Investing for grown ups?
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.
If you are a value investor, you make your investment judgments, based upon the value of assets in place and consider growth assets to be speculative and inherently an unreliable basis for investing. Put bluntly, if you are a value investor, you want to buy a business only if it trades at less than the value of the assets in place and view growth, if it happens, as icing on the cake.
The Different Faces of Value Investing

- **Passive Screeners**: Following in the Ben Graham tradition, you screen for stocks that have characteristics that you believe identify under valued stocks. You are hoping to find market mistakes through the screens.

- **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. You are implicitly assuming that markets over react.

- **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 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

Figure 8.1: Value of $100 invested in 1988: Berkshire Hathaway vs S&P 500
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

Figure 2: Berkshire Hathaway: Price to Book from 1998 to 2010
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

- A low price book value ratio has been considered a reliable indicator of undervaluation in firms.
- The empirical evidence suggests that over long time periods, low price-book values stocks have outperformed high price-book value stocks and the overall market.
Low Price/BV Ratios and Excess Returns

Figure 3: PBV Classes and Returns - 1927-2010
Evidence from International Markets

*Premium earned by low price to book stocks over high price to book stocks*
Caveat Emptor on P/BV ratios

- **A risky proxy?** Fama and French point out that low price-book value ratios may operate as a measure of risk, since firms with prices well below book value are more likely to be in trouble and go out of business. Investors therefore have to evaluate for themselves whether the additional returns made by such firms justifies the additional risk taken on by investing in them.

- **Low quality returns/growth:** The price to book ratio for a stable growth firm can be written as a function of its ROE, growth rate and cost of equity:

\[
\frac{(\text{Return on Equity} - \text{Expected Growth Rate})}{(\text{Return on Equity} - \text{Cost of Equity})}
\]

Companies that are expected to earn low returns on equity will trade at low price to book ratios. In fact, if you expect the ROE < Cost of equity, the stock should trade at below book value of equity.
2. Price/Earnings Ratio Screens

- Investors have long argued that stocks with low price earnings ratios are more likely to be undervalued and earn excess returns. For instance, this is one of Ben Graham’s primary screens.
- Studies which have looked at the relationship between PE ratios and excess returns confirm these priors.
The Low PE Effect

Figure 4: Returns on PE Ratio Classes - 1952 - 2010
More On the PE Ratio Effect

- Firms in the lowest PE ratio class earned an average return substantially higher than firms in the highest PE ratio class in every sub-period.
- The excess returns earned by low PE ratio stocks also persist in other international markets.

<table>
<thead>
<tr>
<th>Country</th>
<th>Annual Premium earned by lowest P/E Stocks (bottom quintile) over the market</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>3.03%</td>
</tr>
<tr>
<td>France</td>
<td>6.40%</td>
</tr>
<tr>
<td>Germany</td>
<td>1.06%</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>6.60%</td>
</tr>
<tr>
<td>Italy</td>
<td>14.16%</td>
</tr>
<tr>
<td>Japan</td>
<td>7.30%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>9.02%</td>
</tr>
<tr>
<td>U.K.</td>
<td>2.40%</td>
</tr>
</tbody>
</table>
What can go wrong?

1. *Companies with high-risk earnings*: The excess returns earned by low price earnings ratio stocks can be explained using a variation of the argument used for small stocks, i.e., that the risk of low PE ratios stocks is understated in the CAPM. A related explanation, especially in the aftermath of the accounting scandals of recent years, is that accounting earnings is susceptible to manipulation.

2. *Tax Costs*: A second possible explanation that can be given for this phenomenon, which is consistent with an efficient market, is that low PE ratio stocks generally have large dividend yields, which would have created a larger tax burden for investors since dividends were taxed at higher rates during much of this period.

3. *Low Growth*: A third possibility is that the price earnings ratio is low because the market expects future growth in earnings to be low or even negative. Many low PE ratio companies are in mature businesses where the potential for growth is minimal.
3. Revenue Multiples

- Senchack and Martin (1987) compared the performance of low price-sales ratio portfolios with low price-earnings ratio portfolios, and concluded that the low price-sales ratio portfolio outperformed the market but not the low price-earnings ratio portfolio.
- Jacobs and Levy (1988a) concluded that low price-sales ratios, by themselves, yielded an excess return of 0.17% a month between 1978 and 1986, which was statistically significant. Even when other factors were thrown into the analysis, the price-sales ratios remained a significant factor in explaining excess returns (together with price-earnings ratio and size)
What can go wrong?

1. **High Leverage**: One of the problems with using price to sales ratios is that you are dividing the market value of equity by the revenues of the firm. When a firm has borrowed substantial amounts, it is entirely possible that it’s market value will trade at a low multiple of revenues. If you pick stocks with low price to sales ratios, you may very well end up with a portfolio of the most highly levered firms in each sector.

