Hand out more information for Sealed Air Valuation for Class on Feb.17, 2004.
Professor Greenwald reviews the Claiborne Valuation. These applications of our investment process are very important.

Go here for 1999 10-K (Year End Jan. 01, 2000):
Begin with a search strategy. How likely it is that this particular security will be undervalued. The first question you should ask when you find an investment through your search strategy is, "Why me God?" Why is this presented to me? Why are you the lucky one? Know the causes of the price decline.

## LIZ CLAIBORNE VALUATION EXERCISE

## Basic Overview

In 1999, the price of Liz Claiborne got as high as $\$ 44$ per share and as low as $\$ 20$ per share during the time of the Russian Debt default and the demise of Long-Term Capital Management.

There are 57 million outstanding shares-mkt. value of $\$ 2.4$ billion, $\$ 116$ mil of LT debt and no short term debt. The Enterprise value is $\$ 2.5$ billion. This is not a small company nor is it that obscure, but it is in the rag trade. An industry with a bad reputation. The fact that this industry has a bad reputation is a good sign. That is reassuring.

It is fairly widely held. Management and Directors hold about 20\% of the stock which is enough to make it worthwhile to help the company be successful. Not so much that it would be impossible to remove them if company is run poorly.

Funds own $32 \%$ of the stock. One famous value investor owns the stock: GEICO
9\% Sales growth-could this be too fast or glamorous for me? But this company has had a checkered sales growth record over its history. Look in Value Line and see inconsistent growth. Don't forget in 1999 we are in the Internet Mania--during the rapid growth bull market. 1\% Dividend Yield. The stock has gone up $41.4 \%$ in the past year; we may have missed the boat on this.
12.6 P/E which is below the market average. Market to book value is relatively low, but remember that this is a company with a lot of off-balance sheet assets-its brands. The company is border-line cheap. The female analysts on Wall Street won't care about this company.

Good news: 5\% of the stock is being bought back each year. You could tender 5\% of your stock each year and have the same percentage ownership-your residual ownership would remain unchanged. A dividend yield in a form that is capital gains. 1\% dividend yield along with the $5 \%$ buy back of stock gives you a $6 \%$ yield.

There are some attractive features; there are some unattractive features for this stock. Again, from a value perspective, you won't be shocked to find this stock fully valued or under valued. Imagine going through this process yourself.

This is a company that may not have been thrown up by a screen, but it is a decent company that has been at a low price and it has been purchased by value managers who are certainly holding on to it.

Now you have thought about it, you might wish to pass, but we have told you to value it.

## STEP 1:

Start with the asset value. What is there for the $\$ 2.4$ billion market value ( $\$ 42.30$ @ 56.72 mil. outstanding shares)?

| Balance Sheet (LIZ) | Jan-00 |
| :---: | :---: |
| Assets (\$000's) |  |
| Current Assets |  |
| Cash | \$37.9 |
| Mkt. Secs. |  |
| Accts Rec. Trade | 299 |
| Inventories | 418.3 |
| Deferred income tax benefits | 27.8 |
| Other current assets | 75.6 |
| Total CA | 858.6 |
| PP\&E Net (add value of Buildings \& Land) | 284 |
| Goodwill and Intangibles - Net | 227.7 |
| Other Assets | 41.3 |
| TOTAL ASSETS | 1,411.6 |
| Liabilities |  |
| Current Liabilities |  |
| Accounts Payable | 184.5 |
| Accrued Expenses | 160 |
| Income Tax Payable | 7.5 |
| Total CL | 352 |
| LT Debt | 116 |
| Other Non-Current Liabilities | 15 |
| Deferred Income Taxes | 23.1 |
| Commitments and Contingencies |  |
| Minority Interest | 3.1 |
| Put Warrants |  |
| Stockholder's Equity |  |
| Common Stock | 88,218,617 |
| Treasury Stock | -31,498,577 |
| Net OS | 56,720,040 |


| Net Sales | $\$ 2,806$ |
| :--- | ---: |
| CGS | 1,709 |
| Gross Profit | 1,097 |
| SG\&A | 798 |
| EBIT | $\mathbf{3 0 0}$ |
| Inv.\& other inc. | 2 |
| Taxes | 109 |
|  | $\mathbf{7 5}$ |
| Cap-ex |  |
|  |  |
|  |  |
|  |  |
|  |  |


\section*{| Total Share Equity | 902,169 |
| :--- | :--- |}

No LIFO Adj. In their history a fair amount of write-offs on Inventory so they are conservative. The inventory number is probably good.

