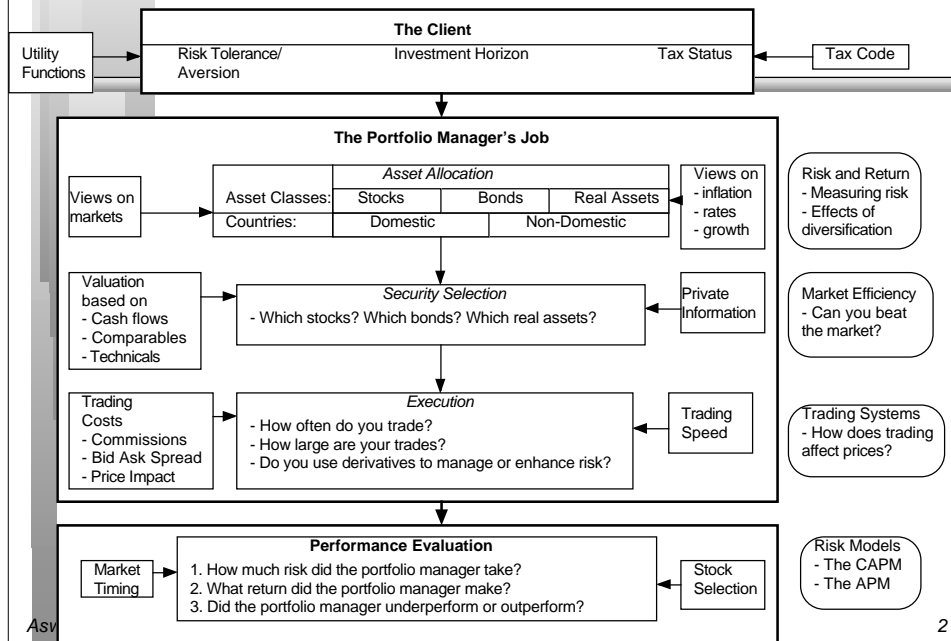


# Investment Philosophies: An Overview

Aswath Damodaran

## The Investment Process



## Understanding the Client

- There is no “one” perfect portfolio for every client. To create a portfolio that is right for an investor, we need to know:
  - The investor’s risk preferences
  - The investor’s time horizon
  - The investor’s tax status

## I. Investor Risk Preferences

- The trade off between Risk and Return
  - Most, if not all, investors are risk averse
  - To get them to take more risk, you have to offer higher expected returns
  - Conversely, if investors want higher expected returns, they have to be willing to take more risk.
- - Ways of evaluating risk
  - Most investors do not know have a quantitative measure of how much risk that they want to take
  - Traditional risk and return models tend to measure risk in terms of volatility or standard deviation
- Whether we measure risk in quantitative or qualitative terms, investors are risk averse.
  - The degree of risk aversion will vary across investors at any point in time, and for the same investor across time (as a function of his or her age, wealth, income and health)
- **Proposition 1: The more risk averse an investor, the less of his or her portfolio should be in risky assets (such as equities).**

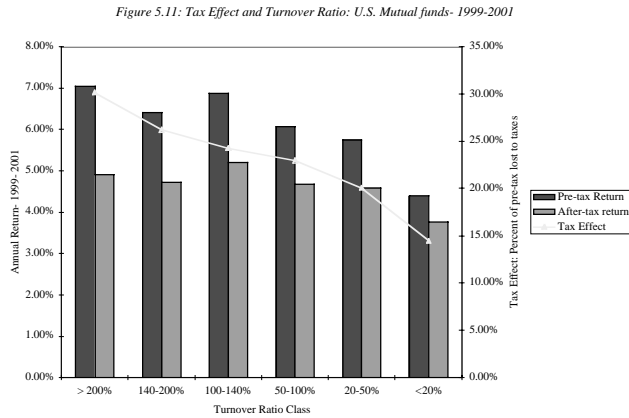
## II. Investor Time Horizon

- An investor's time horizon reflects
  - **personal characteristics:** Some investors have the patience needed to hold investments for long time periods and others do not.
  - **need for cash.** Investors with significant cash needs in the near term have shorter time horizons than those without such needs.
  - **Job security and income:** Other things remaining equal, the more secure you are about your income, the longer your time horizon will be.
- An investor's time horizon can have an influence on both the kinds of assets that investor will hold in his or her portfolio and the weights of those assets.

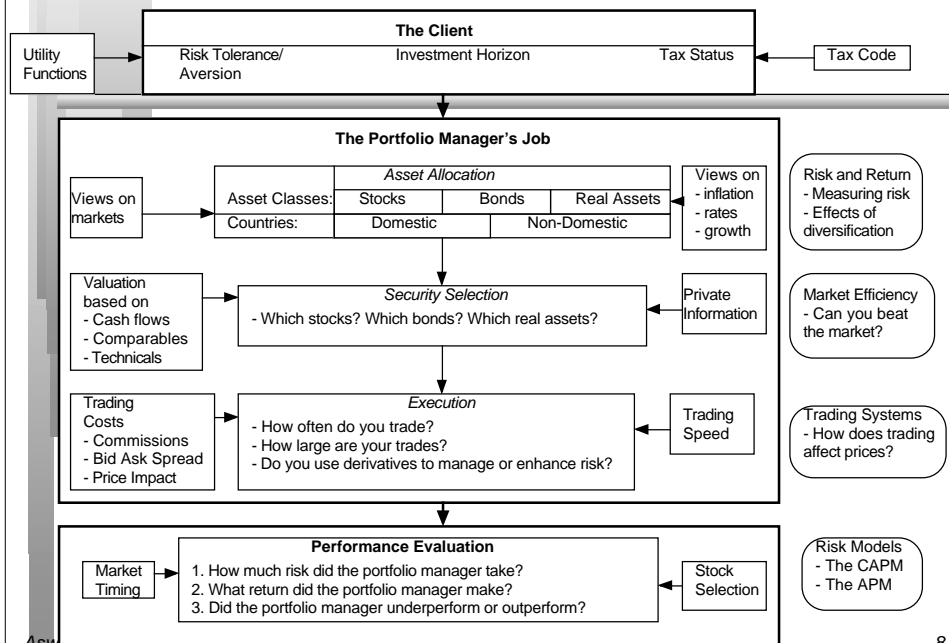
## III. Tax Status and Portfolio Composition

- Investors can spend only after-tax returns. Hence taxes do affect portfolio composition.
  - The portfolio that is right for an investor who pays no taxes might not be right for an investor who pays substantial taxes.
  - Moreover, the portfolio that is right for an investor on one portion of his portfolio (say, his tax-exempt pension fund) might not be right for another portion of his portfolio (such as his taxable savings)
- The effect of taxes on portfolio composition and returns is made more complicated by:
  - The different treatment of current income (dividends, coupons) and capital gains
  - The different tax rates on various portions of savings (pension versus non-pension)
  - Changing tax rates across time

# Turnover and Tax Drag



# The Investment Process



## Asset Allocation

- The first step in all portfolio management is the asset allocation decision.
- The asset allocation decision determines what proportions of the portfolio will be invested in different asset classes.
- Studies indicate that good asset allocation trumps good security selection when it comes to creating excess returns. One study indicates that 93% of the excess returns earned by portfolios can be attributed to asset allocation decisions and 7% to security selection.

