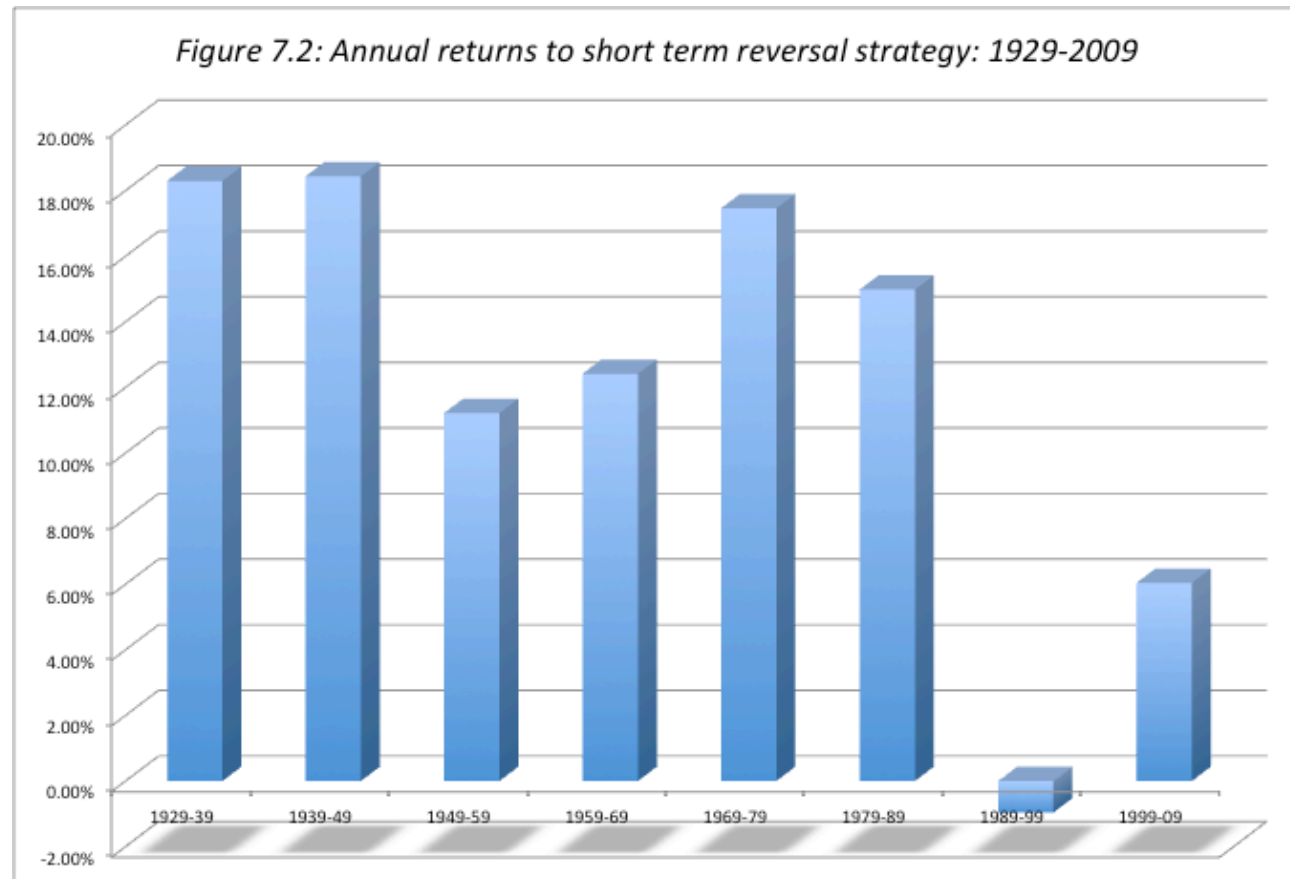
Returns on Filter Rule Strategies

<i>Value of X</i>	<i>Return with Strategy</i>	<i>Return with Buy & Hold</i>	<i>No of Trades</i>	<i>Return after costs</i>
0.5%	11.5%	10.4%	12,514	-103.6%
1.0%	5.5%	10.3%	8,660	-74.9%
2.0%	0.2%	10.3%	4,764	-45.2%
3.0%	-1.7%	10.1%	2,994	-30.5%
4.0%	0.1%	10.1%	2,013	-19.5%
5.0%	-1.9%	10.0%	1,484	-16.6%
6.0%	1.3%	9.7%	1,071	-9.4%
8.0%	1.7%	9.6%	653	-5.0%
10.0%	3.0%	9.6%	435	-1.4%
12.0%	5.3%	9.4%	289	2.3%
14.0%	3.9%	10.3%	224	1.4%
16.0%	4.2%	10.3%	172	2.3%
18.0%	3.6%	10.0%	139	2.0%
20.0%	4.3%	9.8%	110	3.0%

2. Serial correlation in the short term (days, weeks)

- As you move from hours and days to weeks or a month, there seems to be some evidence that prices reverse. In other words, stocks that have done well over the last month are more likely to do badly in the next one and stocks that have done badly over the last month are more likely to bounce back.
- The reasons given are usually rooted in market over reaction, i.e., that the stocks that have gone up (down) the most over the most recent month are ones where markets have over reacted to good (bad) news that came out about the stock over the month. The price reversal then reflects markets correcting themselves.

