

# Business Valuation

Meeting with Entrepreneurial Class  
The College of Coastal Georgia  
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FairValue Advisors, LLC

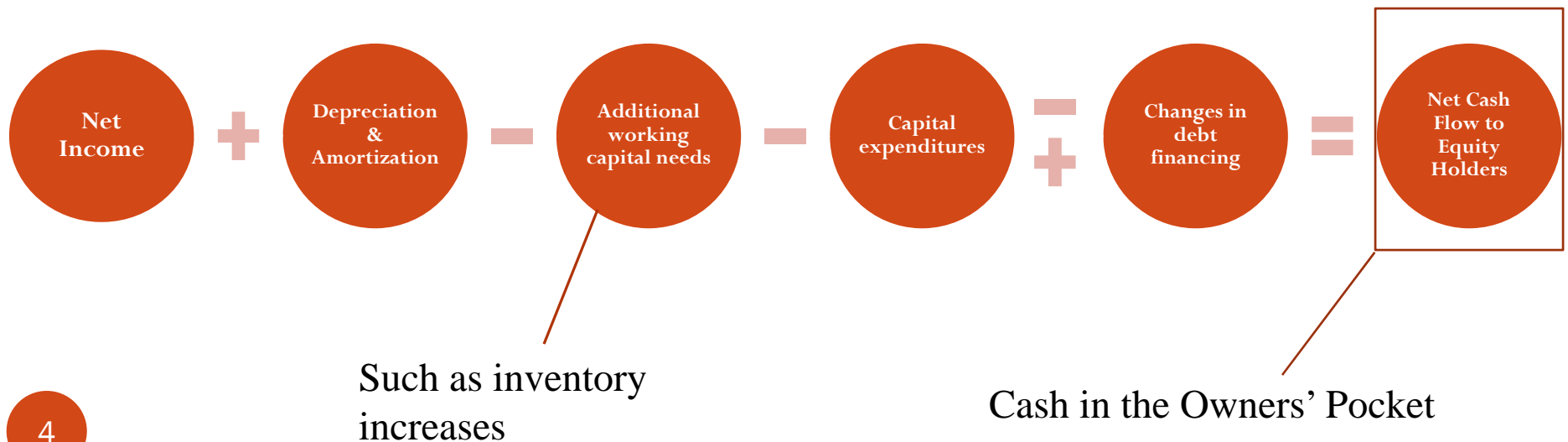
# Common Reasons for a Valuation

- Sales / Purchase of Business
- Mergers/Acquisitions
- Shareholder buy-out / buy-in
- Employee Stock Ownership Plans
- Estate & Succession Planning
- Ownership disputes
- Divorce
- Managing for Value

**What makes a business valuable?**

# Cash is King!

- What is Net Cash Flow?
- Why does Net Cash Flow matter?



Which part of a financial statement shows the net cash *flow* to shareholders?

What is meant by “flow?”

Inventory Turnover of 4x

Good or Bad?

How does quicker inventory turnover  
impact cash flow?

		<b>25% Rev. Growth</b>	<b>25% Rev. Growth</b>
	<b>2011</b>	<b>2012</b>	<b>2013</b>
Revenues	\$2,000,000	\$2,500,000	\$3,125,000
Cost of Sales	1,000,000	1,250,000	1,562,500
Gross Profit	\$1,000,000	\$1,250,000	\$1,562,500
% gross margin	50%	50%	50%
<b>Inventory Turnover</b>	<b>4</b>	<b>4</b>	<b>4</b>
Inventory	\$250,000	\$312,500	\$390,625
Change in cash flow from Inventory		-\$62,500	-\$78,125



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Gross Profit	\$1,000,000	\$1,250,000	\$1,562,500
% gross margin	50%	50%	50%
<b>Inventory Turnover</b>	<b>8</b>	<b>8</b>	<b>8</b>
Inventory	\$125,000	\$156,250	\$195,313
Change in cash flow from Inventory		-\$31,250	-\$39,063

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Change in cash flow from Inventory			
@ <b>4x</b> Inventory Turn.		-\$62,500	-\$78,125
@ <b>8x</b> Inventory Turn.		-\$31,250	-\$39,063