## Approaches to Asset Allocation

- Asset allocation can be passive,
  - It can be based upon the mean-variance framework
  - It can be based upon simpler rules of diversification or market value based
- When asset allocation is determined by market views, it is active asset allocation.

## Passive Asset Allocation

- In passive asset allocation, the proportions of the various asset classes held in an investor's portfolio will be determined by the risk preferences of that particular investor. These proportions can be determined in one of two ways:
  - Statistical techniques can be employed to find that combination of assets that yields the highest return, given a certain risk level
  - The proportions can mirror the market values of the asset classes. Any deviation from these proportions will lead to a portfolio that is over or under weighted in some asset classes and thus not fully diversified.

## I. Efficient Portfolios

### Return Maximization

Maximize Expected Return

$$E(R_p) = \sum_{i=1}^{i=n} w_i E(R_i)$$

subject to  $\sigma_p^2 = \sum_{i=1}^{i=n} \sum_{j=1}^{j=n} w_i w_j \sigma_{ij} \leq \hat{\sigma}^2$   
 where,

$\sigma^2$  = Investor's desired level of variance

$E(R)$  = Investor's desired expected returns

### Risk Minimization

Minimize return variance

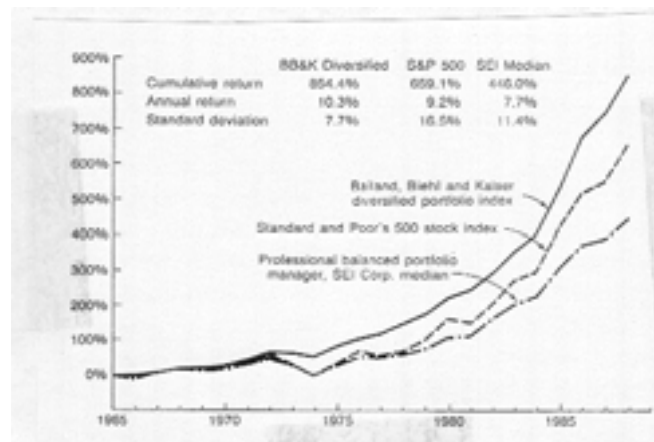
$$\sigma_p^2 = \sum_{i=1}^{i=n} \sum_{j=1}^{j=n} w_i w_j \sigma_{ij}$$

$$E(R_p) = \sum_{i=1}^{i=n} w_i E(R_i) = E(\hat{R})$$

## Limitations of this Approach

- This approach is heavily dependent upon two assumptions:
  - That investors can provide their risk preferences in terms of variance
  - That the variance-covariance matrix between asset classes remains stable over time.
- If correlations across asset classes and covariances are unstable, the output from the Markowitz portfolio approach is useless.

## II. Just Diversify



## The Optimally Diversified Portfolio

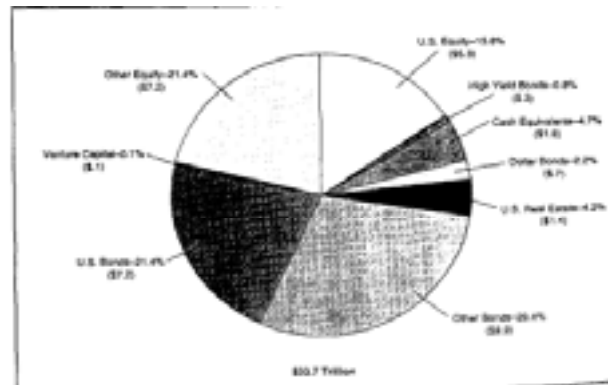


Figure 26.1  
Scott Investment Capital Market Portfolio, Year-end 1992\*  
\*Portfolio figures presented in billions of U.S. dollars.

## Active Asset Allocation: The Market Timers

- In contrast to passive asset allocation, where the portfolio's composition is determined primarily by the risk characteristics of the investor, the portfolio composition in active asset allocation approaches will deviate from the "passive" composition, based upon market views.
- In particular, those markets viewed as under valued will be over weighted and those markets viewed as over valued will be under weighted. At the limit, no assets might be allocated at all to those asset classes that are the most over valued.
  - *Assumption:* You can forecast market movements
  - *Advantage:* If you can forecast market movements, the rewards are immense.
  - *Disadvantage:* If you err, the costs can be significant.



## Why Market Timing is so alluring and so difficult...

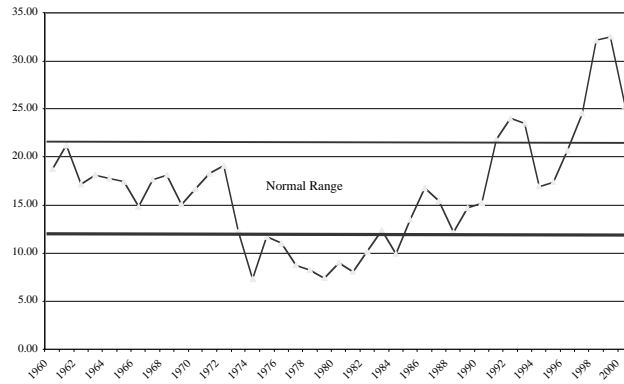
- Over time, asset allocation decisions dominate security selection in explaining portfolio returns. A study by Brinson, Hood and Beebower found that 93% of differences in returns across portfolios could be explained by asset allocation.
- On the other hand, you have to be right about 7 times out of 10 for market timing to pay off..