2. **Low Margins**: Firms that operate in businesses with little pricing power and poor profit margins will trade at low multiples of revenues. The reason is intuitive. Your value ultimately comes not from your capacity to generate revenues but from the earnings that you have on those revenues.
4. Dividend Yields

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

- **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 own measures of earnings that correct 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.

- **Margin of safety:** The margin of safety (MOS) is the buffer that value investors build into their investment decision to protect themselves against risk. Thus, a MOS of 20% would imply that an investor would buy a stock only if its price is more than 20% below the estimated value (estimated using a multiple or a discounted cash flow model).
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.
1. Winner and Loser portfolios

- Since there is evidence that prices reverse themselves in the long term for entire markets, it might be worth examining whether such price reversals occur on classes of stock within a market.
- For instance, are stocks which have gone up the most over the last period more likely to go down over the next period and vice versa?
- To isolate the effect of such price reversals on the extreme portfolios, DeBondt and Thaler constructed a winner portfolio of 35 stocks, which had gone up the most over the prior year, and a loser portfolio of 35 stocks, which had gone down the most over the prior year, each year from 1933 to 1978,
- They examined returns on these portfolios for the sixty months following the creation of the portfolio.
Excess Returns for Winner and Loser Portfolios

Figure 6: Cumulative Abnormal Returns - Winners versus Losers
More on Winner and Loser Portfolios

- This analysis suggests that loser portfolio clearly outperform winner portfolios in the sixty months following creation. This evidence is consistent with market overreaction and correction in long return intervals.
- There are many, academics as well as practitioners, who suggest that these findings may be interesting but that they overstate potential returns on 'loser' portfolios.
  - There is evidence that loser portfolios are more likely to contain low priced stocks (selling for less than $5), which generate higher transactions costs and are also more likely to offer heavily skewed returns, i.e., the excess returns come from a few stocks making phenomenal returns rather than from consistent performance.
  - Studies also seem to find loser portfolios created every December earn significantly higher returns than portfolios created every June.
  - Finally, you need a long time horizon for the loser portfolio to win out.
Loser Portfolios and Time Horizon

Figure 7: Differential Returns - Winner versus Loser Portfolios

Cumulative abnormal return (Winner - Loser)

Month after portfolio formation

1941-64  1965-89
2. Buy “bad” companies

- Any investment strategy that is based upon buying well-run, good companies and expecting the growth in earnings in these companies to carry prices higher is dangerous, since it ignores the reality that the current price of the company may reflect the quality of the management and the firm.
- If the current price is right (and the market is paying a premium for quality), the biggest danger is that the firm loses its lustre over time, and that the premium paid will dissipate.
- If the market is exaggerating the value of the firm, this strategy can lead to poor returns even if the firm delivers its expected growth.
- It is only when markets under estimate the value of firm quality that this strategy stands a chance of making excess returns.
a. Excellent versus Unexcellent Companies

There is evidence that well managed companies do not always make great investments. For instance, there is evidence that excellent companies (using the Tom Peters standard) earn poorer returns than “unexcellent companies”.

![Diagram: Comparison of Excellent versus Unexcellent Companies]
b. Risk/Return by S&P Quality Indices

- Conventional ratings of company quality and stock returns seem to be negatively correlated.
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 for 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

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

(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

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

Expected Growth during high growth period

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

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.

<table>
<thead>
<tr>
<th>Price Announced</th>
<th>Motive Announced</th>
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<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Yes</td>
<td>3.92%</td>
</tr>
<tr>
<td>No</td>
<td>0.70%</td>
</tr>
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</table>
Redeploying assets: spin offs, split offs and split ups

- In a spin off, a firm separates out assets or a division and creates new shares with claims on this portion of the business. Existing stockholders in the firm receive these shares in proportion to their original holdings. They can choose to retain these shares or sell them in the market.

- In a split up, which can be considered an expanded version of a spin off, the firm splits into different business lines, distributes shares in these business lines to the original stockholders in proportion to their original ownership in the firm, and then ceases to exist.

- A split off is similar to a spin off, insofar as it creates new shares in the undervalued business line. In this case, however, the existing stockholders are given the option to exchange their parent company stock for these new shares, which changes the proportional ownership in the new structure.
Choosing between spin offs and split offs

- **Whose fault?** A spin off can be an effective way of creating value when subsidiaries or divisions are less efficient than they could be and the fault lies with the parent company, rather than the subsidiaries.

- **Taxes:** The second advantage of a spin off or split off, relative to a divestiture, is that it might allow the stockholders in the parent firm to save on taxes. If spin offs and split offs are structured correctly, they can save stockholders significant amounts in capital gains taxes.