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Inventory	\$250,000	\$156,250	\$195,313
Change in cash flow from Inventory		<b>\$93,750</b>	-\$39,063

		25% Rev. Growth	25% Rev. Growth	
	2010	2011	2012	2013
Revenues	\$2,000,000	\$2,500,000	\$3,125,000	\$3,906,250
Cost of Sales	1,000,000	1,250,000	1,562,500	1,953,125
Gross Profit	\$1,000,000	\$1,250,000	\$1,562,500	\$1,953,125
% gross margin	50%	50%	50%	50%
<b>Inventory Turnover</b>	<b>4</b>	<b>8</b>	<b>4</b>	<b>4</b>
Inventory	\$250,000	\$156,250	\$390,625	\$488,281
Change in cash flow from Inventory		<b>\$93,750</b>	-\$234,375	-\$97,656

Does the owner want a higher or lower amount of assets on the balance sheet?

Does the owner want a higher or lower amount of liabilities on the balance sheet?

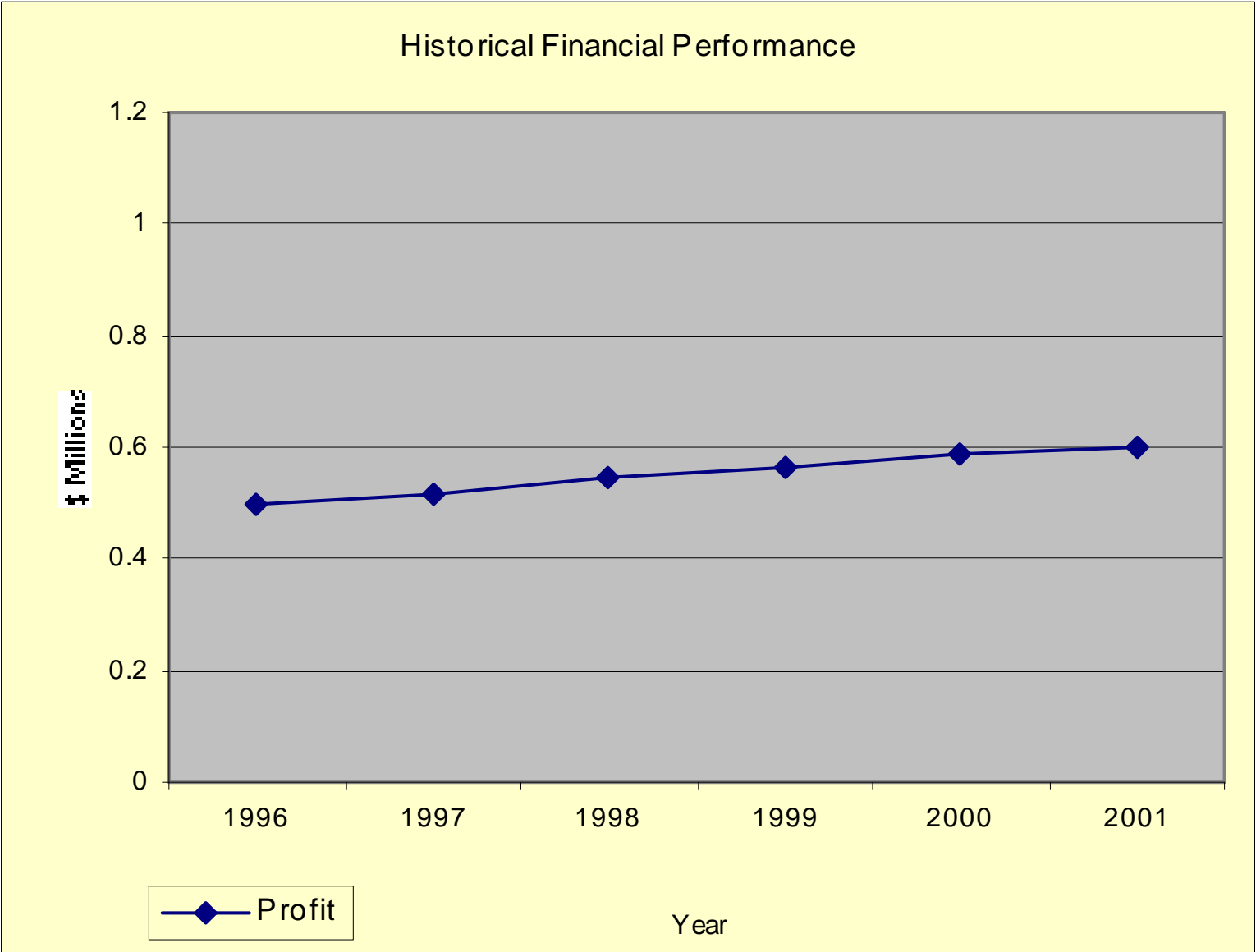
# The Income Approach

- Present value of cash flows
- Risk & Required rate of return
- Growth potential
- Terminal value

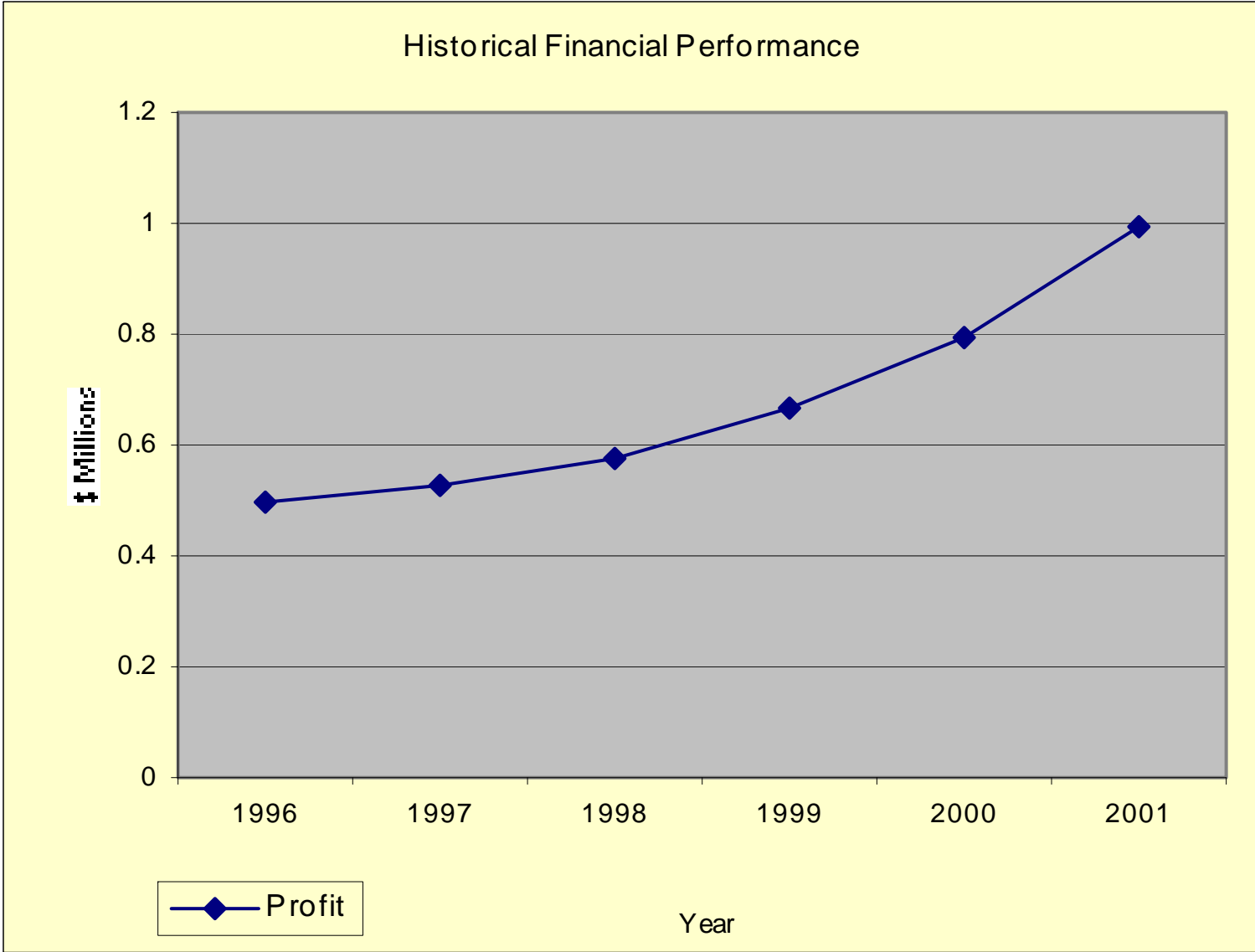
# What is Risk?