## Market Timing Approaches

- Non-financial indicators
  - Spurious Indicators: Example: If Super Bowl winner is from the old NFC, stock market rises (22 out of 25 times between 1967 and 2001)
  - Feel Good Indicators: The Hemline Index
  - Hype Indicators: Cocktail party chatter (Time elapsed at party before talk turns to stocks, average age of chatterers, fad component)
- Technical Indicators
  - Price Indicators: Charting patterns and indicators
  - Volume Indicators
  - Volatility Indicators
- Reversion to the mean (Normal ranges)
- Fundamentals

## A Normal Range for PE ratios

Figure 12.2: PE Ratio for S&P 500: 1960-2001



## Or Interest rates..

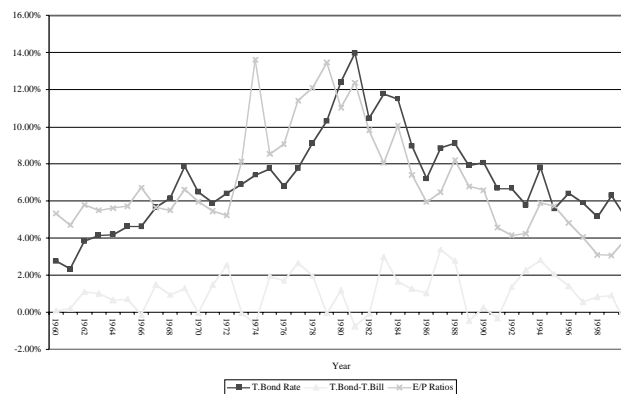
<i>1-year Corporate Bond Rate</i>	<i>Slope of Yield Curve</i>		
	<i>Positive</i>	<i>Flat</i>	<i>Negative</i>
<i>Above 4.40%</i>	0	0	20
<i>1900-70 3.25% - 4.40%</i>	10	10	5
<i>Below 3.25%</i>	26	0	0
<i>1971-2000 Above 8.00%</i>	4	1	3
<i>Below 8.00%</i>	15	6	1

## Fundamentals

- Fundamental Indicators
  - If short term rates are low, buy stocks...
  - If long term rates are low, buy stocks
  - If economic growth is high, buy stocks...
- Intrinsic value models
  - Value the market using a discounted cash flow model and compare to actual level.,
- Relative value models
  - Look at how market is priced, given fundamentals and given history.

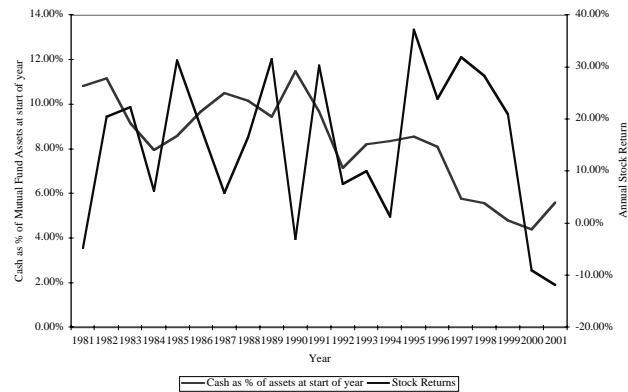
## The Relative Value Judgment...

Figure 12.5: S&P 500- Earnings Yield, T.Bond rate and Yield spread



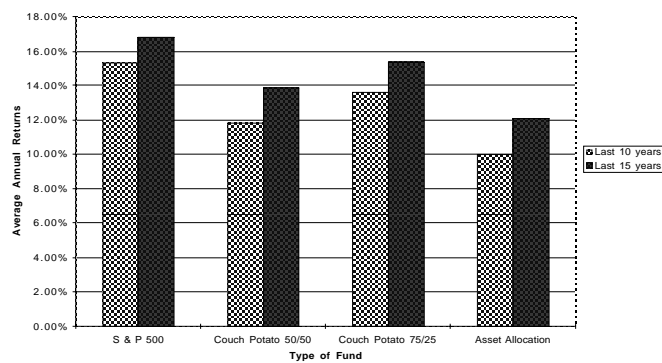
## How well does market timing work? 1. Mutual Funds

Figure 12.6: Mutual Fund Cash Holdings and Stock Returns

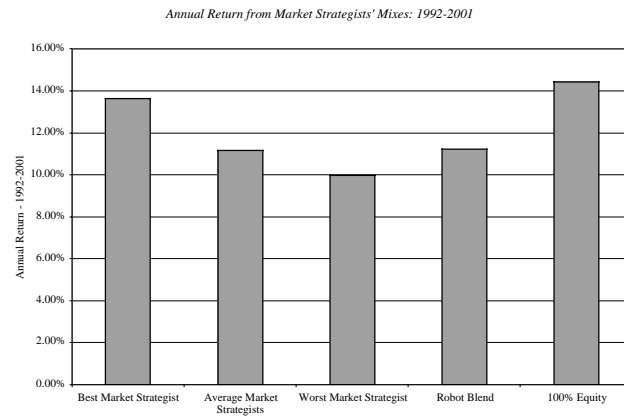


## 2. Tactical Asset Allocation Funds

Performance of Unsophisticated Strategies versus Asset Allocation Funds

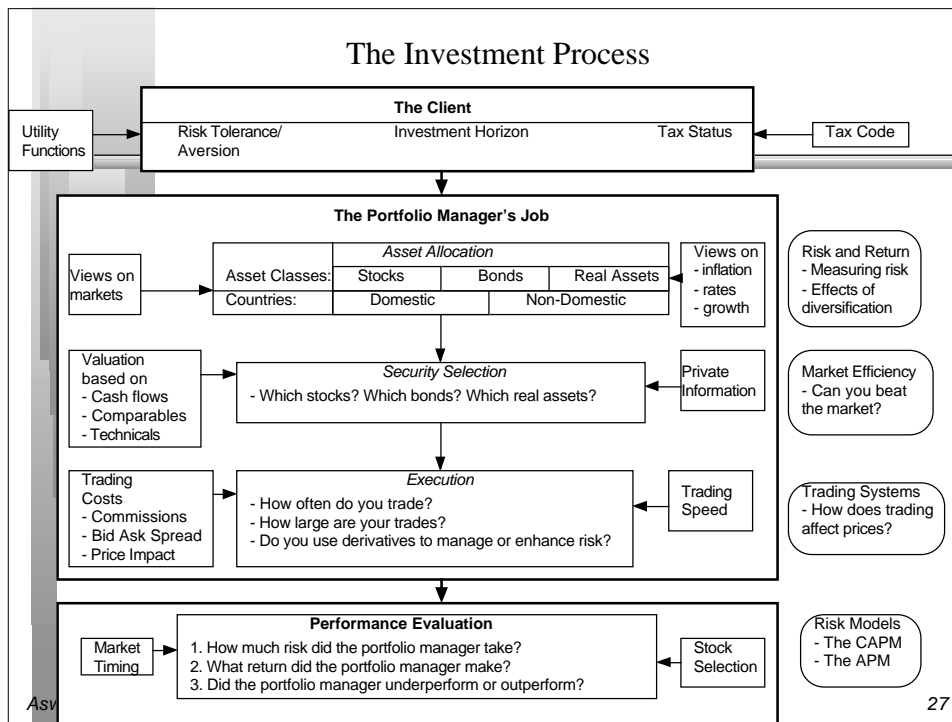


### 3. Market Strategists..



### Summing Up on Market Timing

- A successful market timer will earn far higher returns than a successful security selector.
- Everyone wants to be a good market timer.
- Consequently, becoming a good market timer is not only difficult to do, it is even more difficult to sustain.