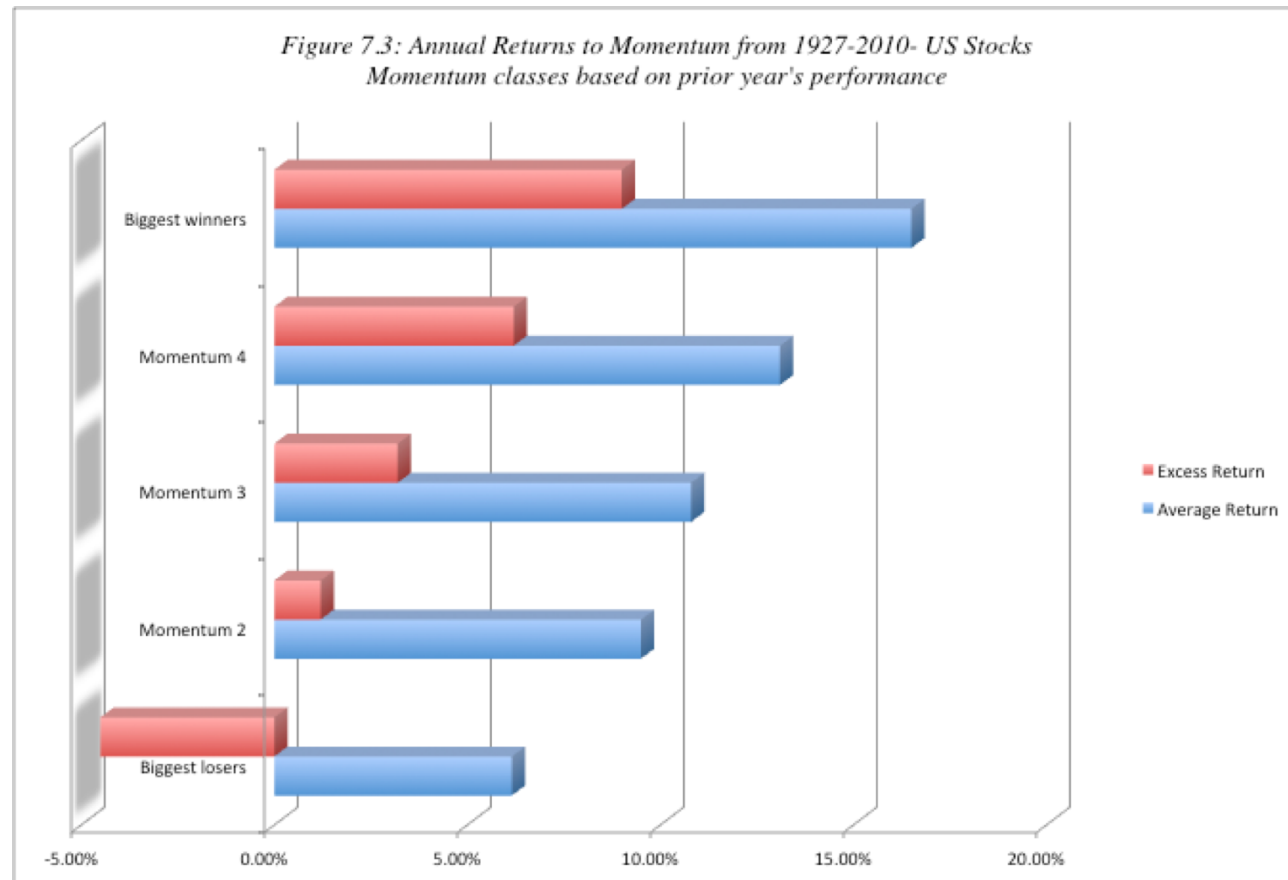
Returns from Momentum in short term



3. Serial correlation in the medium term

- When time is defined as many months or a year, rather than a single month, there seems to be a tendency towards positive serial correlation.
- Jegadeesh and Titman present evidence of what they call “price momentum” in stock prices over time periods of several months – stocks that have gone up in the last six months tend to continue to go up whereas stocks that have gone down in the last six months tend to continue to go down.
- Between 1945 and 2008, if you classified stocks into deciles based upon price performance over the previous year, the annual return you would have generated by buying the stocks in the top decile and held for the next year was 16.5% higher than the return you would have earned on the stocks in the bottom decile.