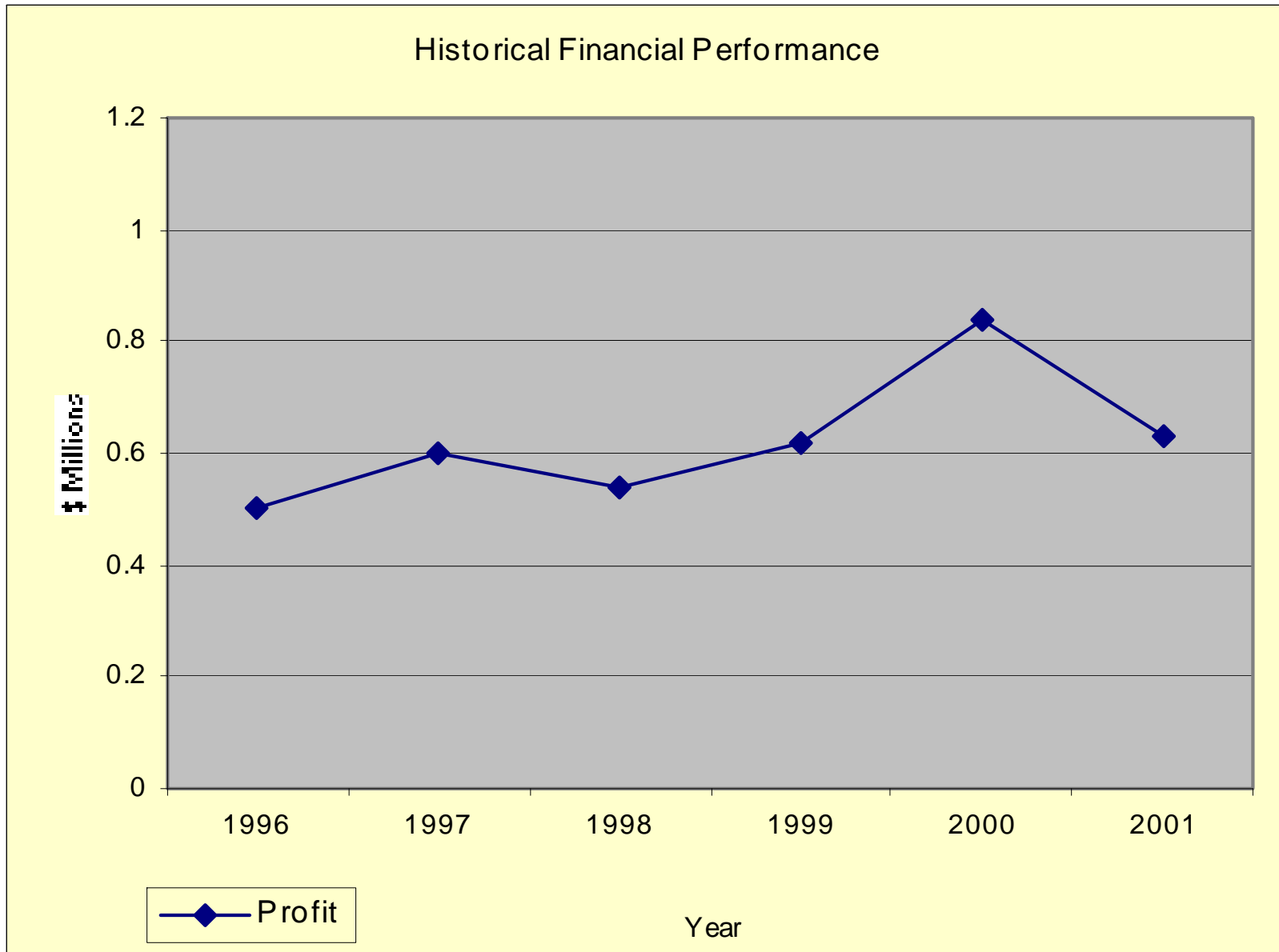
# What is Risk?