## Security Selection

- Security selection refers to the process by which assets are picked within each asset class, once the proportions for each asset class have been defined.
- Broadly speaking, there are three different approaches to security selection.
  - The first to focus on fundamentals and decide whether a stock is under or overvalued relative to these fundamentals.
  - The second is to focus on charts and technical indicators to decide whether a stock is on the verge of changing direction.
  - The third is to trade ahead of or on information releases that will affect the value of the firm.

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## Active Security Selection

- The objective is to use the skills of your security analysts to select stocks that outperform the market, and create a portfolio.
  - (1) *Technical Analysis*, where charts reveal direction of future movements
  - (2) *Fundamental Analysis*, where public information is used to pick undervalued stocks
  - (3) *Private information*, which enables the analyst to pinpoint mis-valued securities.

*Assumption:* Your stock selection skills help you make choices which, on average, beat the market.

*Inputs:* The model will vary with the security selection model used.

*Advantage:* If there are systematic errors in market valuation, & you can spot these errors, the portfolio will outperform the market.

*Disadvantage:* If it does not pay off, you have expended time and resources to earn what you could have made with random selection.

## Active investors come in all forms...

- Technical investors can be
  - momentum investors**, who buy on strength and sell on weakness
  - reversal investors**, who do the exact opposite
- Fundamental investors can be
  - value investors**, who buy low PE or low PBV stocks which trade at less than the value of assets in place
  - growth investors**, who buy high PE and high PBV stocks which trade at less than the value of future growth
- Information traders can believe
  - that **markets learn slowly** and buy on good news and sell on bad news
  - that **markets overreact** and do the exact opposite
- They cannot all be right in the same period and no one approach can be right in all periods.

## Value Investing

- *The Conventional Definition:* A value investor is one who invests in low price-book value or low price-earnings ratios stocks.
- *The Generic Definition:* A value investor is one who pays a price which is less than the value of the assets in place of a firm.

## I. The Passive Screener

- This approach to value investing can be traced back to Ben Graham and his screens to find undervalued stocks.
- In recent years, these screens have been refined and extended. The following section summarizes the empirical evidence that backs up each of these screens.

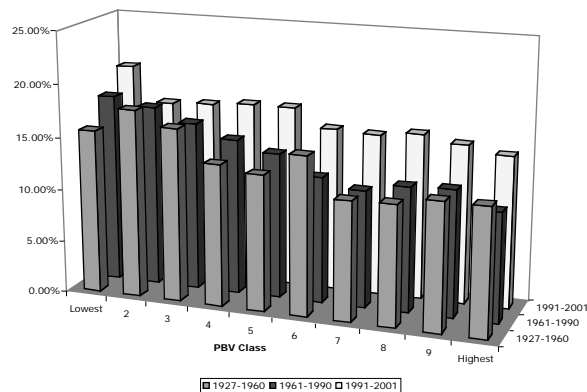


## Ben Graham' Screens

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.

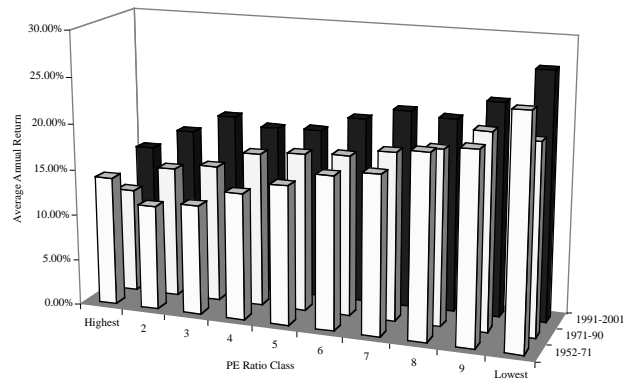
## Low Price/BV Ratios and Excess Returns

Figure 8.2: PBV Classes and Returns - 1927-2001



## The Low PE Effect

Figure 8.3: Returns on PE Ratio Classes - 1952 - 2001

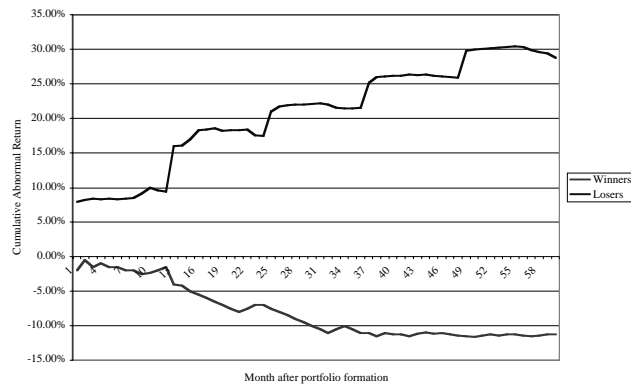


## II. Contrarian Value Investing: Buying the Losers

- 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.

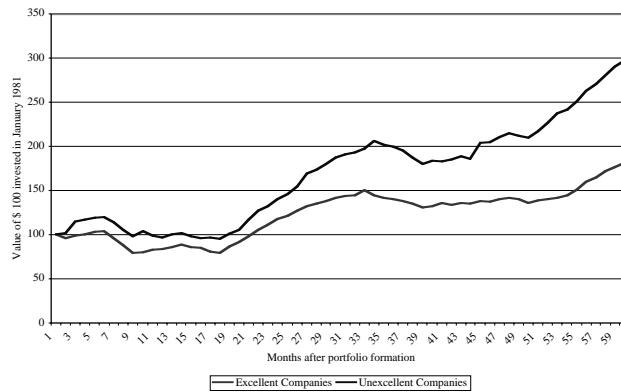
## Excess Returns for Winner and Loser Portfolios

Figure 8.5: Cumulative Abnormal Returns - Winners versus Losers



## Good Companies are not necessarily Good Investments

Figure 8.7: Excellent versus Unexcellent Companies



### III. Activist Value Investing

- An activist value investor having acquired a stake in an “undervalued” company which might also be “badly” managed then pushes the management to adopt those changes which will unlock this value. For instance,
- If the value of the firm is less than its component parts:
  - push for break up of the firm, spin offs, split offs etc.
- If the firm is being too conservative in its use of debt:
  - push for higher leverage and recapitalization
- If the firm is accumulating too much cash:
  - push for higher dividends, stock repurchases ..
- If the firm is being badly managed:
  - push for a change in management or to be acquired
- If there are gains from a merger or acquisition
  - push for the merger or acquisition, even if it is hostile

### Determinants of Success at Activist Investing

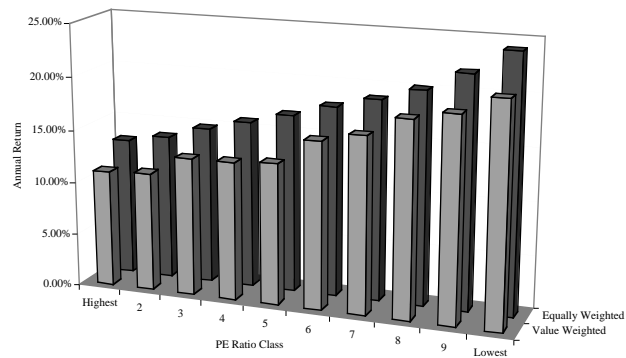
1. **Have lots of capital:** Since this strategy requires that you be able to put pressure on incumbent management, you have to be able to take significant stakes in the companies.
2. **Know your company well:** Since this strategy is going to lead a smaller portfolio, you need to know much more about 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.