Annual returns from momentum classes (based upon most recent year)



More “evidence” on momentum

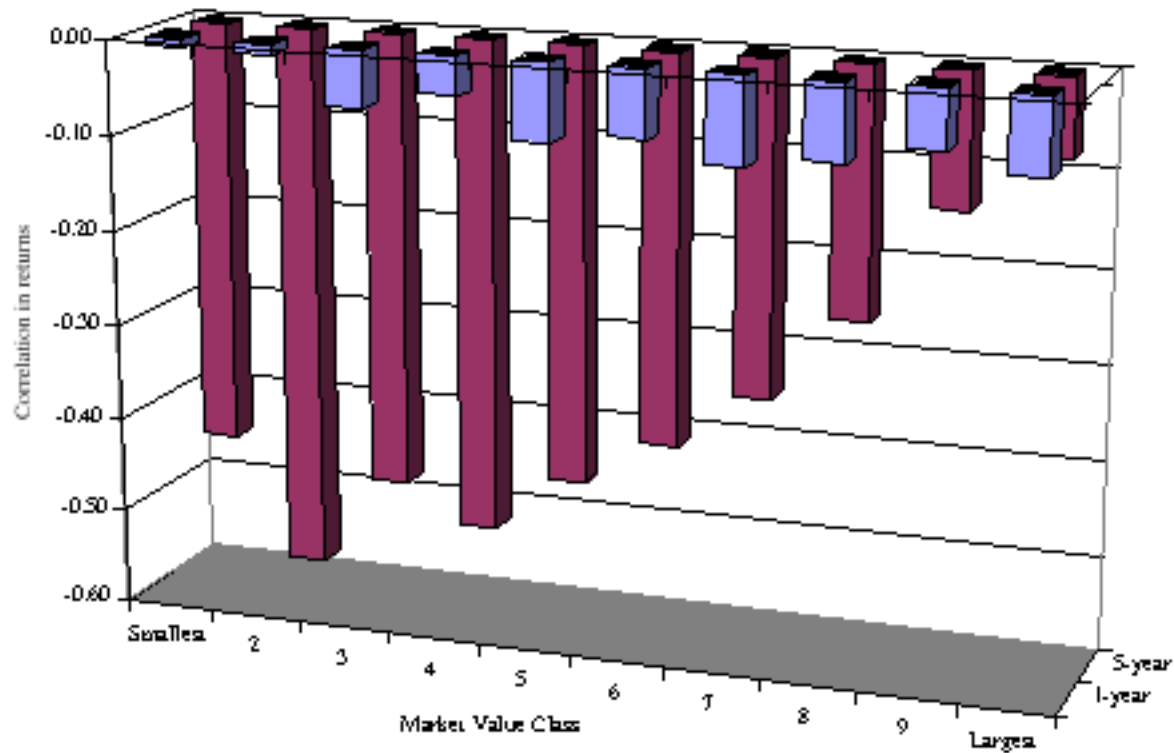
- Volume effect: Momentum accompanied by higher trading volume is stronger and more sustained than momentum with low trading volume.
- Size effect: While some of the earlier studies suggest that momentum is stronger at small market cap companies, a more recent study that looks at US stocks from 1926 to 2009 finds the relationship to be a weak one, though it does confirm that there are sub periods (1980-1996) where momentum and firm size are correlated.
- Upside vs Downside: The conclusions seem to vary, depending on the time period examined, with upside momentum dominating over very long time periods (1926-2009) and downside momentum winning out over some sub-periods (such as the 1980-1996).
- Growth effect: Price momentum is more sustained and stronger for higher growth companies with higher price to book ratios than for more mature companies with lower price to book ratios.

4. Long Term Serial Correlation (Years)

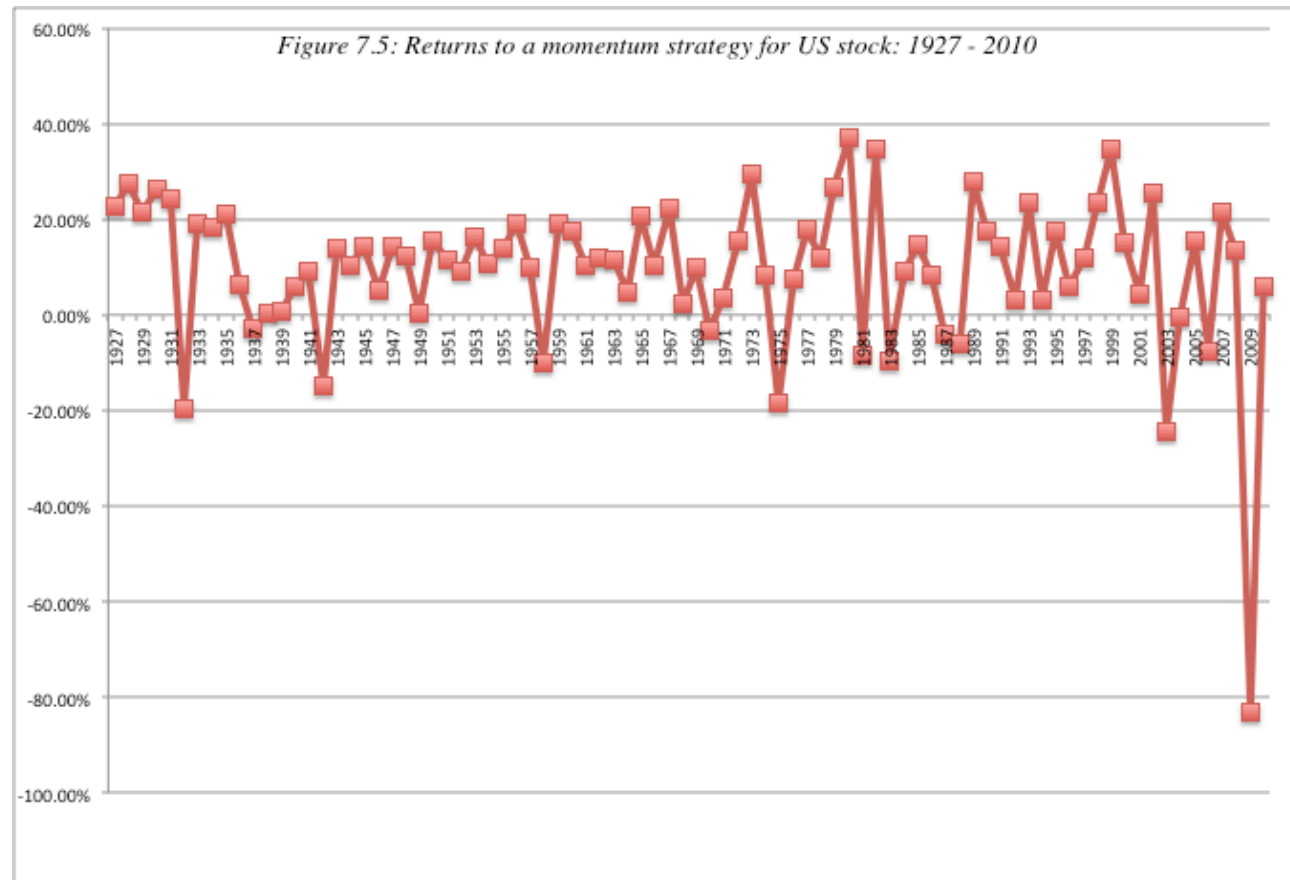
- In contrast to the studies of short term correlation, there is evidence of strong correlation in long term returns.
- When long term is defined as months, there is positive correlation - a momentum effect.
- When long term is defined as years, there is negative correlation - reversal in prices. The effect is much stronger for smaller companies.