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# What is Risk?



# Required Returns\*

- 20 Year U.S. Treasury (“Risk-free Rate) = 2.5% to 5%
- Large Cap. Public Stocks (S&P 500) = 10% to 12%
- Small Cap. (smallest 10% of Public Companies) = 16% to 20%
- Private Equity Firms = target 20% to 25%
- Venture Capital Firms = 30% to 45%+

\* General estimates. Actual historical rates of return vary based on the historical time period analyzed and specific investment. These estimates do not reflect an investment recommendation or a return that can be expected from a particular investment or asset class.

# Time Value of Money

## Compounding:

**Compound Annual  
Rate of Return**

10%

**Initial  
Investment**

100,000

**Year 1**

110,000

$100,000 \times (1+.10)$

**Year 2**

121,000

$100,000 \times (1+.10) \times (1+.10)$

$100,000 \times (1+.10)^2$

# Time Value of Money

## Discounting:

**Required**

**Annual Return**

10%

**Present Value**

**Year 1**

100,000

110,000

$110,000 / (1+.10)$

**Year 2**

100,000

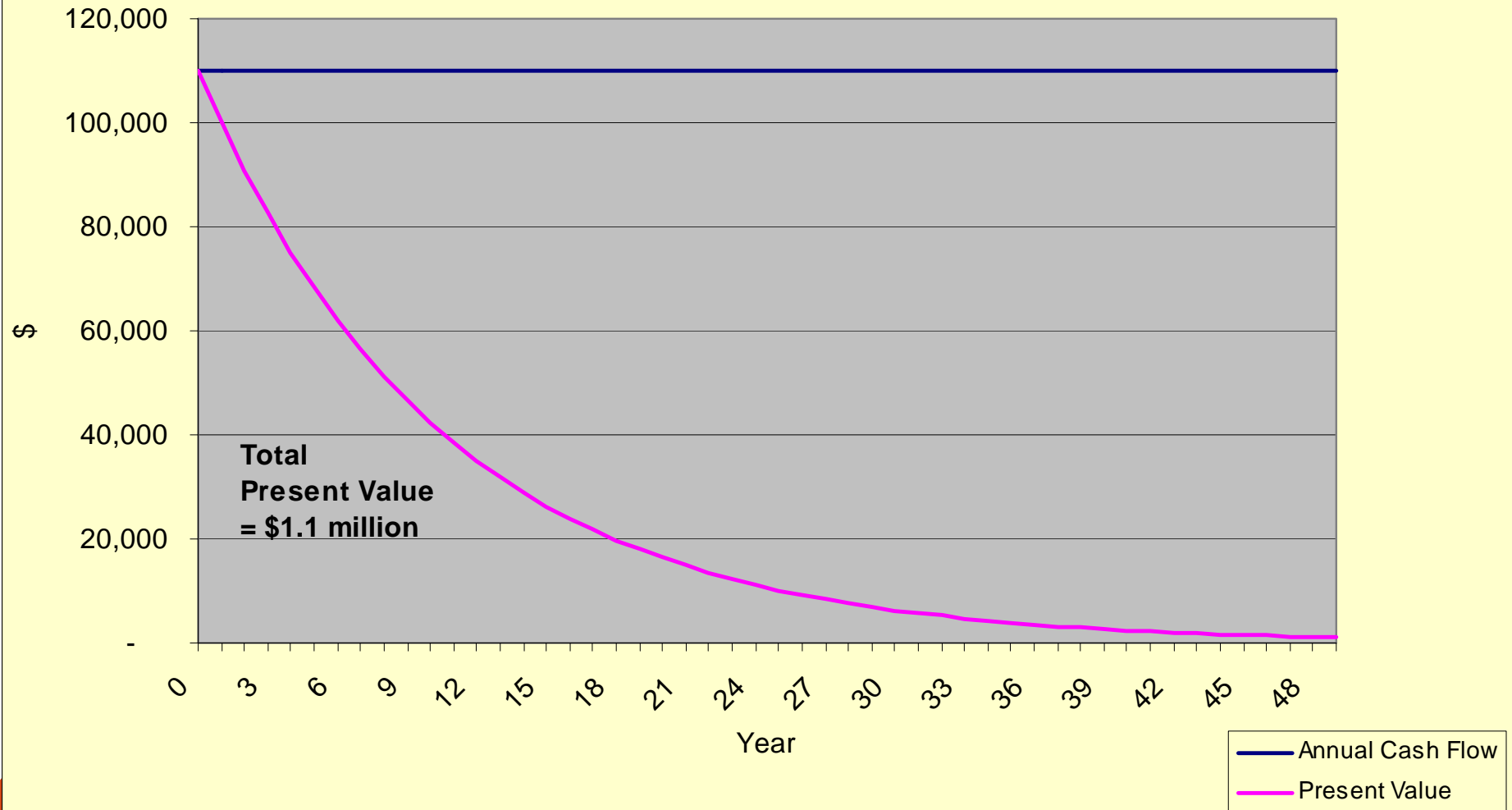
121,000

$121,000 / (1+.10) / (1+.10)$

$121,000 / (1+.10)^2$

# Time Value of Money

Present Value of \$110,000 Annuity  