## Growth Investing

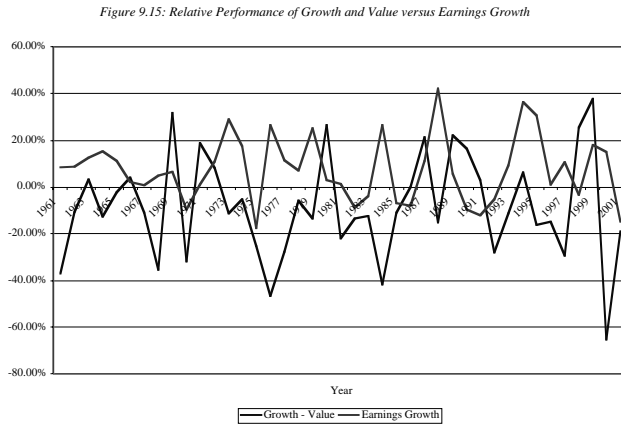
- *The Classic Definition:* Investing in companies with high PE ratios.
- *The Correct Definition:* Investing in companies where the price paid for growth < Value of that growth.

## Is growth investing doomed?

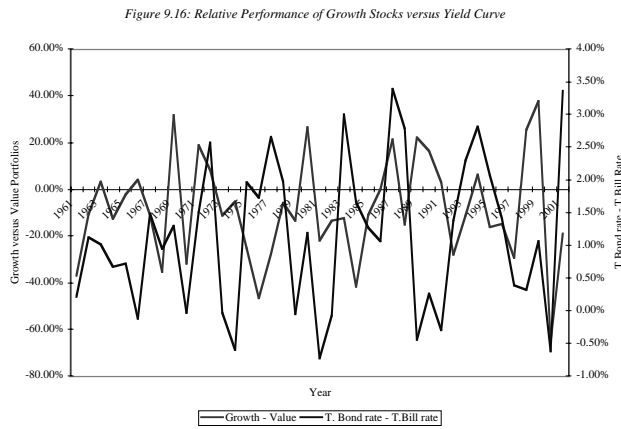
Figure 9.14: PE Ratios and Stock Returns - 1952 -2001



But ..

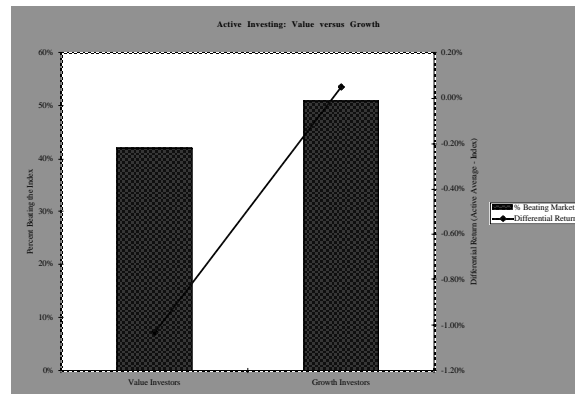


And ...



## Furthermore..

- And active growth investors seem to beat growth indices more often than value investors beat value indices.

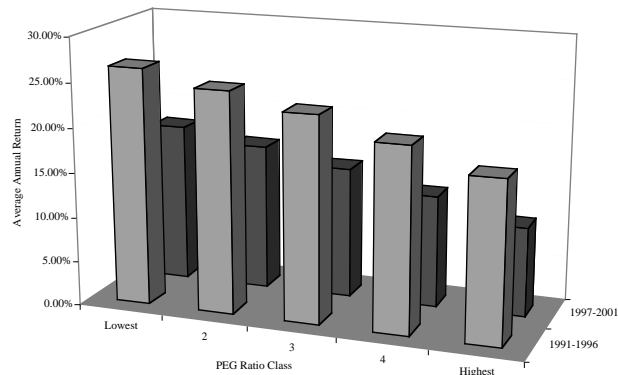


## Growth Investing Strategies

- Passive Growth Investing Strategies focus on investing in stocks that pass a specific screen. Classic passive growth screens include:
  - $PE < \text{Expected Growth Rate}$
  - Low PEG ratio stocks ( $PEG \text{ ratio} = PE / \text{Expected Growth}$ )
  - Earnings Momentum Investing (Earnings Momentum: Increasing earnings growth)
  - Earnings Revisions Investing (Earnings Revision: Earnings estimates revised upwards by analysts)
  - Small Cap Investing
- Active growth investing strategies involve taking larger positions and playing more of a role in your investments. Examples of such strategies would include:
  - Venture capital investing
  - Private Equity Investing

## I. Passive Growth Strategies

Figure 9.17: PEG Ratios and Annual Returns



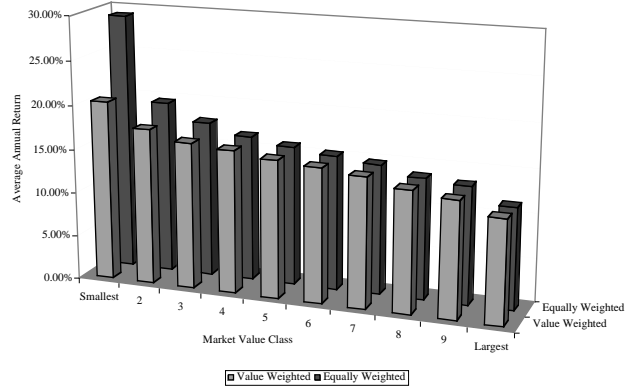
## II. Small Cap Investing

- One of the most widely used passive growth strategies is the strategy of investing in small-cap companies. There is substantial empirical evidence backing this strategy, though it is debatable whether the additional returns earned by this strategy are really excess returns.
- Studies have consistently found that **smaller firms** (in terms of market value of equity) **earn higher returns** than larger firms of equivalent risk, where risk is defined in terms of the market beta. In one of the earlier studies, returns for stocks in ten market value classes, for the period from 1927 to 1983, were presented.