Evidence of long term correlation

Figure 7.2: One year and Five year Correlations: Market Value Class: 1941-1985



The tipping point... Momentum works, until it does not..



Seasonal and Temporal Effects on Prices

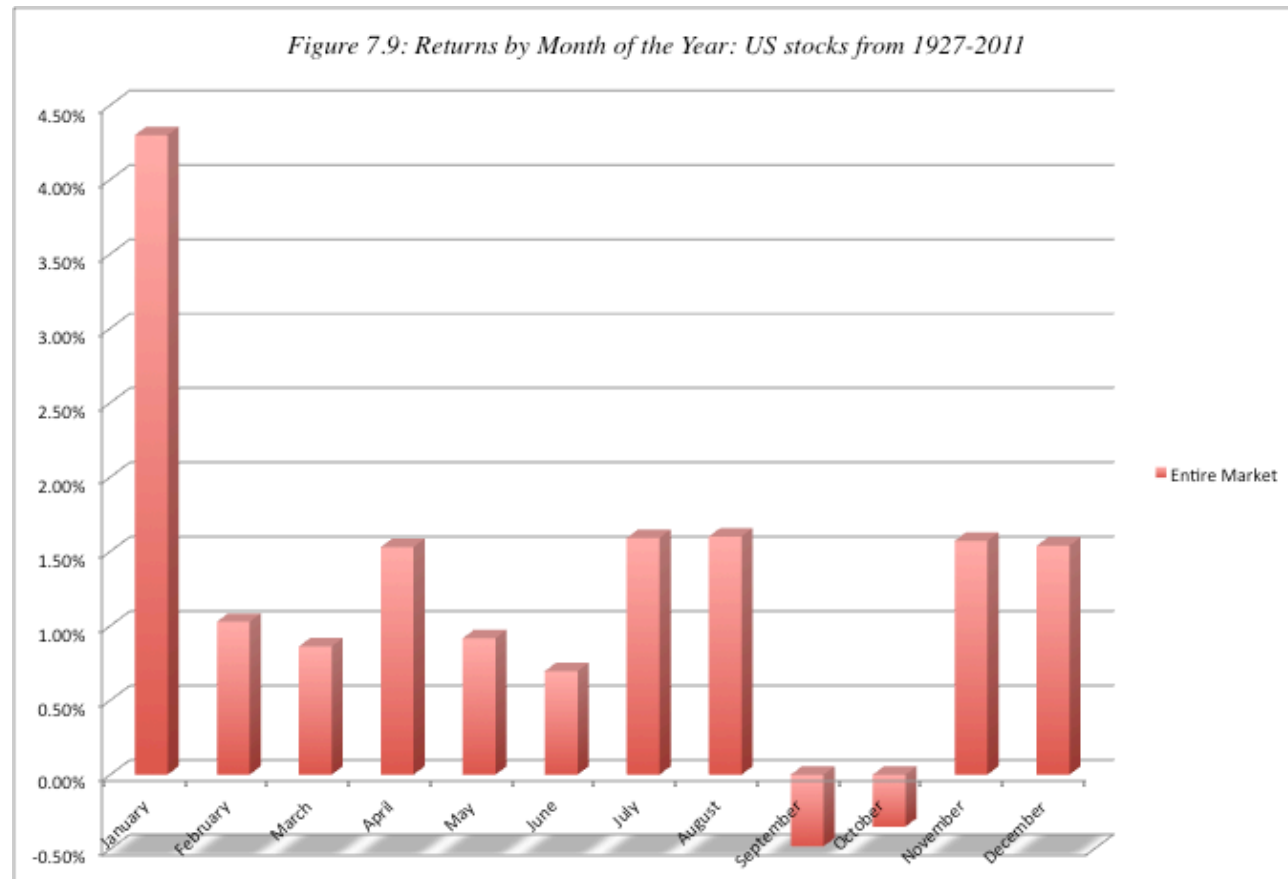
- Empirical studies indicate a variety of seasonal and temporal irregularities in stock prices. Among them are:
 - The January Effect: Stocks, on average, tend to do much better in January than in any other month of the year.
 - The Weekend Effect: Stocks, on average, seem to do much worse on Mondays than on any other day of the week.
 - The Mid-day Swoon: Stocks, on average, tend to do much worse in the middle of the trading day than at the beginning and end of the day.
- While these empirical irregularities provide for interesting conversation, **it is not clear that any of them can be exploited to earn excess returns.**

