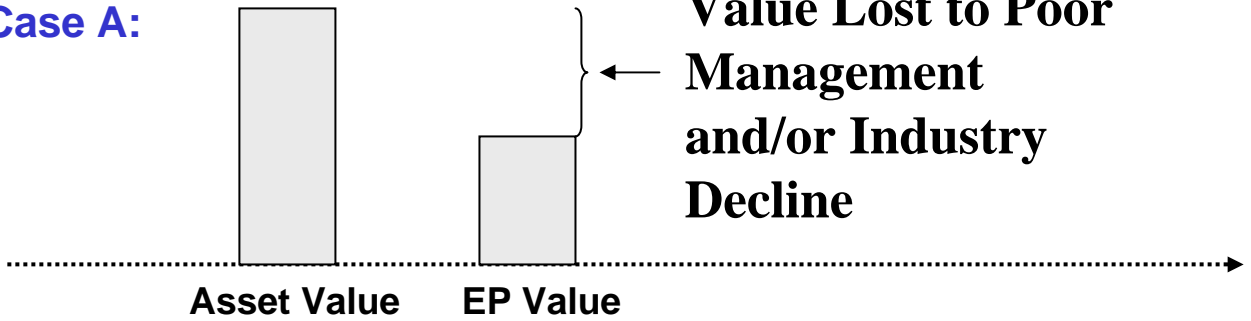

Value Investing Principles

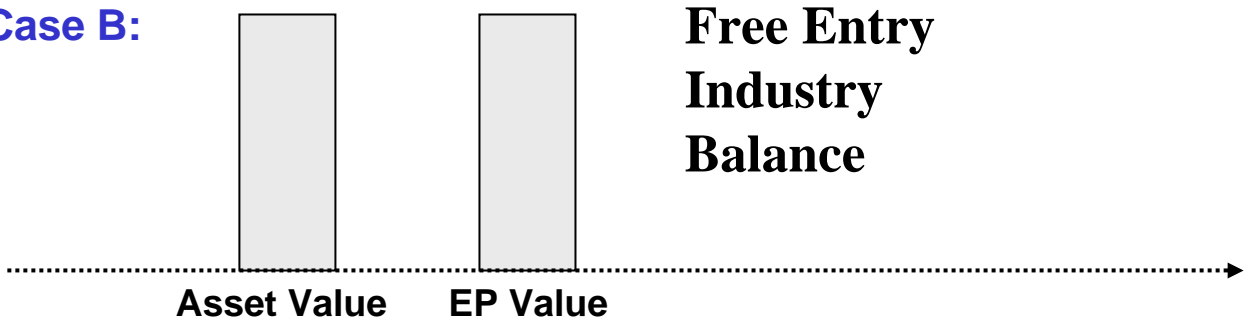
- Identify enterprises whose value as a business is reliably calculable by you (circle of competence)
- Among those enterprises, invest in those whose market price (equity plus debt) is below your calculated value by an appropriate margin of safety (1/3 to 1/2)

Earning Power and Entry - Exit

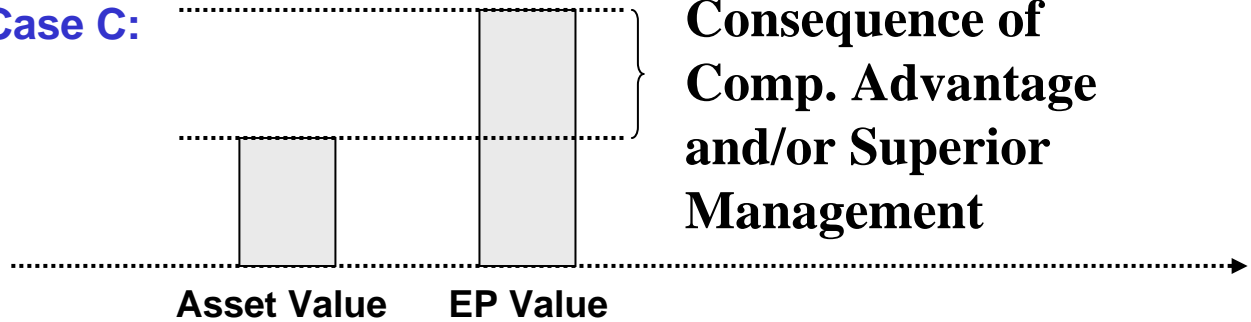
Case A:



Case B:



Case C:



“Sustainability” depends on Continuing Barriers-to-Entry

Varieties of Competitive Advantage

Producer (Cost) Supply – Proprietary Technology or Resources

Consumer (Revenue) Demand – Customer Captivity

Economies-of-Scale (plus Customer Captivity)



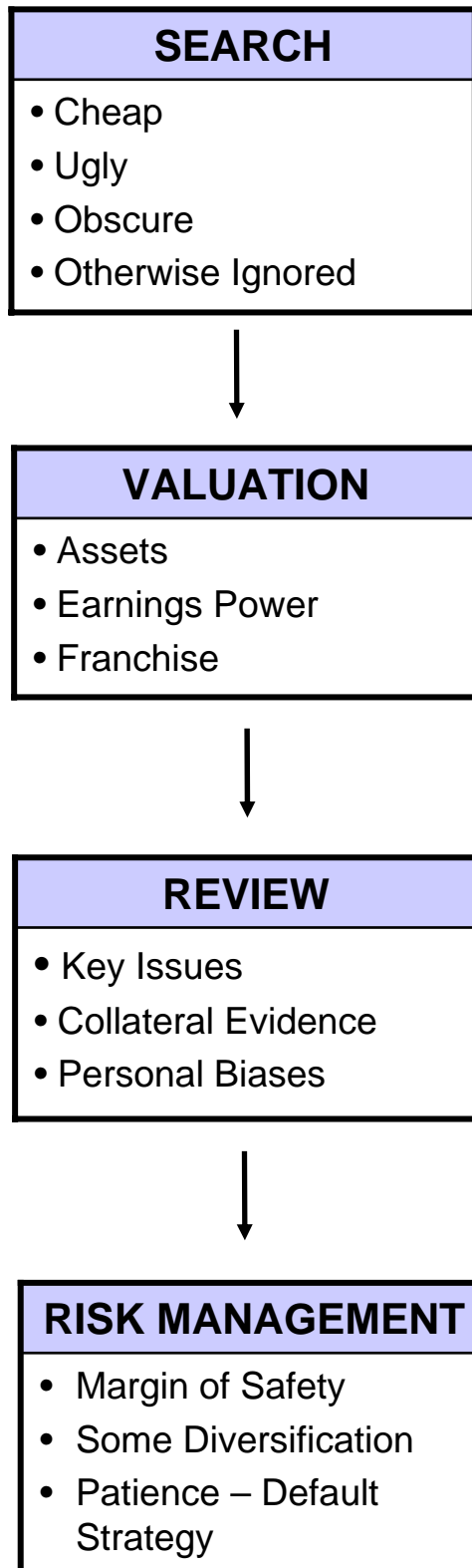
Key to Sustainability

Sustainable Competitive Advantage implies market dominance.