10% Required Return



## Cost of Equity ( $K_e$ )

### Build-up Method:

Risk-free Rate <sup>1</sup>	4.85%
Large Stock Equity Risk Premium <sup>2</sup>	<u>5.00%</u>
Large Public Company Return	9.85%
Industry Risk Premium <sup>3</sup>	8.60%
Company Specific & Size Premium <sup>4</sup>	<u>3.50%</u>
<b>Required Rate of Return (<math>K_e</math>)<sup>5</sup></b>	<b><u><u>21.95%</u></u></b>

### CAPM:

Risk-free Rate <sup>1</sup>	4.85%
Large Stock Equity Risk Premium <sup>2</sup>	5.00%
x beta	<u>1.86</u>
Beta Adjusted Risk Premium	9.28%
Company Specific & Size Premium <sup>4</sup>	<u>3.50%</u>
<b>Required Rate of Return (<math>K_e</math>)<sup>5</sup></b>	<b><u><u>17.63%</u></u></b>

**Selected Required Rate of Return (ke) = 19.80%**

1) Based on the yield to maturity for 20-Year Treasury Note as of 12/29/06.

2) Return earned on the public companies in excess of the 20-Year Treasury Note - Estimated from Duff & Phelps' Risk Premium Report.

3) Incremental return earned in specific industry (Industry risk premium) - Ibbotson Data.

4) Additional premium based on specific risk characteristics of the subject company & relative size.

5) Estimated return on equity investment required by a typical willing buyer.