- **Contamination:** The third reason for a spin off or split off occurs when problems faced by one portion of the business affect the earnings and valuation of other parts of the business.

- **Regulatory factors:** Finally, spin offs and split offs can also create value when a parent company is unable to invest or manage its subsidiary businesses optimally because of regulatory constraints.
And markets generally react positively to spin offs…
## 2. Capital Structure/ Financing

<table>
<thead>
<tr>
<th>Advantages of Debt</th>
<th>Disadvantages of debt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Tax Benefit:</strong> Interest expenses on debt are tax deductible but cash flows to equity are generally not.</td>
<td><strong>1. Expected Bankruptcy Cost:</strong> 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.</td>
</tr>
<tr>
<td><em>Implication: The higher the marginal tax rate, the greater the benefits of debt.</em></td>
<td><em>Implication:</em></td>
</tr>
<tr>
<td><strong>2. Added Discipline:</strong> Borrowing money may force managers to think about the consequences of the investment decisions a little more carefully and reduce bad investments.</td>
<td><strong>2. Agency Costs:</strong> 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).</td>
</tr>
<tr>
<td><em>Implication: As the separation between managers and stockholders increases, the benefits to using debt will go up.</em></td>
<td><em>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.</em></td>
</tr>
<tr>
<td><strong>3. Loss of flexibility:</strong> 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.</td>
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</tr>
<tr>
<td><em>Implication:</em></td>
<td></td>
</tr>
<tr>
<td>1. <em>Firms that can forecast future funding needs better should be able to borrow more.</em></td>
<td></td>
</tr>
<tr>
<td>2. <em>Firms with better access to capital markets should be more willing to borrow more today.</em></td>
<td></td>
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</table>
### Cost of capital as a tool for assessing the optimal mix


As debt ratio increases, equity becomes riskier (higher beta) and cost of equity goes up. 

As firm borrows more money, its ratings drop and cost of debt rises.

Debt ratio is percent of overall market value of firm that comes from debt financing.

At debt ratios > 80%, firm does not have enough operating income to cover interest expenses. Tax rate goes down to reflect lost tax benefits.

As cost of capital drops, firm value rises (as operating cash flows remain unchanged).

<table>
<thead>
<tr>
<th>Debt Ratio</th>
<th>Beta</th>
<th>Cost of Equity</th>
<th>Bond Rating</th>
<th>Interest Rate on Debt</th>
<th>Tax Rate</th>
<th>Cost of Debt (after-tax)</th>
<th>WACC</th>
<th>Firm Value (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>0.78</td>
<td>7.00%</td>
<td>AAA</td>
<td>3.60%</td>
<td>40.00%</td>
<td>2.16%</td>
<td>7.00%</td>
<td>$4,523</td>
</tr>
<tr>
<td>10%</td>
<td>0.83</td>
<td>7.31%</td>
<td>AAA</td>
<td>3.60%</td>
<td>40.00%</td>
<td>2.16%</td>
<td>6.80%</td>
<td>$4,665</td>
</tr>
<tr>
<td>10.39%</td>
<td>0.83</td>
<td>7.33%</td>
<td>AAA</td>
<td><strong>3.60%</strong></td>
<td><strong>40.00%</strong></td>
<td><strong>2.16%</strong></td>
<td><strong>6.79%</strong></td>
<td><strong>$4,680</strong></td>
</tr>
<tr>
<td>20%</td>
<td>0.89</td>
<td>7.70%</td>
<td>AAA</td>
<td>3.60%</td>
<td>40.00%</td>
<td>2.16%</td>
<td>6.59%</td>
<td>$4,815</td>
</tr>
<tr>
<td>30%</td>
<td>0.97</td>
<td>8.20%</td>
<td>A+</td>
<td>4.60%</td>
<td>40.00%</td>
<td>2.76%</td>
<td>6.57%</td>
<td>$4,834</td>
</tr>
<tr>
<td>40%</td>
<td>1.09</td>
<td>8.86%</td>
<td>A-</td>
<td>5.35%</td>
<td>40.00%</td>
<td>3.21%</td>
<td>6.60%</td>
<td>$4,808</td>
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<tr>
<td>50%</td>
<td>1.24</td>
<td>9.79%</td>
<td>B+</td>
<td>8.35%</td>
<td>40.00%</td>
<td>5.01%</td>
<td>7.40%</td>
<td>$4,271</td>
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<tr>
<td>60%</td>
<td>1.47</td>
<td>11.19%</td>
<td>B-</td>
<td>10.85%</td>
<td>40.00%</td>
<td>6.51%</td>
<td>8.38%</td>
<td>$3,757</td>
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<tr>
<td>70%</td>
<td>1.86</td>
<td>13.52%</td>
<td>CCC</td>
<td>12.35%</td>
<td>40.00%</td>
<td>7.14%</td>
<td>9.24%</td>
<td>$3,398</td>
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<tr>
<td>80%</td>
<td>2.79</td>
<td>18.53%</td>
<td>CC</td>
<td>14.35%</td>
<td>38.07%</td>
<td>8.89%</td>
<td>10.81%</td>
<td>$2,992</td>
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<tr>
<td>90%</td>
<td>5.39</td>
<td>34.70%</td>
<td>CC</td>
<td>14.35%</td>
<td>33.84%</td>
<td>9.49%</td>
<td>12.01%</td>
<td>$2,597</td>
</tr>
</tbody>
</table>