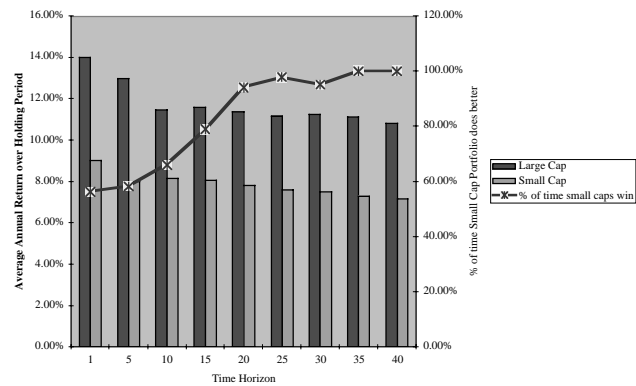
## The Small Firm Effect

Figure 9.1: Annual Returns by Market Value Class - 1927 - 2001



## A Note of caution...

Figure 9.7: Time Horizon and the Small Firm Premium

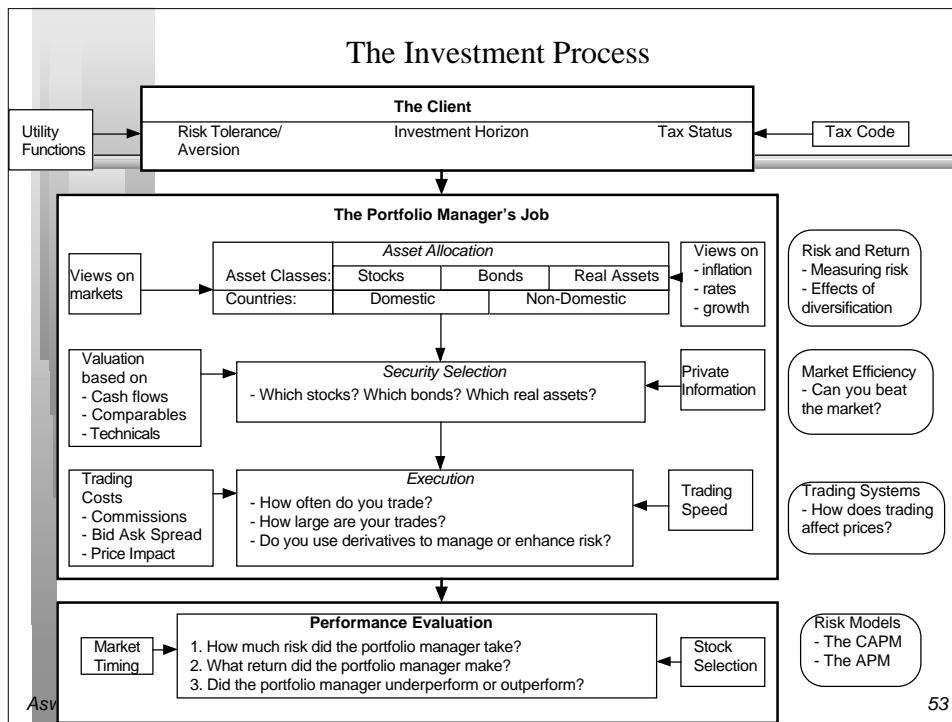


### III. Activist Growth Investing..

<i>Fund Type</i>	<i>1 Yr</i>	<i>3 Yr</i>	<i>5 Yr</i>	<i>10 Yr</i>	<i>20 Yr</i>
Early/Seed Venture Capital	-36.3	81	53.9	33	21.5
Balanced Venture Capital	-30.9	45.9	33.2	24	16.2
Later Stage Venture Capital	-25.9	27.8	22.2	24.5	17
All Venture Capital	-32.4	53.9	37.9	27.4	18.2
All Buyouts	-16.1	2.9	8.1	12.7	15.6
Mezzanine	3.9	10	10.1	11.8	11.3
All Private Equity	-21.4	16.5	17.9	18.8	16.9

### Are there great stock pickers?

<i>Firm</i>	<i>Latest qtr.</i>	<i>One- year</i>	<i>Five- year</i>
Credit Suisse F.B.	-3.60%	36.90%	253.10%
Prudential Sec.	-12.3	36.2	216.1
U.S. Bancorp Piper J.	-1.4	28.5	208.8
Merrill Lynch	-1.9	28.1	162.2
Goldman Sachs	0	27.4	220.3
Lehman Bros.	-11.7	18.3	262.4
J.P. Morgan Sec.	2.9	11.6	N.A.
Bear Stearns	-6.4	11.4	184.9
A.G. Edwards	-1.7	9.8	194.8
Morgan Stanley D.W.	-2.8	9.5	148.8
Raymond James	-0.4	6.9	164.4
Edward Jones	-0.5	4.8	204.3
First Union Sec.	-12.3	1.8	N.A.
PaineWebber	-13.2	-3.2	153.6
Salomon S.B.	-1.8	-17	101.7
<b>S&amp;P 500 Index</b>	<b>-2.70%</b>	<b>7.20%</b>	<b>190.80%</b>

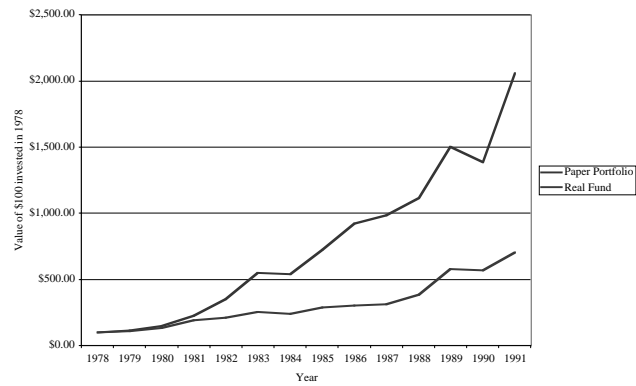


## Trading and Execution Costs

- The cost of trading includes three components:
  - the brokerage cost, which tends to decrease as the size of the trade increases
  - the bid-ask spread, which generally does not vary with the size of the trade but is higher for less liquid stocks
  - the price impact, which generally increases as the size of the trade increases and as the stock becomes less liquid.

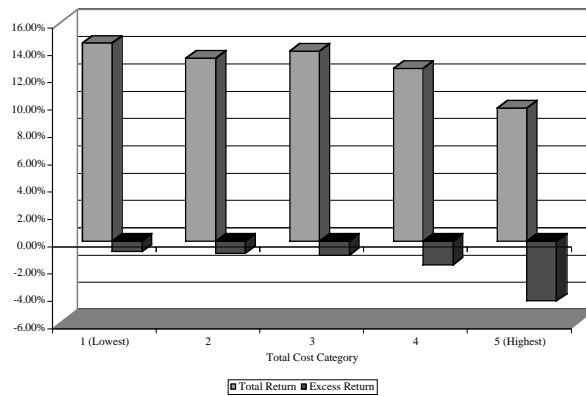
## Many a slip...