They own buildings in the Meadowlands, NJ. So probably worth more than original cost. At a minimum at replacement cost. Probably worth $\$ 400$ to $\$ 500$ million. Maint. Capex not very high since the industry is not capital intensive. There is some extra value in the real estate so add back to EPV. Remember to add back assets that are not needed for their ongoing business.

There are no formulas here. We treat the brands separately.
The value doesn't necessarily reside on the balance sheet except there may be more value in the real estate than stated on the books. $\$ 288$ mil in PP\&E is probably worth $\$ 400$ million because of the Real Estate value? If it was crucial to your decision, then find out more about the industry and asset and/or hire an assessor for the buildings. We know that Real Estate value is greater than the book value historical cost basis.

Equity value: $\$ 902,000$ divided by 56.72 mil $O S=\$ 16$ per share in book value. The market value is over $2.3 x$ book value.

Now analyze the Brand Value-calling people up to assess the value of brands in the rag trade. Investment in advertising and distribution. 20 to 40 cents per $\$ 1$ of sales is what you are given.

These estimates are not something you get from an accounting formula. You have to ask someone in the rag/retail industry. These investments in developing brands, by no means, always work out. Failure rate is $1 / 2$ to $1 / 3$ of the time. For a successful brand like Liz Claiborne it could cost as little as 20 cents per $\$ 1$ of sustainable sales with a $50 \%$ success probability or 40 cents for the cost of developing a brand or as much as a $\$ 1.20$. There are a large range of uncertainties. If these are old, tired brands, they need to be written down by $25 \%$. These brands are worth about 60 cents per $\$ 1$ of sales.

40 cents to $\$ 1.20$ cents investment for brands. These brands coupled with the supplier relations are worth about 60 cents per $\$ 1$ of sales.

Revenues of $\$ 2.807$ billion multiplied by .60 (remember 60 cents per $\$ 1$ of sales) = $\$ 1.684$ billion in estimated brand value-the reproduction value of the bands. We are estimating this off of what Liz Claiborne was willing to pay. $10 \%$ is the cost of capital, so you should be able to make $\$ 168$ million per year ( $\$ 1.68$ bil. X $10 \%$ ) without risk of competitive entry. You have asset protection.

The brand is an asset NOT a competitive advantage. Competitors would have to pay that amount to compete with you in that particular brand, but the higher cost to enter the market does not equate to a competitive advantage.

Old brands are worth less than new brands in the rag trade. You have to spend to support the brand. We are seeking the reproduction value for the brands.

Cheapest investment is 20 cents on the dollar for advertising, sales force and development for sales divided by $50 \%$ probability of success $=\$ 0.40$ investment per $\$ 1$ of sales at a minimum.

What do I have to invest upfront to develop a brand? Is developing a brand the same as having a successful brand? No, only half of them succeed at best. 40 cents is the best cost for successful development of the brand. 80 cents is halfway between 40 cents to \$1.20.

The cost of brand information came from a person who writes business plans for the rag trade. You want to cross-correlate this information with PMV transaction by Liz Claiborne. We have three basic transactions for LIZ in the footnotes.

Understand the concepts and where the information resides.
Things go out of fashion - Levi's. Item by item looking at each brand. The key is to cross correlate the estimate with the PMV transaction that Liz Clairborne paid.

1. Bought the Laundry Brand: Paid $\$ 43$ million ( $\$ 41.2$ - $\$ 44.7$ ) plus $\$ 1$ million in other net assets so they paid net for $\$ 42$ million for sales of $\$ 76$ million-- $\$ 42 / \$ 76$ $=55$ cents for $\$ 1$ sales. This is close to our 60 cent estimate.
2. Lucky Brand. There is much greater uncertainty about the payment. Liz made the seller keep $15 \%$. Liz paid $\$ 85$ million for $85 \%$ of the business with contingent payments over 3 years of between $\$ 15$ and $\$ 45$ million or an average of $\$ 30$ million. They paid $\$ 108$ million $/ 85 \%$ of the company $=\$ 127$ million for Lucky. They got $\$ 8$ million in net assets, so the net price was $\$ 127$ million - $\$ 8$ million $=$ $\$ 119$ million for brand value. Lucky has $\$ 60$ million in sales or about $\$ 2.00$ per $\$ 1$ in sales. Now you are starting to see some of the sources of error in our estimates. Lucky has youth appeal, rapid growth appeal and particular appeal to Liz Claiborne who is worried about its stodgy image. With the brand are all the intangibles, including management, sales force, and procurement and supplier relationships. (numbers in footnotes under acquisitions)
3. Sigrid Olsen Brand for $\$ 55$ million for $87.5 \%$ for a full value of $\$ 63$ million, net assets were $\$ 13$ million, so they paid ( $\$ 63-\$ 13$ ) $\$ 50$ million for the brand value. Sales 60 million so $\$ 50$ million paid for the brand/ $\$ 60$ million in sales $=83$ cents for $\$ 1$ in sales.