Optimal: Cost of capital lowest between 20 and 30%. 

Current Cost of Capital: 

1. As debt ratio increases, equity becomes riskier (higher beta) and cost of equity goes up.
2. As firm borrows more money, its ratings drop and cost of debt rises.
3. At debt ratios > 80%, firm does not have enough operating income to cover interest expenses. Tax rate goes down to reflect lost tax benefits.
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 are viewed as good news.

![Graph showing returns around management changes]
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

![Figure 14: Friendly vs Hostile Takeover Target Characteristics](image)
And acquisitions are clearly good for the target firm’s stockholders.
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:

![Figure 15: Motives for Hedge Fund Activism](image)
What do they do?

- Institutional activists primarily push for changes in corporate governance – more independent boards and improved voting rights.
- Individual activists agitate for asset redeployment (divestitures of non-core assets) and higher dividends/buybacks.

A study of 1164 hedge fund activist investing campaigns between 2000 and 2007 documents some interesting facts about hedge fund activism:

- Two-thirds of activist investors quit before making formal demands of the target. The failure rate in activist investing is very high.
- Among those activist investors who persist, less than 20% request a board seat, about 10% threaten a proxy fight and only 7% carry through on that threat.
- Activists who push through and make demands of managers are most successful (success rate in percent next to each action) when they demand the taking private of a target (41%), the sale of a target (32%), restructuring of inefficient operations (35%) or additional disclosure (36%). They are least successful when they ask for higher dividends/buybacks (17%), removal of the CEO (19%) or executive compensation changes (15%). Overall, activists succeed about 29% of the time in their demands of management.
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.
Where’s the beef? Overall assessment of value investing
Evidence from active value funds
What about individual value investors?

- In a study of the brokerage records of a large discount brokerage service between 1991 and 1996, Barber and Odean concluded that while the average individual investor under performed the S&P 500 by about 1% and that the degree of under performance increased with trading activity, the top-performing quartile outperformed the market by about 6%. Another study of 16,668 individual trader accounts at a large discount brokerage house finds that the top 10 percent of traders in this group outperform the bottom 10 percent by about 8 percent per year over a long period.

- Studies of individual investors find that they generate relatively high returns when they invest in companies close to their homes compared to the stocks of distant companies, and that investors with more concentrated portfolios outperform those with more diversified portfolios.

- While none of these studies of individual investors classify the superior investors by investment philosophy, the collective finding that these investors tend not to trade much and have concentrated portfolios can be viewed as evidence (albeit weak) that they are more likely to be value investors.
The fallback position…

- To the extent that the evidence on both institutional and individual value investors’ capacity to beat the market consistently is not convincing, some value investors will fall back on that old standby, which is that we should draw our cues from the most successful of the value investors, not the average.

- Arguing that value investing works because Warren Buffett and Seth Klarman have beaten the market is a sign of weakness, not strength. After all, every investment philosophy (including technical analysis) has its winners and its losers.

- A more telling test would be to take the subset of value investors, who come closest to purity, at least as defined by the oracles in value investing, and see if they collectively beat the market. Have those investors who have read Graham and Dodd generated higher returns, relative to the market, than those who just listen to CNBC? Do the true believers who trek to Omaha for the Berkshire Hathaway annual meeting every year have superior track records to those who buy index funds?
Conclusion

- Value investing comes in many stripes.
  - There are screens such as price-book value, price earnings and price sales ratios that seem to yield excess returns over long periods. It is not clear whether these excess returns are truly abnormal returns, rewards for having a long time horizon or just the appropriate rewards for risk that we have not adequately measured.
  - There are also “contrarian” value investors, who take positions in companies that have done badly in terms of stock prices and/or have acquired reputations as “bad” companies.
  - There are activist investors who take positions in undervalued and/or badly managed companies and by virtue of their holdings are able to force changes that unlock this value.

- In spite of the impeccable academic evidence in its favor, there is little backing for the general claim that being an active value investor generates excess returns (relative to investing a value index fund).