A. The January Effect

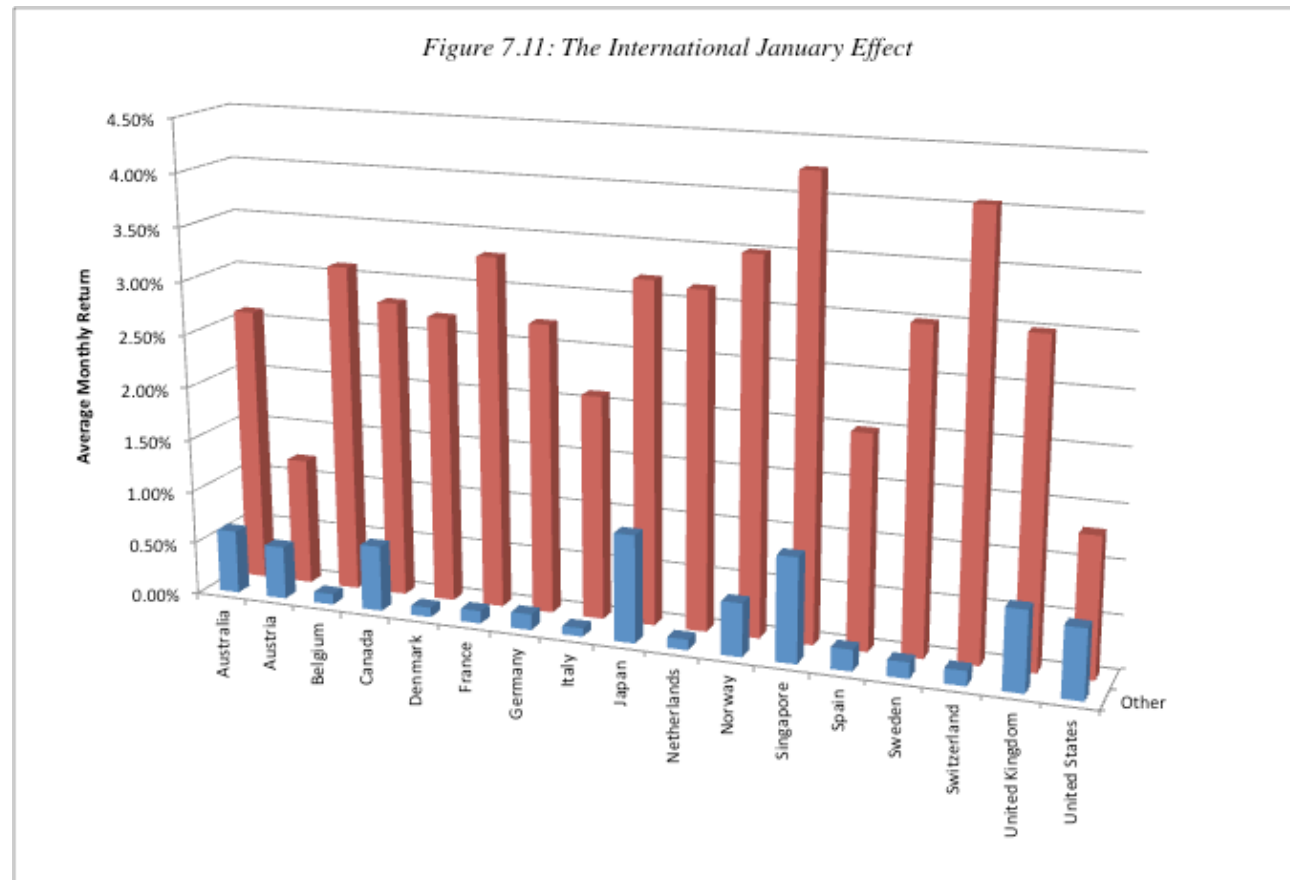
- Studies of returns in the United States and other major financial markets consistently reveal strong differences in return behavior across the months of the year.
- **Returns in January are significantly higher than returns in any other month of the year.** This phenomenon is called the year-end or January effect, and it can be traced to the first two weeks in January.
- The January effect is **much more accentuated for small firms** than for larger firms, and roughly half of the small firm premium, described in the prior section, is earned in the first two days of January.