The private market transactions range from 55 cents to 83 cents to $\$ 2.00$-this is a wide range of uncertainty. To be conservative we will stay with our estimate of 60 cents for the brand assets-the low end of the private market transactions. Lucky was a very special brand-an outlier.

When you do your due-diligence on this and you still had uncertainty, then you would look at what other companies in the industry are paying for brands like Jones, NY. Check on competitors' purchases of brands.

Book Value is $\$ 228$ million for intangibles included in total assets. $\$ 1.684$ Billion ( $\$ 2.8$ billion in sales $\times 0.60$ for the estimated brand asset value).
$\$ 1.2$ billion for the assets on the balance sheet
$\$ 2.970$ billion in total or approximately $\$ 3$ billion.
You get close to $\$ 3$ billion for the reproduction of the asset value for Liz Clairborne
Then subtract the liabilities, but we don't include the debt, since we are doing an enterprise value. No-debt liabilities are $\$ 392$ million

Net asset value is $\$ 2.572$ billion net reproduction value, compared to a book value of $\$ 1$ billion. Or $\$ 45.34$ per share.

We use enterprise value because we view purchasing the company in its entirety including its debt. Now why do I include the non-debt liabilities? Because they are at a 0 interest rate-the liabilities are automatic sources of funding. They are an intrinsic part of being in business. So the liabilities are an offset to the $\$ 3$ billion reproduction value for Liz Claiborne. The test here is what does it cost to enter this business?

## Second Step: Earnings Power Value (EPV)

Do we want to stop there after we have estimated the Asset value for the firm? No, we want to compare that to the earnings power.

Notice the value of the preliminary work that you have done. You have looked at the asset value. In the NPV calculation you don't look at the asset value. This is in a sense free information beyond what you get from NPV.

We cross-correlate it to the current earnings power, which is the most reliable part of the cash flow. The lesson in Greenwald's book is to concentrate on the reproduction value of the asset values.

How much in cap-ex to duplicate the business? Reproduction value is not liquidation value. High end clothiers are in a viable industry. Use liquidation value in a non-viable industry.

Start with the $\$ 301.5$ billion in EBIT then subtract the $\$ 1.8$ million in net interest over and above what they pay on their debt, so approximately $\$ 299.7$ million. Are there accounting manipulations? $\$ 27$ million write-off in 1998. You could divide the $\$ 27$ million and divide by 5 and then subtract the result-- $\$ 5$ million.

Was it a particularly bad or good year (temporarily). Look at margins. For the three years starting in 1999, the margins for EBITDA are relatively stable. Liz had unusually high amortization due to their purchases of Brands.
$25 \%$ operating margins. In 1992, the margins start to fall. In 1992-1994 the Company has a crisis. Margins fall to $15.5 \%-18.5 \%$, then recovered. Stability is good for sustaining earnings. You won't do much in secular or cyclical earnings adjustments. In a situation where earnings are at a cyclical peak then subtract the excess earnings. Conversely, if earnings are in a trough, then add back to obtain the average, "normalized" earnings power.

Look at other companies and see if their earnings are stable during the same periods as Liz. We will stick with the $\$ 300$ million EBIT

There are no special problems or unconsolidated subsidiaries. Use a 36\% tax rate.
Is there over-depreciation and amortization? The accountants may be understating earnings. They have $\$ 68$ million in D\&A while doing $\$ 75$ million in investment. The change in sales when they made $\$ 75$ million. 10 cents change in PPE for $\$ 1$ in new sales.
\$27 million in necessary investment. Maintenance capex of \$48 million for replacing equipment. The rate of D\&A is too high for the amount of tangible assets. High amortization is due to investment in Brands.

Liz brands are not growing. Liz is buying growth. Look at years when Liz is not making investments-there is almost no growth.

They spend $\$ 80$ million per year in support of old brands to keep sales flat-no improvement. $\$ 80$ million is added back to profit IF there is organic growth (not true in this case). We want to analyze steady state growth.

Equipment wears out. $\$ 130$ million in PP\&E. Buildings are not depreciated, so depreciation is overstated. Purchased of PP\&E is $\$ 75,130$ million from the CF Statement. The value of buildings is not declining, so we know we should exclude depreciation on $\$ 131$ of land and buildings.