Competitive Advantage Strategy Implications

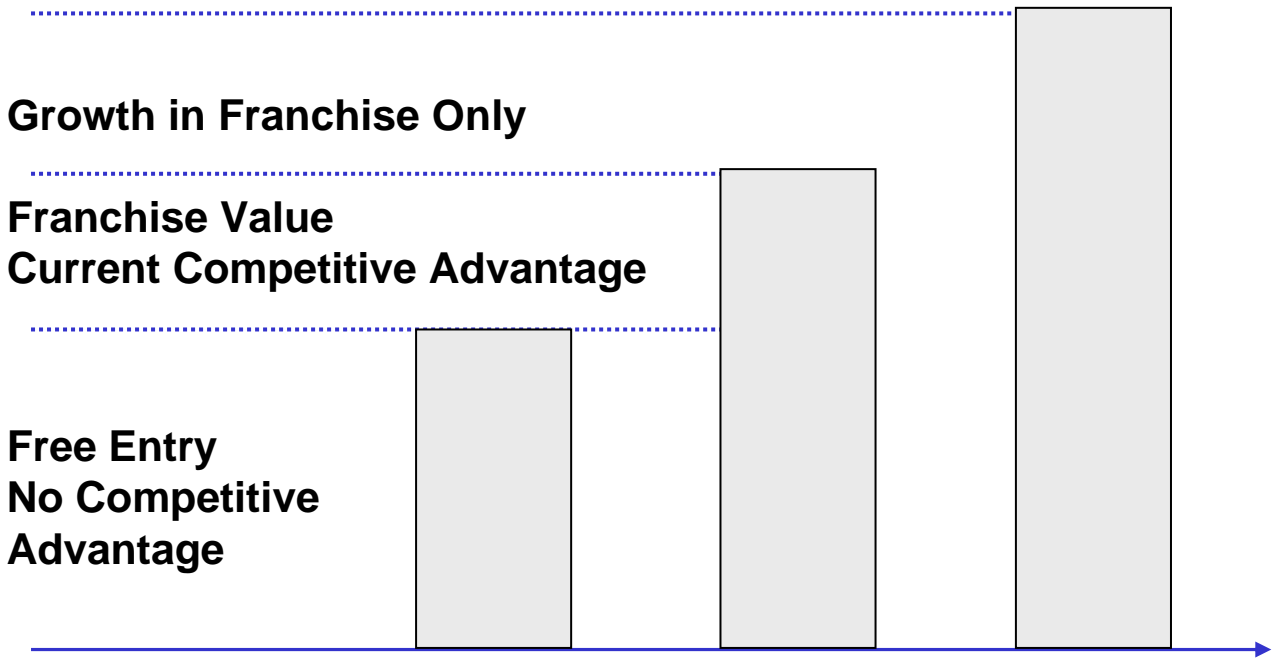
- Analysis on a market-by-market basis
- Large global markets are difficult to dominate
- Local markets (Physical, product geography) are ones susceptible to domination
 - Microsoft (Apple, IBM)
 - Wal-Mart (K-Mart, Circuit City)
 - Intel (Texas Instruments, et al)
 - Verizon (ATT, Sprint)
 - Pharmaceuticals

Value Investing Process



Basic Elements of Value

Strategic Dimension



	Asset Value	Earnings Power Value	Total Value
Reliability Dimension	<ul style="list-style-type: none"> • Tangible • Balance Sheet Based • No Extrapolation 	<ul style="list-style-type: none"> • Current Earnings • Extrapolation • No Forecast 	<ul style="list-style-type: none"> • Includes Growth • Extrapolation • Forecast

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)

Value of Growth - Basic Forces At Work

- **Growing Stream of Cash Flows is more Valuable than a Constant Stream (relative to current Cash Flow)**

I.E. $CF_0 * \left(\frac{1}{R - G} \right)$ vs. $CF_0 * \frac{1}{R}$

The diagram shows two arrows pointing from the labels 'WACC' and 'Growth Rate' to the denominator 'R - G' in the first formula. The 'WACC' arrow points to the 'R' and the 'Growth Rate' arrow points to the '- G'.

- **Growth Requires Investment which reduces current (distributable) Cash Flow**

$$CF_0 = \underbrace{\text{"Earnings"}}_{\text{No Growth } CF_0} \cdot \text{Investment Needed to Support Growth}$$

(N.B. Do Not Discount Growing "Earnings" Streams)

Valuing Growth

Basic Algebra

$$\text{"Earnings"} = \text{Return on Capital (ROC)} * \text{Capital}_{\text{Beg Yr}}$$

$$\text{Necessary Investment to Support Growth at } G\% \text{ PA} = G * \text{Capital}_{\text{Beg Yr}}$$

$$\begin{aligned} \text{Cash Flow of Growing Firm} &= \text{"Earnings"} - \text{Necessary Investment} \\ (CF_0) &= \text{ROC} * \text{Capital}_{\text{Beg Yr}} - G * \text{Capital}_{\text{Beg Yr}} \\ &= (\text{ROC} - G) * \text{Capital}_{\text{Beg Yr}} \end{aligned}$$

$$\text{Value of Growing Firm} = CF_0 * \frac{1}{R - G} = \frac{(\text{ROC} - G) * \text{Capital}_{\text{Beg Yr}}}{R - G}$$