Figure 5.1: Value Line - Paper Portfolio versus Real Fund



## Trading Costs and Performance...

Figure 13.16: Trading Costs and Returns: Mutual Funds



## The Trade Off on Trading

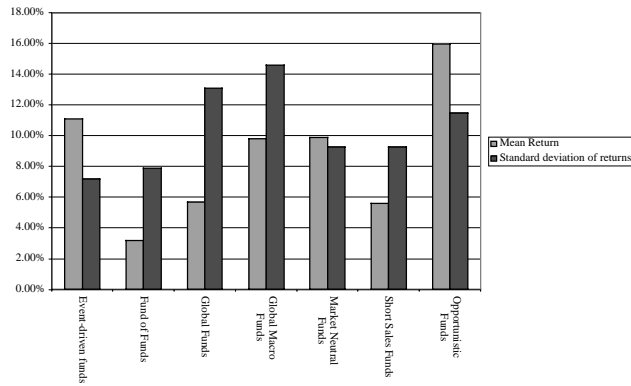
- There are two components to trading and execution - the cost of execution (trading) and the speed of execution.
- Generally speaking, the tradeoff is between faster execution and lower costs.
- For some active strategies (especially those based on information) speed is of the essence.  
Maximize: Speed of Execution  
Subject to: Cost of execution < Excess returns from strategy
- For other active strategies (such as those based on long term investing) the cost might be of the essence.  
Minimize: Cost of Execution  
Subject to: Speed of execution < Specified time period.
- The larger the fund, the more significant this trading cost/speed tradeoff becomes.

## Trading-based Investment Strategies

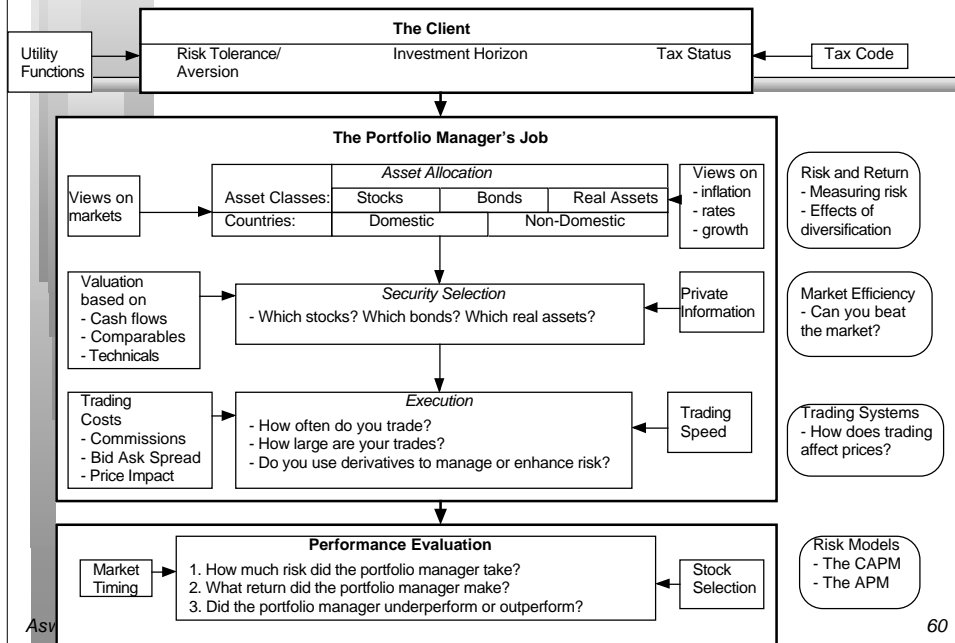
- An arbitrage-based investment strategy is based upon buying an asset (at a market price) and selling an equivalent or the same asset at a higher price.
- A true arbitrage-based strategy is riskfree and hence can be financed entirely with debt. Thus, it is a strategy where an investor can invest no money, take no risk and end up with a pure profit.
- Most real-world arbitrage strategies (such as those adopted by hedge funds) have some residual risk and require some investment.
- **Assumption:** Market prices are sometimes wrong, reflecting market frictions.
- **Basis for strategy:** An investor who has the capacity to spot this mispricing (through models, for instance) and has the resources to take advantage of this mispricing can earn excess returns.

# Are hedge funds that much better?

Figure 11.10: Hedge Funds: Average Returns and Standard Deviations - 1989-1995



# The Investment Process



## Performance Evaluation: Time to pay the piper!

### *Who should measure performance?*

- Performance measurement has to be done either by the client or by an objective third party on the basis of agreed upon criteria. It should not be done by the portfolio manager.

### *How often should performance be measured?*

- The frequency of portfolio evaluation should be a function of both the time horizon of the client and the investment philosophy of the portfolio manager. However, portfolio measurement and reporting of value to clients should be done on a frequent basis.

### *How should performance be measured?*

Against a market index (with no risk adjustment)

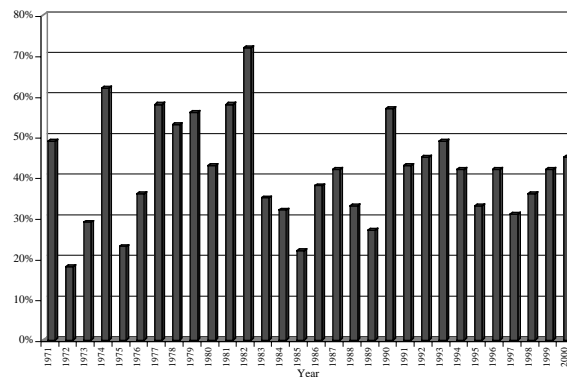
Against other portfolio managers, with similar objective functions

Against a risk-adjusted return, which reflects both the risk of the portfolio and market performance.

Based upon Tracking Error against a benchmark index

## I. Against a Market Index

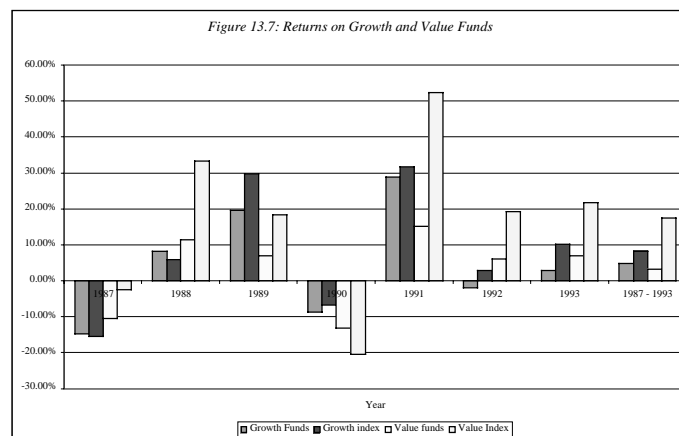
Figure 13.5: Percent of Money Managers who beat the S&P 500



## II. Against Other Portfolio Managers

- In some cases, portfolio managers are measured against other portfolio managers who have similar objective functions. Thus, a growth fund manager may be measured against all growth fund managers.
- The implicit assumption in this approach is that portfolio managers with the same objective function have the same exposure to risk.