A. The January Effect

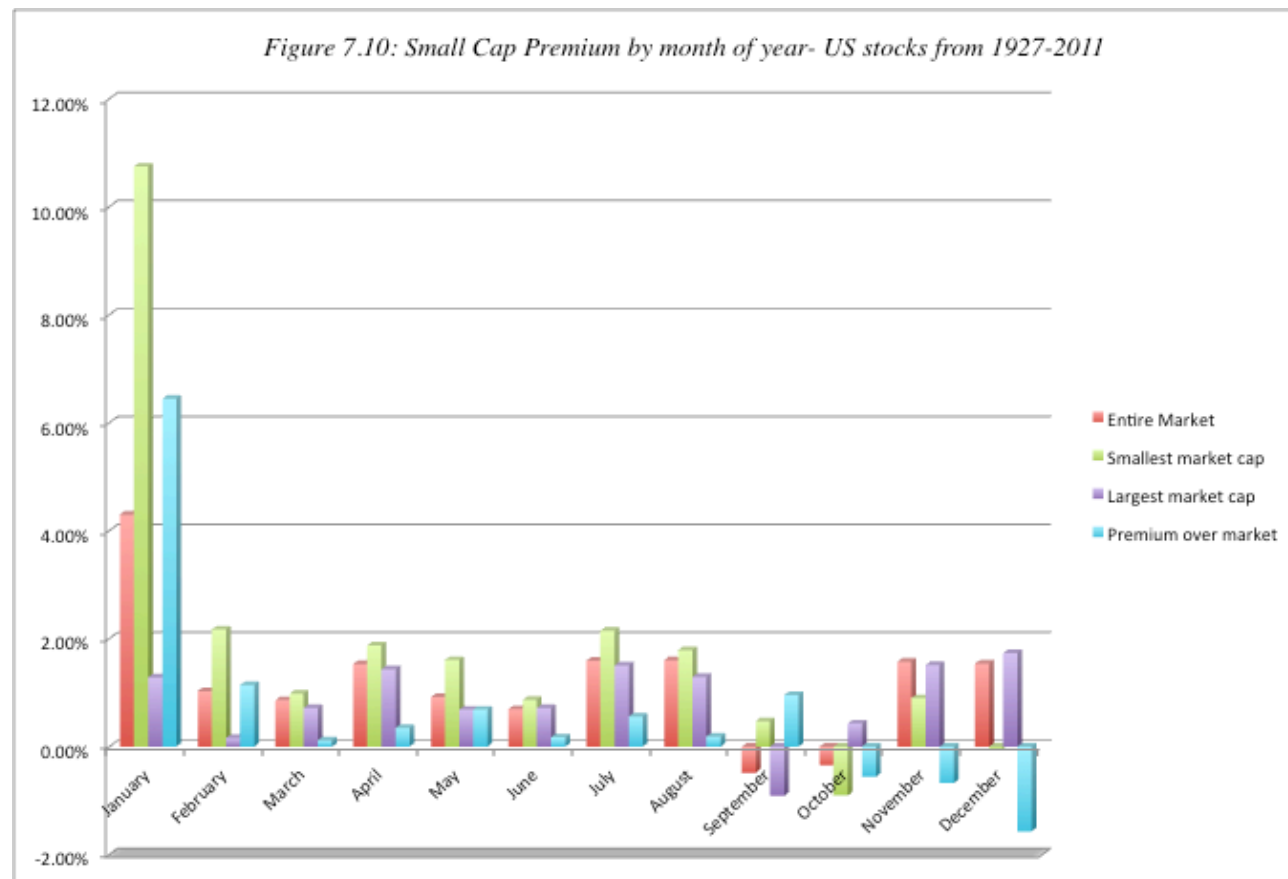
Stocks do better in January than any other month..



In every financial market...



But of the bulk of the return is in small caps...