Liz has $\$ 68$ million in D\&A, but we estimate it as $\$ 48$ million, so add back the difference of $\$ 20$ million to EBIT. So now we have $\$ 320$ million in EBIT** for recurring, steadystate earnings.

Valuation is an exercise in telling a story that is sensible and then trying to quantify it. It is not manipulating numbers.

A value investor doesn't just look at numbers. He/She understands the underlying economic reality behind the investment, the company and its industry.

To review: the cost of equipment is declining so the economic Depreciation is below the accounting depreciation. The $\$ 68$ million includes the amortization of brands. Fast D\&A for tax purposes so D\&A is greater than economic reality.

## Investing is a story of economic reality.

## Depreciation Adjustment**

What is maintenance? Cap-ex? It is the cost to replace physical stock to the same state at the end of the year. Do they really have to spend $\$ 48$ million a year?

Full tax rate is $36 \%$. What is the tax they are paying now? 0 , because income protected by Depreciation tax shield. Eventually that tax shield will expire, so we take the average of $0+36 \%$ or a $20 \%$ tax rate for an average. $\$ 20$ million difference in economic and
accounting D\&A is $(\$ 68-\$ 48) \times 20 \%$ avg. tax rate $=\$ 16$ million. Add this to after-tax EBIT

EPV is probably worth $\$ 210$ to $\$ 230$ million. $\$ 300$ million operating income - $\$ 109$ million tax $=\$ 191$ million then add the depreciation adjustment after-tax $=\$ 207$ million in EPV. We probably overstated depreciation.

If the $\$ 48$ million maintenance cap-ex were $\$ 28$ million then the difference is another $\$ 20$ million or the after-tax adjustment to depreciation using a $20 \%$ tax rate $=\$ 32$ million.
\$220-\$230 million EPV/10\% WACC = $\$ 2.20$ billion then add back excess cash of $\$ 38$ million and also excess buildings of $\$ 100$ million) $=\$ 2.338$ billion divided by 56.72 million outstanding shares $=\mathbf{\$ 4 1 . 2 2}$. (vs. $\$ 45 \mathrm{AV}$ ). The market price is also $\$ 42$.

Reproduction value of assets, brands and now EPV are trying to tell us a unified story: AV is equivalent to EPV or Asset value is close to the Earnings Power Value. Free entry and the industry are in balance. Is my valuation appropriate for this industry? Here is where you have to be careful.

Is management degrading the investment? NO.
It looks like AV = EPV, so it seems there is, in fact, no franchise. However, the ROE seems high so there might be a franchise here. If I book value of the equity $\$ 902$ million and divided into the net income of $\$ 192$ million, I have a $21.2 \%$ ROE. If the return is above $20 \%$, so those things might suggest a franchise.

In value creation, those things (high, above average 21.3 ROE) might suggest a franchise. High returns on capital. In the rag trade is there anything--proprietary technology? Are there significant EOS? Are there captive customers with Liz? There are NO significant competitive advantages.

SO WHY THE HIGH ROE, ROIC?
The ROIC and ROE are not including the full value of the brands (off-the-balancesheet). If I include the brand value, then the ROE is below $10 \%$.

Where did that brand value come from if it did not come from invested capital?
There were clothing companies that started out to be Liz Claiborne's that are no longer with us. Then there were companies that started out to be Liz Clairborne and then succeeded unexpectedly well. This is one of those surviving Liz Claiborne's. (Survivor Bias). So fortuitous history will improve the balance sheet without particular investments that are identified with those assets.

Here we have a range of value between $\$ 2$ to $\$ 2.5$ billion and $\$ 35$ to $\$ 40$ per share, so at \$39-\$40 the company is fairly valued.

## Our strategic analysis shows no particular competitive advantages.

No great management, but not bad management either. You are not buying management greatness. Management is acquiring and developing brands which are
understating the profitability. No opportunity, no margin of safety to buy with the stock at $\$ 38.00$, but if the stock gets down below $\$ 25$, then an opportunity. Note that GEICO bought near $\$ 20$.

This company has a stable value based on all the available information that we used. We now know the basic value of the company. There are a lot of intangibles here. Investment is offset by D\&A of brands. The asset value was understated due to the band value being off the balance sheet.

If you bought the stock at $\$ 20$, would you sell it here near $\$ 39$ ? No. Avoid the capital gains tax until the gain is long-term. The price is at fair value. The stock has been more volatile than it deserves. Take advantage when the price goes below value-say under $\$ 25$. Value is supported by AV, EPV and your strategic analysis. No franchise and AV = EPV

Claiborne's (Liz's) profits should have been higher during their early years-they were understating their profits-if they didn't the retained earnings would have been higher.