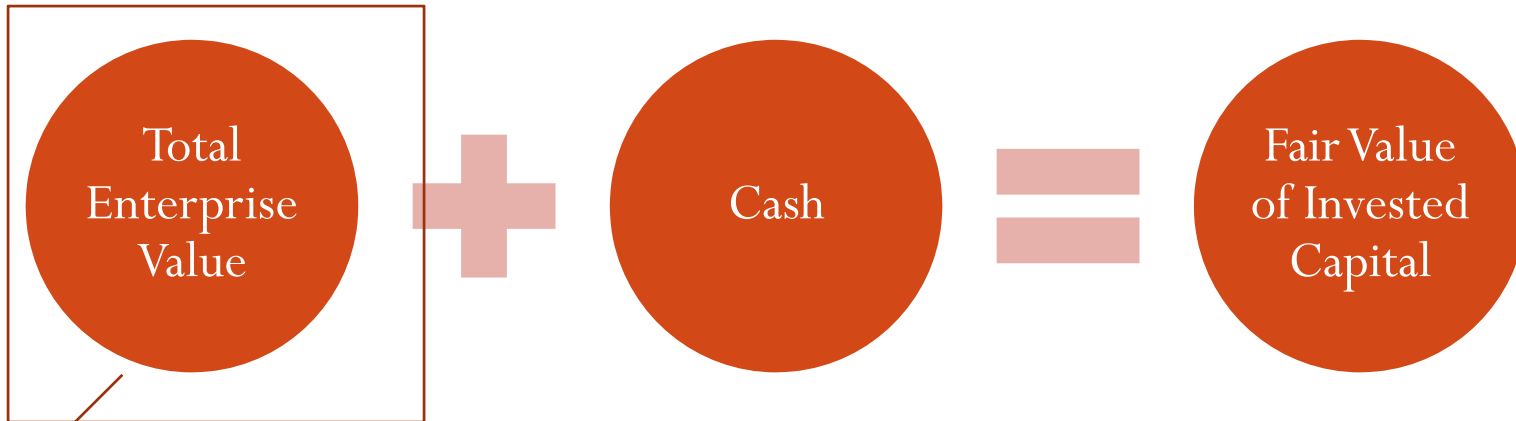


## Discounted Cash Flow - Equity Method

	2007F	2008F	2009F	2010F	2011F	2012F	2013F	2014F	2015F
Revenues - net	\$49,139	\$58,721	\$69,291	\$80,378	\$91,630	\$100,793	\$106,841	\$112,984	\$119,481
Cost of Sales	39,803	47,564	56,126	65,106	74,221	81,643	86,541	91,517	96,780
Gross Profit	9,336	11,157	13,165	15,272	17,410	19,151	20,300	21,467	22,701
Total Cash Operating Expenses	5,126	5,786	6,485	7,522	8,575	9,433	9,999	10,574	11,182
EBITDA	4,211	5,371	6,681	7,749	8,834	9,718	10,301	10,893	11,520
Depreciation	701	706	756	823	906	997	1,088	1,329	1,405
Operating Profit	3,510	4,665	5,925	6,926	7,928	8,721	9,213	9,564	10,114
Other Income - net	32	32	33	34	35	36	37	39	41
EBIT	3,542	4,697	5,958	6,960	7,963	8,757	9,250	9,603	10,155
Interest Expense	333	364	411	466	527	585	634	674	713
Pre-tax Income	3,208	4,333	5,547	6,494	7,437	8,171	8,616	8,929	9,442
Less: Provision for Income Taxes	1,235	1,668	2,136	2,500	2,863	3,146	3,317	3,438	3,635
<b>After-tax Income</b>	<b>1,973</b>	<b>2,665</b>	<b>3,412</b>	<b>3,994</b>	<b>4,574</b>	<b>5,025</b>	<b>5,299</b>	<b>5,491</b>	<b>5,807</b>
Plus: Depreciation & Amortization	701	706	756	823	906	997	1,088	1,329	1,405
Gross Operating Cash Flow	2,674	3,371	4,167	4,817	5,479	6,022	6,386	6,820	7,212
Less: Add'l Working Capital (Needs)	(1,706)	(1,138)	(1,255)	(1,316)	(1,336)	(1,088)	(718)	(729)	(771)
Less: Capital Expenditures	(614)	(734)	(1,039)	(1,206)	(1,374)	(1,512)	(1,603)	(1,695)	(1,792)
Increase/(Decr.) in Net Debt Financing	255	466	615	680	722	641	493	438	463
Increase/(Decrease) in All Other - Net	1	1	1	1	1	1	0	0	0
Net Cash Flow to Equity Holders <sup>3</sup>	610	1,966	2,489	2,975	3,491	4,064	4,559	4,834	5,112
Time Period <sup>4</sup>	0.50	1.50	2.50	3.50	4.50	5.50	6.50	7.50	8.50
Present Value Factor $K_e = 19.8\%$	0.9136	0.7626	0.6366	0.5314	0.4436	0.3702	0.3091	0.2580	0.2153
Present Value (PV)	557	1,499	1,584	1,581	1,549	1,505	1,409	1,247	1,101
Sum of PV of Yearly Cash Flows	\$12,032				Twelve-month Est. Cash Flow for 2016F		\$5,406		
Plus: PV of Perpetuity	<u>8,286</u>				Required Rate of Return ( $K_e$ )		19.80%		
<b>100% Equity Value from Operation</b>	<b><u>\$20,300</u></b>		rounded		Less: long-term growth (g)		<u>5.75%</u>		
					Capitalization Rate ( $K_e - g$ )		14.05%		
					Value of Perpetuity in Terminal Yr.		\$38,480		
					Periods to Discount		8.50		
					PV Factor with $K_e = 19.8\%$		<u>0.2153</u>		
					Present Value of Perpetuity (Terminal Value)		\$8,286		