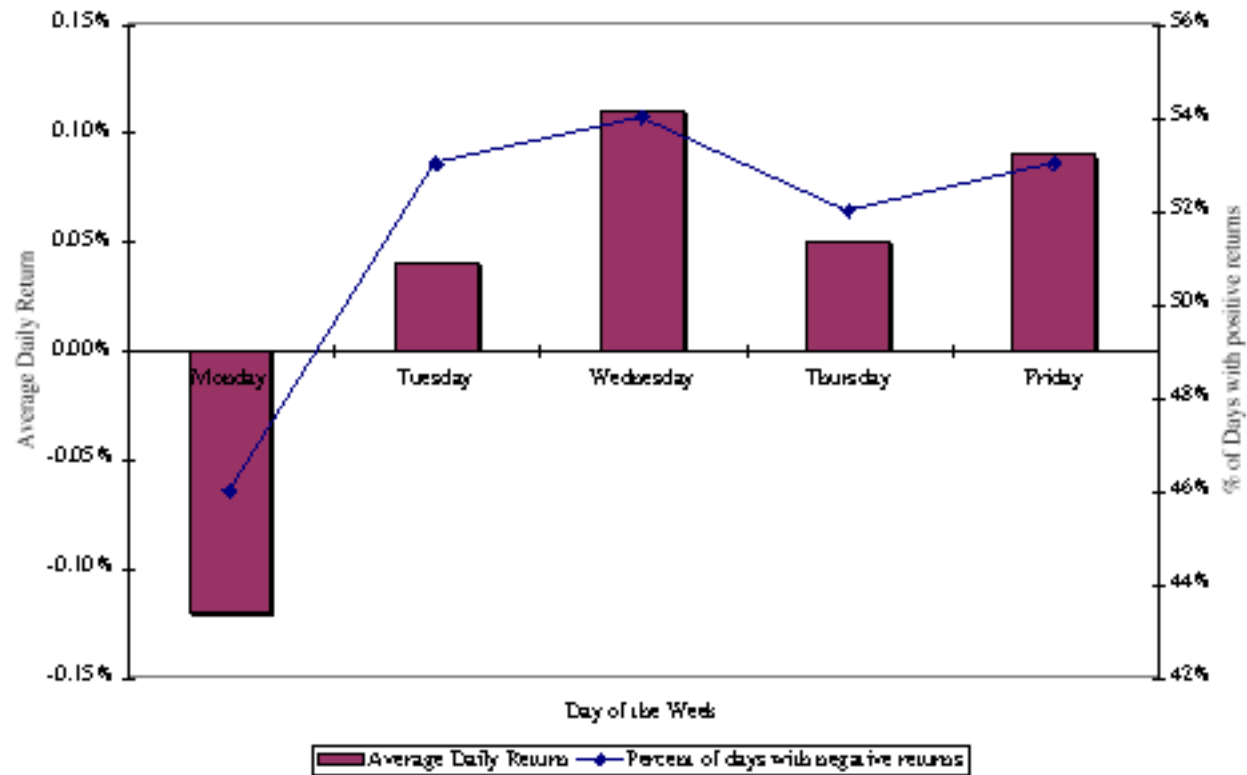
B. The Weekend Effect

- The weekend effect is another phenomenon that has **persisted over long periods** and over a number of international markets. It refers to the differences in returns between Mondays and other days of the week.
- Over the years, returns on Mondays have been consistently lower than returns on other days of the week.

B. The Weekend Effect

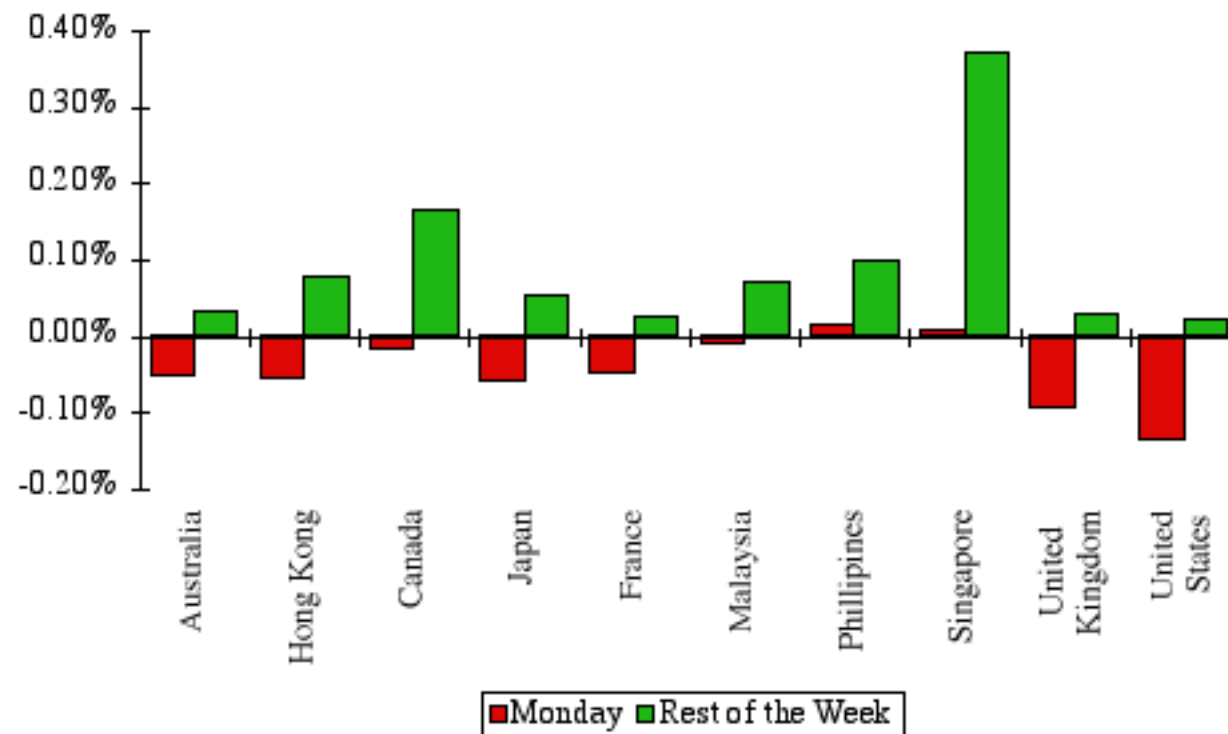
Monday's are awful for stocks

Figure 7.6: Returns by Day of the Week - 1927-2001



And again across markets...