Remember what we are doing here. THIS IS PROCESS. Remember the process you did in Course 6301-compare it to what we are doing here. It is a process for the Hudson General's and Liz Claiborne's of the world.

End of Valuation exercise.

## PROCESS

We started off with having a search process, a valuation technology that incorporates all the relevant information, reviewing in qualitative terms the message sent by that information-the bad management message of Hudson General, the no competitive advantage of Liz Claiborne, then you have to manage the risk, but before doing that

We will talk about the last element of valuation--Growth. Remember we have talked about Asset Value and Earnings Power Value. We have not spoken about the value of growth.

Valuing growth is very hard to do. There are many inherent uncertainties.
Most investors--because they love winners, big wins and lottery tickets--overpay for growth. Don't be there! You want growth but with 0 cost. You want the growth hidden in some way by temporary problems, by unused pricing power or by some other market anomaly.

Wall Street loves growth. There are good things about growth and there are bad things about growth. The KEY is to understand how the trade-off works. A growing stream of CF is obviously better than no growth, so if you could grow without investing, that would be unambiguously good. Unfortunately, growth often requires investment. That means the investment reduces the current sustainable cash flow. The value of the cash flow per dollar goes up, but the dollars of CF goes down. How the trade-off between those two things occurs is what is important.

For example, take $\$ 100$ million in additional investment while the cost of capital is $10 \%$, so the cost is $\$ 10$ million per year. If the firm earns an additional $\$ 15$ million then there
is profitable growth of $\$ 5$ million ( $\$ 15$ mil.- $\$ 10$ mil.). If there were no competitive advantages and no B-t-E, then more entry, so profits decline and in the future the $\$ 15$ million will become $\$ 10$ million on the $\$ 100$ million investment or equal to the cost of capital (K). If there is no B-t-E, you should earn just the cost of capital of $\$ 10$ million, so the net return to shareholders is ZERO (\$0). You have to pay $\$ 10$ million to make $\$ 10$ million-break-even for the shareholders.

Growth without a competitive advantage generates NO VALUE. The cost of the investment just offsets the value of the growing revenue stream.

Growth at a competitive disadvantage: I earn $\$ 8$ million vs. the cost of $\$ 10$ million for capital. $\$ 2$ million of destruction per year. The more you have to invest without earning you cost of capital, then the faster you destroy value.

Growth—no matter how fast-without CA and/or B-t-E does not add value. Faster growth at a competitive disadvantage means faster destruction of value. Successful franchise-based investments often ignore the value of growth.

NOTE KEY FACTOR: The growth in earnings will get investors excited in the short-run to increase the multiple, then the multiple and price will collapse when the hoped-for profits don't appear. Investors are fooled by earnings per share increases without considering the costs of capital to obtain such increased. That is why when a company says it increased earnings for a record $10^{\text {th }}$ quarter in a row-says nothing.

Say you have a cruise ship that costs $\$ 400$ million and you make $\$ 20$ million vs. earning $\$ 40$ million in securities while there are 100 million shares outstanding. The company records an increase of earnings of 20 cents, but to earn its cost of capital is should have earned 40 cents per share. You are counting on the growth in earnings will manipulate investors into giving you a higher multiple for growth. When the investors learn that the return on capital is $4 \%$, then price collapse.

To have competitive advantage: you must do something unique that your competitors can't do. You have captive customers or captive customers combined with EOS or you have some proprietary technology advantage.

When you try to value growth, remember $A T \& T$. They tried to grow in markets like information processing where they were at a CA disadvantage and local telephone service, $A T \& T$ destroyed value and a great American franchise.

When WMT grew in the North-East, where it did not have the regional dominance (of EOS), its returns were no better than average.

Growth on a level playing field neither creates nor destroys value-only growth within a franchise creates value. There it is relatively easy to calculate the growth rate because if there are CA, then what is true of market share? The share is stable. You can calculate the industry growth rate and therefore the company growth rate in the long run.

## A Company needs a lot of powerful growth to add a significant amount of value.

Stronger your competitive advantage, the higher your ROIC.

If the growth rate exceeds the cost of capital, then none of our formulas in the table will work-this is a good test. Average Cost of Capital $(\mathrm{K})$ is $10 \%$, while nominal world growth in GDP is $5 \%$, so fast growth is about $7.5 \%$ while slow growth is $2.5 \%$ for a company.

The number in the table is the factor by which you have to multiply the earnings power value to get the value with growth.