↑
WACC

$$= \left(\frac{\text{ROC} - G}{R - G} \right) \text{Capital}_{\text{Beg Yr}}$$

$$\text{Critical Valuation Factor is } \frac{\text{ROC} - G}{R - G}$$

Valuing Growth

Case 1:

- $\text{ROC} \equiv \text{Return on Capital} \equiv \text{Cost of Capital} \equiv R$
- Then $\frac{\text{ROC} - G}{R - G} = \frac{R - G}{R - G} = 1$ (for all growth rates)

e.g. ($\text{ROC} = R = 10\%$)

ROC = R when there are no Barriers-to-Entry (i.e. no competitive advantages – level playing field) then Growth has no Value.

$$G = 0\% \quad \frac{\text{ROC} - G}{R - G} = \frac{10 - 0}{10 - 0} = 1$$

$$G = 2\% \quad \frac{\text{ROC} - G}{R - G} = \frac{10 - 2}{10 - 2} = 1$$

$$G = 8\% \quad \frac{\text{ROC} - G}{R - G} = \frac{10 - 8}{10 - 8} = 1$$

Valuing Growth

Case 2:

- Competitive disadvantage with growth
↔ ROC less than cost of capital
- then $\frac{ROC - G}{R - G} < 1$
- and $\frac{ROC - G}{R - G}$ gets smaller with higher growth rates.

e.g.

(ROC = 8%, R=10%)

$$G = 0\% \quad \frac{ROC - G}{R - G} = \frac{8 - 0}{10 - 0} = .8$$

$$G = 2\% \quad \frac{ROC - G}{R - G} = \frac{8 - 2}{10 - 2} = .75$$

$$G = 8\% \quad \frac{ROC - G}{R - G} = \frac{8 - 8}{10 - 8} = 0$$

Higher Growth at a
Competitive
Disadvantage Destroys
Value

Valuing Growth

Case 3:

- ROC is greater than R – Firm enjoys a competitive advantage (*franchise*)
 - Shares are stable → $G = \text{Industry Growth Rate}$
- then $\text{ROC} - G$ is greater than $R - G$
- and $\frac{\text{ROC} - G}{R - G}$ is greater than 1 and increasing in G .

e.g. (ROC = 15%, R = 10%)

$$G = 0\% \quad \frac{\text{ROC} - G}{R - G} = \frac{15 - 0}{10 - 0} = 1.5$$

$$G = 2\% \quad \frac{\text{ROC} - G}{R - G} = \frac{15 - 2}{10 - 2} = 1.625$$

$$G = 8\% \quad \frac{\text{ROC} - G}{R - G} = \frac{15 - 8}{10 - 8} = 3.5$$

Only within Franchise
Growth creates Value

Value of Growth

Quantitative Effects

Investment: • \$100 million

Cost of Funds: • 10% (R) = \$10M

Return on Investment (%)	5%	10%	20%
Return on Investment (\$)	\$5M	\$10M	\$20M
Cost of Investment	\$10M	\$10M	\$10M
Net Income Created	(\$5M)	0	\$10M
Net Value Created	(\$50M)	0	\$100M
Qualitative Impact:	Value Destroyed	No Value	Value Created
Situation:	Competitive Disadvantage	Level Playing Field	Competitive Advantage

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

Valuing Growth How much does it add?