## Value and Growth Funds...



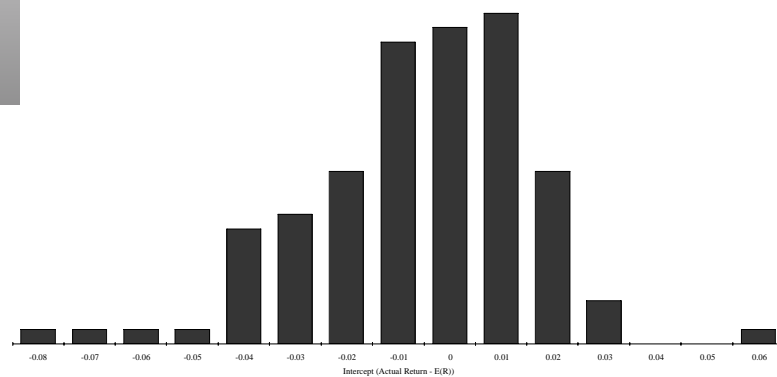


### III. Risk-Adjusted Returns

- The fairest way of measuring performance is to compare the actual returns earned by a portfolio against an expected return, based upon the risk of the portfolio and the performance of the market during the period.
- All risk and return models in finance take the following form:  
Expected return = Riskfree Rate + Risk Premium  
Risk Premium: Increasing function of the risk of the portfolio
- The actual returns are compared to the expected returns to arrive at a measure of risk-adjusted performance:  
Excess Return = Actual Return - Expected Returns
- The limitation of this approach is that there are no perfect (or even good risk and return models). Thus, the excess return on a portfolio may be a real excess return or just the result of a poorly specified model.

### The Performance of Mutual Funds..

Figure 13.3: Mutual Fund Performance: 1955-64 - The Jensen Study

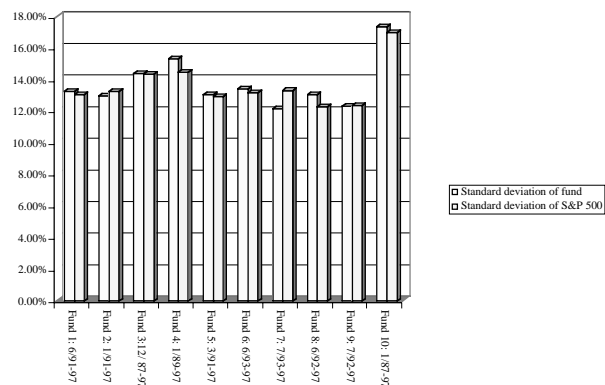


## IV. Tracking Error as a Measure of Risk

- Tracking error measures the difference between a portfolio's return and its benchmark index. Thus portfolios that deliver higher returns than the benchmark but have higher tracking error are considered riskier.
- Tracking error is a way of ensuring that a portfolio stays within the same risk level as the benchmark index.
- It is also a way in which the “active” in active money management can be constrained.

## Enhanced Index Funds... Oxymoron?

Figure 13.21: Enhanced Index funds: Standard deviation vs. S&P 500



## Finding an Investment Philosophy

	<i>Momentum</i>	<i>Contrarian</i>	<i>Opportunistic</i>
Short term (days to a few weeks)	<ul style="list-style-type: none"> <li>• <b>Technical momentum indicators</b> – Buy stocks based upon trend lines and high trading volume.</li> <li>• <b>Information trading</b>: Buying after positive news (earnings and dividend announcements, acquisition announcements)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Technical contrarian indicators</b> – mutual fund holdings, short interest. These can be for individual stocks or for overall market.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Pure arbitrage in derivatives and fixed income markets.</b></li> <li>• <b>Technical demand indicators</b> – Patterns in prices such as head and shoulders.</li> </ul>
Medium term (few months to a couple of years)	<ul style="list-style-type: none"> <li>• <b>Relative strength</b>: Buy stocks that have gone up in the last few months.</li> <li>• <b>Information trading</b>: Buy small cap stocks with substantial insider buying.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Market timing</b>, based upon normal PE or normal range of interest rates.</li> <li>• <b>Information trading</b>: Buying after bad news (buying a week after bad earnings reports and holding for a few months)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Near arbitrage opportunities</b>: Buying discounted closed end funds</li> <li>• <b>Speculative arbitrage opportunities</b>: Buying paired stocks and merger arbitrage.</li> </ul>
Long Term (several years)	<ul style="list-style-type: none"> <li>• <b>Passive growth investing</b>: Buying stocks where growth trades at a reasonable price (PEG ratios).</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Passive value investing</b>: Buy stocks with low PE, PB V or PS ratios.</li> <li>• <b>Contrarian value investing</b>: Buying losers or stocks with lots of bad news.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Active growth investing</b>: Take stakes in small, growth companies (private equity and venture capital investing)</li> <li>• <b>Activist value investing</b>: Buy stocks in poorly managed companies and push for change.</li> </ul>

## The Right Investment Philosophy

- **Single Best Strategy**: You can choose the one strategy that best suits you. Thus, if you are a long-term investor who believes that markets overreact, you may adopt a passive value investing strategy.
- **Combination of strategies**: You can adopt a combination of strategies to maximize your returns. In creating this combined strategy, you should keep in mind the following caveats:
  - You should not mix strategies that make contradictory assumptions about market behavior over the same periods. Thus, a strategy of buying on relative strength would not be compatible with a strategy of buying stocks after very negative earnings announcements. The first strategy is based upon the assumption that markets learn slowly whereas the latter is conditioned on market overreaction.
  - When you mix strategies, you should separate the dominant strategy from the secondary strategies. Thus, if you have to make choices in terms of investments, you know which strategy will dominate.

## In closing...

- Choosing an investment philosophy is at the heart of successful investing. To make the choice, though, you need to look within before you look outside. The best strategy for you is one that matches both your personality and your needs.
- Your choice of philosophy will also be affected by what you believe about markets and investors and how they work (or do not). Since your beliefs are likely to be affected by your experiences, they will evolve over time and your investment strategies have to follow suit.