If your profit is $50 \%$ greater than your K, say $15 \%$ and you have $7.5 \%$ growth per year, your total value with growth will be $2 x$ your earnings power. If the appropriate earnings power of P/E is 16, it would get you a 32 multiple. Notice that without a franchise, the earnings growth is 0 .

At low growth rates, the growth adds almost nothing to the earnings power value. Even if you have earnings power $3 x$ your capital cost (K), and then at $2.5 \%$ growth you are only going to get $22 \%$ more than your EPV.

Even at average growth rates and at $3 x$ the K , you add just $67 \%$ to the EPV. Typically, industry growth rate = company growth rate.

These growth situations are very hard to predict. The quantitative value of growth is much smaller than Wall Street believes.

Only with very high growth rates does growth add substantial value. But the high growth rates are the least reliable.

The value of growth is Return on Capital (ROC) minus (-) the growth rate (G) divided by the cost of capital $(\mathrm{K})$ - the growth rate then $x$ the original capital investment.

The EPV is the capital invested since this ROC $x$ the capital invested in time 0 , which is earnings power then divided by the cost of capital.

The value with growth divided by EPV. ROC - G/ R-G x Original capital invested then divided by ROC/R $x$ the original capital.

For a growth company with a franchise then pay for the full EPV, but not for growth. This is what WEB did when he paid 12 x earnings for Coke in 1988. He got the franchise growth for free.

## Managing risk

AV \& EPV and then assess the degree of franchise st4rength and sustainability.
Greenwald: You won't remember these formulas when you leave here. The bottom line of valuing growth: it is the least reliable and highly sensitive to the assumptions. Everybody overpays for growth.

As a value investor you will pay the full EPV if the firm has a growing franchise. Where will you get the growth value--that is our margin of safety?

You know it is worth something, it may be worth a lot. WEB bought Coke at 12 x earnings which is an 8\% return, but for a stable growing company is a good bargain.

It is dangerous to start paying for growth. The actual value is very small and it is only valuable within a franchise.

The last I have to say about valuation.

## REVIEW: Total Value Including Growth

Least reliable - Forecast change not just stability (earnings Power)
Highly sensitive to assumptions
Data indicates that investors systematically overpay for growth
Strict value investors want growth for "Free" (Market Value < Earnings Power Value).
The Contradiction of Growth
Growing stream of CFs is more valuable than a Constant Stream (relative to current cash flow).

Growth Requires Investment which reduces current (distributable Cash Flow.
Valuing Growth
Basic Algebra
"Earnings" = Returns on Capital * Capital beg. Yr.
Necessary Investment to Support Growth at G\% PA.
$=\quad G *$ Capital beg. Yr.
Cash Flow of Growing Firm = "Earnings" - Necessary Investment
$(\mathrm{CFO})=$ ROC * Capital beg. Yr. $=$ (ROC - G) ${ }^{*}$ Capital beg. Yr.

Value of Growing Firm = CF0 * 1/R-G $=(R O C-G) *$ Capital beg. Yr. $/ R-G=$ (ROC-G)/R-C) Capital beg. $Y$

The critical Valuation Factor is
ROC - G/R-G

## Valuing Growth

## Case 1: Growth with no Competitive Advantage

ROC $=$ Return on Capital $=$ Cost of Capital $=$ R
Then ROC-G/R-G = R-G/R-G = 1 (for all growth rates)

| e.g. $(\mathbf{R O C}=\mathbf{R}=\mathbf{1 0 \%})$ |
| :--- |
| ROC $=\mathrm{R}$ when there are no |
| Barriers-to-Entry (i.e. no |
| CA-a level playing field. |
|  |
|  |

## Case 1

$$
\begin{aligned}
& \mathrm{G}=0 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=10-0 / 10-0=1 \\
& \mathrm{G}=2 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=10-2 / 10-2=1 \\
& \mathrm{G}=8 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(10-8) /(10-8)=1
\end{aligned}
$$

Case 2: Competitive disadvantage with growth. ROC is less than the cost of capital.
Then $\mathrm{ROC}-\mathrm{G}<\mathrm{R}-\mathrm{G} \longrightarrow \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}<1$
And $R O C-G / R-G$ gets smaller with higher growth rates.

```
e.g. (ROC = 8% R = 10%)
ROC < R so growth destroys
value no matter how rapid that growth.
```

$$
\begin{aligned}
& \mathrm{G}=0 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(8-0) /(10-0)=0.80 \\
& \mathrm{G}=2 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(8-2) /(10-2)=0.75 \\
& \mathrm{G}=8 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(8-8) /(10-8)=0
\end{aligned}
$$