- Look at Value (with Growth) ÷ EP Value
- Depend on ROC/R - Franchise Strength
and G/R - Growth Rate

TABLE I

	ROC/R	1.0	1.5	2.0	2.5	3.0
G/R	0.25	1.0	1.11	1.17	1.20	1.22
	0.50	1.0	1.33	1.50	1.60	1.67
	0.75	1.0	2.00	2.50	2.80	3.00

Entries = Value (with Growth) ÷ EPV

It takes a lot to go from 16 PE to 48 PE

Procedure in Practice

(1) Verify existence of franchise

- i. History – Returns – Share Stability
- ii. Sustainable competitive advantages

(2) Calculate earnings return – i.e. $1/PE$

(3) Identify cash distribution portion of earnings return

(Dividend + Repurchase)

(4) Identify organic (low investment) growth

(GDP \pm)

(5) Identify reinvestment return

(Multiple of Pct retained Earnings)

(6) Compare to market return (D/P & growth)

(7) Identify options positive/negative

Simple Examples Franchise Verification

<u>Company</u>	<u>Business</u>	<u>Adjusted ROE</u>
Wal-Mart	Discount Retail	22.5%
American Express	High-end Credit Cards & Services	45.50%
Gannett	Local Newspapers & Broadcasting	15.6%
Dell	Direct PC Supply to Large organizations	100.0% +

Simple Examples Franchise Verification

Sources of Competitive Advantage

Sources of Competitive Advantage

<u>Company</u>	<u>Customer Captivity?</u>	<u>Economies-of-Scale?</u>
Wal-Mart	Slight Customer Captivity	Local Economies-of-Scale
American Express	Customer Captivity	Some Economies-of-Scale
Gannett	Customer Captivity	Local Economies-of-Scale
Dell	Slight Customer Captivity	Economies-of-Scale

Calculated Growth Stock Returns

		<u>CASH</u>		<u>RE</u>		<u>GROWTH</u>		<u>TOTAL</u>
Wal-Mart	=	1.5%	+	4.5%	+	3.5%	=	9.5% + Option

(P/E – 17, Growth – 11 ½%)

(x1 Capital Allocation)

American Express	=	4%	+	4%	+	7.5%	=	15.5% + Option
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(P/E – 17 ½, Growth – 13%)

(2% x 2)

Gannett	=	10%	-	1%	-	2.0%	=	7.0% + Option
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(P/E – 11, Growth –3%)

Dell	=	0%	+	5%	+	?	=	5.0% + Growth +Option
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(P/E – 20, Growth –15%)

(?)

Growth Stock Evaluation Adidas

Does the Franchise Exist?

Sources of Competitive Advantage

- Proprietary Technology – No
- Customer Captivity – Some
- Economies-of-Scale – Yes
(Advertising, Distribution – Regional)

Key Question – What will Nike Do?

Growth Stock Evaluation

Adidas

Does the Franchise Exist?

Industry Returns (2003-5)

<u>Company</u>	<u>Adidas</u>	<u>Nike</u>	<u>Puma</u>
Size (\$B) Sales	8.3	13.7	2.2
ROE	18.3	21.2	40.0
ROIC	33.0	37.3	137.6*
ROS (OI)	9.5	12.6	23.0*
ROS (NI)	4.7	7.8	16.6

* Negative Trend

- Reebok -- Acquired by Adidas (\$40B)
- Converse – Acquired by Nike
- New Balance – Private (WW Sales - \$1.6B)

Growth Stock Evaluation Adidas

Does the Franchise Exist?

Share Stability

Recent History – No Entry, Consolidation

Older History – 1989-92 Adidas wiped out by Nike
1992-98 Recovery
1998-2000 Stagnation

Share Stability

	<u>Europe</u>		<u>North America</u>		<u>Asia</u>	
	<u>2003</u>	<u>2005</u>	<u>2003</u>	<u>2005</u>	<u>2003</u>	<u>2005</u>
Adidas	45	43	25	23	45	44
Nike	55	57	75	77	55	56
Share Chg		2		2		1