Figure 7.7: Weekend Effect in International Markets



Foundations of Technical Analysis: What are the assumptions?

- (1) **Price is determined solely by the interaction of supply & demand**
- (2) **Supply and demand are governed by numerous factors both rational and irrational.** The market continually and automatically weighs all these factors. (A random walker would have no qualms about this assumption either. He would point out that any irrational factors are just as likely to be one side of the market as on the other.)
- (3) **Disregarding minor fluctuations in the market, stock prices tend to move in trends which persist for an appreciable length of time.** (Random walker would disagree with this statement. For any trend to persist there has to be some collective 'irrationality')
- (4) **Changes in trend are caused by shifts in demand and supply. These shifts no matter why they occur, can be detected sooner or later in the action of the market itself.** (In the financial economist's view the market (through the price) will instantaneously reflect any shifts in the demand and supply.

I. Markets overreact: The Contrarian Indicators

Basis: Research in experimental psychology suggests that people tend to overreact to unexpected and dramatic news events.

Empirical evidence: If markets overreact then

- (1) Extreme movements in stock prices will be followed by subsequent price movements in the opposite direction.
- (2) The more extreme the price adjustment, the greater will be the subsequent adjustment.

Technical indicators

1. Odd-lot trading: The odd-lot rule gives us an indication of what the man on the street thinks about the stock.
2. Mutual Fund Cash positions: Historically, the argument goes, mutual fund cash positions have been greatest at the bottom of a bear market and lowest at the peak of a bull market.
3. Investment Advisory opinion: This is the ratio of advisory services that are bearish

II. Shifts in demand and supply can be detected

The Lessons in Price Patterns

- Market breadth: This is a measure of the number of stocks in the market which have advanced relative to those that have declined. The broader the market, the stronger the demand.
- Support and resistance lines: Much maligned by value investors, support and resistance lines still have adherents. A stock that breaks through a resistance line is destined to go up, whereas one that breaks through the support line has bad days ahead of it.
- Moving averages: A moving average line smooths out fluctuations and enables the chartist to see trends in the stock price.
- Volume indicators: Some technical analysts believe that there is information about future price changes in trading volume shifts.

III. Market learn slowly: The Momentum Investors

Basis: The argument here is that markets learn slowly. Thus, investors who are a little quicker than the market in assimilating and understanding information will earn excess returns. In addition, if markets learn slowly, there will be price drifts and technical analysis can detect these drifts and take advantage of them.

The Evidence: There is evidence of price momentum over short and medium times intervals.

Momentum indicators:

- Relative Strength: The relative strength of a stock is the ratio of its current price to its average over a longer period (eg. six months).
- Trend Lines: You look past the day-to-day movements in stock prices at the underlying long-term trends. The simplest measure of trend is a trend line.

IV. Following the Smart Investors

- This approach is the flip side of the contrarian approach. Instead of assuming that investors, on average, are likely to be wrong, you assume that they are right.
- To make this assumption more palatable, you do not look at all investors but only at the smartest investors, who presumably know more than the rest of us.
- Indicators:
 - Specialists Short Sales: The assumption is that specialists have more information about future price movements than other investors. Consequently, when they sell short, they must know that the stock is overvalued.
 - Insider buying/selling: The ratio of insider buying to selling is often tracked for stocks with the idea that insiders who are buying must have positive information about a stock whereas insiders who are selling are likely to have negative information.

V. Markets are controlled by external forces: The Mystics

The Elliot Wave: Elliot's theory is that the market moves in waves of various sizes, from those encompassing only individual trades to those lasting centuries, perhaps longer. "By classifying these waves and counting the various classifications it is possible to determine the relative positions of the market at all times". "There can be no bull or bear markets of one, seven or nine waves, for example.

The Dow Theory:" The market is always considered as having three movements, all going at the same time. The first is the narrow movement (daily fluctuations) from day to day. The second is the short swing (secondary movements) running from two weeks to a month and the third is the main movement (primary trends) covering at least four years in its duration.

Determinants of Success at Technical Analysis

- Be aware: If you decide to use a charting pattern or technical indicator, you need to be aware of the investor behavior that gives rise to its success. You can modify or abandon the indicator if the underlying behavior changes.
- Back test: It is important that you back-test your indicator to ensure that it delivers the returns that are promised. In running these tests, you should pay particular attention to the volatility in performance over time and how sensitive the returns are to holding periods.
- Timely/Cheap trading: The excess returns on many of the strategies seem to depend upon timely trading. In other words, to succeed at some of these strategies, you may need to monitor prices continuously, looking for the patterns that would trigger trading.
- Goldilocks timing: Building on the theme of time horizons, success at charting can be very sensitive to how long you hold an investment.