Case 3: Competitive Advantage with Growth
ROC is greater than R - Firm enjoys a competitive advantage (franchise)
Market shares are stable $\longrightarrow G=$ Industry Growth Rate
Then ROC - $G$ is greater than $R-G$
And $(R O C-G) /(R-G)$ is greater than 1 and increasing in $G$.

```
e.g. (ROC = 15% R = 10%)
ROC > R so growth creates
value because it occurs within
a franchise.
```

$$
\begin{aligned}
& \mathrm{G}=0 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(15-0) /(10-0)=1.5 \\
& \mathrm{G}=2 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(15-2) /(10-2)=1.625 \\
& \mathrm{G}=8 \% \mathrm{ROC}-\mathrm{G} / \mathrm{R}-\mathrm{G}=(15-8) /(10-8)=3.5
\end{aligned}
$$

## Valuing Growth Basics

- Growth at a competitive disadvantage destroys value (AT\&T in info processing).
- Growth on a level playing field neither creates nor destroys value (Wal-Mart in NE).
- Only franchise growth (at industry rate) creates value.


## Valuing Growth - How Much Does It Add?

Look at Value (with Growth) + EP Value
Depend on ROC/R - Franchise Strength
And $\quad G / R$ - Growth Rate

| ROC/R | $\mathbf{1 . 0}$ | $\mathbf{1 . 5}$ | $\mathbf{2 . 0}$ | $\mathbf{2 . 5}$ | $\mathbf{3 . 0}$ |
| :--- | :--- | :---: | :---: | :---: | :---: |
| G/R | 0.25 | 1.0 | 1.11 | 1.17 | 1.2 |
|  | 0.50 | 1.0 | 1.33 | 1.5 | 1.6 |
| 0.75 |  | 1.0 | 2.00 | 2.5 | 2.8 |

Entries = Value (with Growth) + EPV
It takes a lot to go from 16 P/E to 48 P/E.

## Valuing High (Unstable) Growth

Pick a target - 5 years out (that you think you can predict)
Calculate EPV in Target Year
(E.G. in 2004 Microsoft "Earnings" = \$12B
$E P V=\$ 12 \mathrm{~B} / 6 \%=\$ 200 \mathrm{~B}$
Add Steady-State Growth Impact (TABLE 1)
Beyond that point. (e.g. 2*EPV = 400B)
Discount back at $R(e . g .5$ years @ $14 \%=1 / * 400 B)=200 \mathrm{~B}$

## Valuing Breakeven Growth Rate

1. Calculate EPV today (e.g. \$75B) and ROC/R today (assuming this is sustainable) (e.g. 2)
2. Calculate current market value (debt, equity) (e.g. 100B)
3. Select margin of safety that you want (e.g. 33.3\%)
4. Calculate the value required to yield this margin of safety (e.g. value * $2 / 3=100 \mathrm{~B}$ or 150B)
5. This is implies value with growth $>2 E P V$ at $R O C / R=2$
6. From Table 1, this implies growth $>60 \%$ cost of capital
7. Calculate cost of capital (e.g. 12\%) $\rightarrow$ long-term growth $>=7.5 \%$

## Valuing growth (keep in mind)

- Very hard to do
- Very hard to determine margin of safety
- Evidence is that investors systematically overpay
- Best growth is hidden (zero cost growth)
- Unused pricing power
- Temporary problem
- Underperforming divisions.

You have carefully calculated Asset Value, Earnings Power Value, and assessment to the degree of Franchise Value, an assessment of management, a review of mistakes you have made and a review of collateral evidence-only then will you be able to think of the additional value of growth and whether that justifies making an investment. Then you must ask in light of your portfolio-how will you manage risk?

## MANAGING RISK

Highly certain losses are an element of risk. You are interested in the downside. Risk is essentially unanticipated negative event. It is negative things that you don't think of or it is a miscalculation of positive value. You paid too much for a rosy picture and it doesn't turn out. The essence of risk is some sort of unanticipated events: either positive developments that don't materialize or negative events that you did not anticipate.

When you think of risk in those terms, the first thing you want to understand is minimize those risks. Understand why you are buying this particular security.

Think through carefully, you will be less likely to be blindsided. There is less chance to be trading with someone who knows more than you. They have better info.

That is the essence of your search strategy. You have to know what you are buying, where the value resides. Your valuation strategy should tell you what value is certain and by implication where the negative surprise to that valuation resides. So if you are buying things in terms of your valuation procedure as value investors-you still have high residual uncertainty-that is when you are going to be dealing with risk.