Growth Stock Evaluation

Adidas

Relative Returns

	<u>CASH</u>		<u>RE</u>		<u>GROWTH*</u>		<u>TOTAL</u>
Adidas	= 1.0	+	4.0	+	4.0	=	10.0 + <u>Option</u>
	(PE 16 ² / ₃ x)		(5.0%)		(9.5)		
Nike	= 1.5	+	5.5	+	5.0	=	11.5 + <u>Option</u>
	(PE 14 ¹ / ₂)		(5.5%)		(13.0)		
Puma	= 1.0	+	5.0	+	5.0	=	11.0 + <u>Option</u>
	(PE 16 ¹ / ₂ x)		(5%)		(13.0)		

* World GDP plus minimal margin improvement (currently 12-15% plus margin improvement)

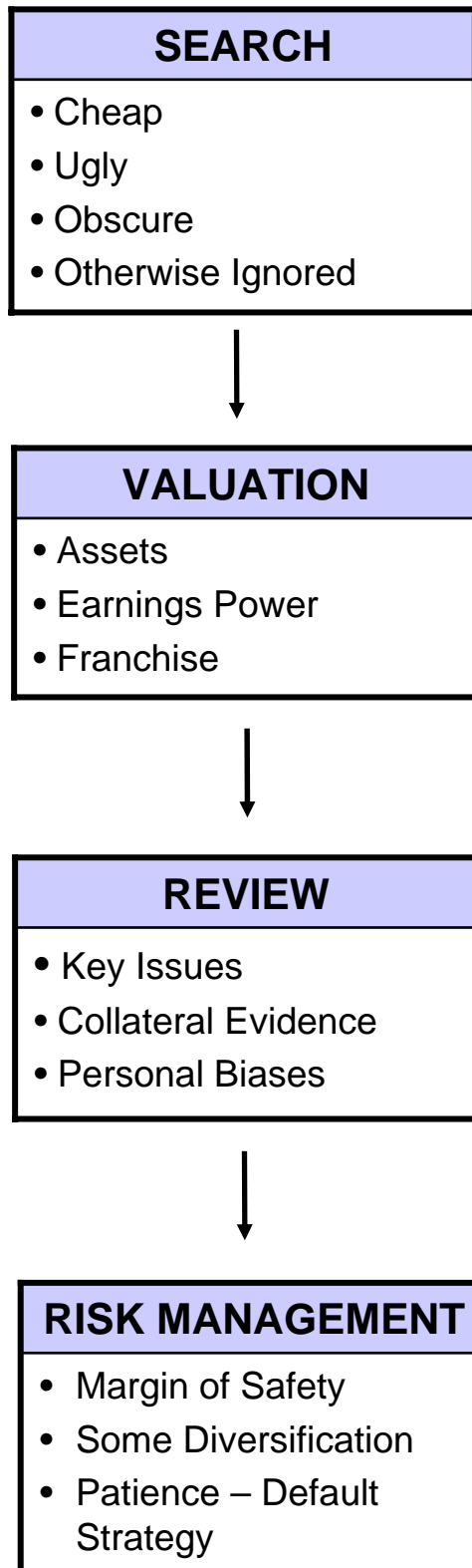
Evaluating Growth Stocks

Results

<u>Stock</u>	<u>Return</u>
Wal-Mart	10.1
Gannett	1.0
American Express	11.6
Dell	-20.0
Dow-Jones Index	19.7
Nike	24.5*
Adidas	2.7*