How do you plan to control that risk in part? By picking your shots so you are at least as well informed about those likely negative uncertain developments as the person on the other side of the trade.

You also have to have a rigorous understanding of the quality of your understanding. You can't fool yourself that you know what the growth rate is in Microsoft, for example.

You have to develop a sensible search strategy as a first element in controlling risk. Remember that risk is being blindsided by negative events. Someone on the other side of the trade is better informed than you. You want to be trading with the unreflective, uninformed. You don't want to be trading with insiders. You don't want to be undisciplined.

If you have irrationalities, a good investment banker or good broker will know how to take advantage of your irrationality. You have to understand the competition. You have to have on your side the institutional biases and behavioral biases.

Once you have done that your residual risk depends on the situation. Depending on what the valuation information says that will determine the level of risk and uncertainty. Some purchases will be asset based with AV > EPV like Hudson General.

Some will be franchised based. You will pay more for Coke than the asset value. The crucial thing will be the strength of the franchise

Liz Claiborne (LIZ) at $\$ 25$ when you have EPV = AV on your side and the value is $\$ 39$ to $\$ 40$ which has been cross-correlated between the AV and the EPV.

In each situation have a rigorous understanding of the information.
If you do Asset based value, you are worried about asset impairment. That is not a problem in stable industries with a lot of working capital. What will be the catalyst to unlock the asset value if it is below the EPV? For example, if you find a company with $A V$ above EPV, but there is no catalyst to remove bad management, the price and situation could still be the same 10 years later. With Hudson General Gabelli owned stock and was a motivated owner and thus a catalyst to unlock the AV.

Risk: not having a catalyst to surface value. The first step to control risk is through having patience to wait for a situation with a catalyst.

With EPV: reliable management and accounting will reduce your calculations of EPV. Avoid accounting irregularities.

For Asset Value calculations: risk resides in:

- Industry deterioration
- Accounting irregularity
- Asset impairment
- Management depredation
- Economic deterioration
- Non-performing catalyst

Diversify \& margin of safety will also lessen risk. Note the performance record of a Walter Schloss who buys based on asset values-he has a very stable record over many years.

Franchise Purchases: Small mgt. impairment, no asset impairment, rare for accounting irregularities, catalyst unnecessary and limited industry or economic impairment.

Franchise impairment is critical. The power of a franchise is critical. Growth as a margin of safety vs. Industry/Economic impairment. You must understand the franchise extremely well. Enron pretended to have a franchise, but they didn't.

Franchises have pricing power because you dominate an industry. You must be very good at judging the durability and sustainability of that franchise. You won't be able to rely on the AV or EPV to protect you.

In EPV and AV joint purchases, you have more protection. You need to worry about economic deterioration.

As a value investor, if you are adequately diversified, the uncontrollable element of risk is franchise impairment if you want to do that type of investment. Or miscalculation by letting your own hope get away from this very disciplined process that we subscribe to.

What can protect you against that? Sometime diversification will. Miscalculation of AV and EPV. Falling in love with a stock. Being careful about your process and your own internal references-look at your own mistakes.

You have deeply ingrained proclivities. In value investing those types of things that are going to get you into trouble.

The problem with Liz Claiborne is waiting for the price to drop below AV \& EPV. What do you do when you have nothing to buy and the market is going crazy? What is your default strategy?

Know nothing: hold cash or a market index.
If the market is overvalued, then the market is at risk for a decline. Bill Ruane at Sequoia management learned that an index strategy beat cash every time.

Today, you might want to hedge out risk or hold cash.
Impatience can kill you. Acting too fast with too much emotion. A well-considered default strategy and a value approach-an appropriate search strategy, an appropriate valuation technology, an appropriate assessment of the growth and an appropriate assessment of management and the economic condition are what is going to make you rich.

## Constructing the Portfolio

## Risk, Diversification, and Default Strategies

An investor must combine security selections into a portfolio and reduce risk without unduly diluting returns.

To reduce risk:

- Operate within your circle of competence.
- The margin of safety principle provides a mechanism for reducing risk distinct from diversification.
- Refuse to pay a premium for growth.
- Think of risk as the permanent loss of capital.
- Select some Event driven investments that are non-correlated with the market.
- Challenge your own judgments: are insiders confirming your purchase by buying, what of other good value investors.
- Keep reviewing your valuation and assumptions in light of new evidence.
- Position limits are another safeguard. Weight your trades according to opportunity.
- Hedge out some risk with short positions? Be careful since mistakes get bigger rather than smaller.
- Wait for the fat pitch. Cultivate patience.
- Develop a default strategy: Cash or Index Fund.


## END