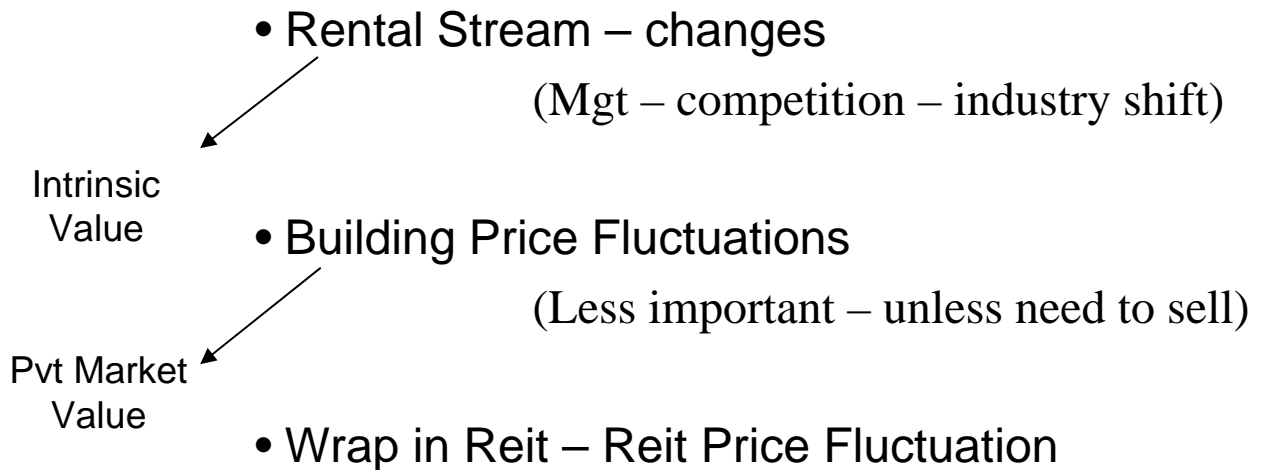
*** Price change since July 2006**

Value Investing Process



Elements of Risk

Building



Risk Management in the Value Process

“Risk” is not the same thing as “Uncertainty”

- Highly certain losses are surely an element of “Risk”
- Upside possibilities that are highly “Uncertain” do not necessarily constitute Risk.

Sources of “Risk” are as Important as “Risks” themselves

- Unanticipated **Negative** development
- Miscalculations of **Positive** values.
(Underestimation of negative values)

Value Investing Risk “Miscalculation”

Diversification may be Underestimated
Margin of Safety will be Miscalculated

Protection Against Miscalculation

- External references
 - Insiders
 - Search strategy
 - Other value Investors
- Internal References
 - Careful tracking
 - Success/Failure
- Pre Consideration of Default Strategy

Relative VS. Absolute Risk The Default Strategy

- Absolute Risk – Capital Preservation
Minimize Deviation (Return – Return on P_{NVO})

P_{NVO} is the Portfolio with “Best” Return with
No Value Opportunities Available

= CASH?

- Relative Risk – Index Performance
Minimize Deviation (Return – Return on P_{Index})

Risk Management in the Value Process

“Risks” are Situational-

- In some cases Asset Value Miscalculations Don't matter
- In other cases, Earnings Power miscalculations don't matter

Negative surprises can be “Minimized”

Situations:

	AV		EPV	
• Asset-Based Purchase	■	>	■	= P
• Franchise-Based Purchase	■	<	■	= P
• Joint-Based purchase	■	=	■	> P

Asset Based Purchases

Unanticipated Negative Development

- (A) • Asset Impairments
 - Management Depredations
 - Industry Deterioration
 - Accounting Irregularity
- Check -
Situation
Specific**
-
- (B) • Non-Performing Catalyst
- Situation
Specific**
-
- (C) • Economic Deterioration
(Depression, Nuclear War)

(A) & (B) Diversification and Margin of Safety

(C) Margin of Safety

Franchise Purchases

Negative Developments

- Management Impairments - SMALL
- Asset Impairment - NONE
- Accounting Irregularity – RARE
- Non-Catalyst – UNNECESSARY
- Industry/Economic Impairment – LIMITED
- Franchise Impairment - CRITICAL

Sector Specific Event

- **Diversification**
- **Growth as a Margin of Safety VS. Industry/Economy Impairment**

Joint Purchase Based

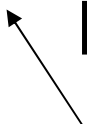
- Company Impairments
 - Industry Impairment
- } - DIVERSIFICATION
- Economy Impairment – MARGIN OF SAFETY

Security Analysis

What Do you Do When There are No Good Ideas?

How Much Do you Buy?

Know Nothing \Rightarrow Modern Portfolio
Theory World

Define “DEFAULT – Risk Minimizing
Portfolio
 **Determining**

(1) Equity Manager – Index Fund

(2) Individual – “Optimal” Index + St.
Portfolio

(3) Value Manager – Statistical Value Index
Fund