# Market Approach

- Market multiples of publicly held companies
- Comparisons to private market transactions
- Types of Market Multiples
  - Price/Earnings
  - Enterprise Value / EBITDA
  - Price/Revenues
- Limitations
  - Degree of comparability
  - Finding information

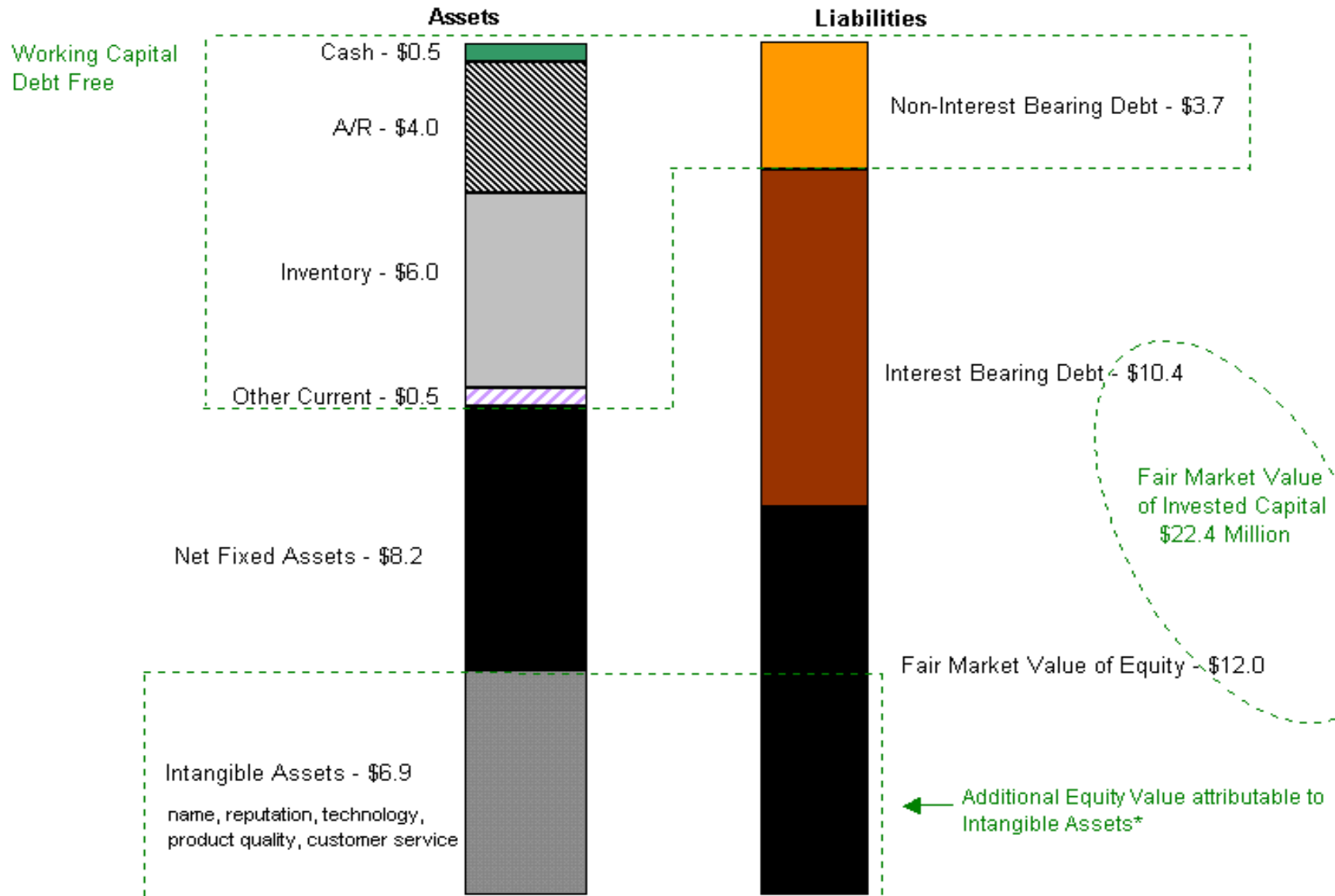


Based on EBITDA multiple



Based on P/E Multiple

# Market-based Balance Sheet



\* Example assumes that book value of working capital and tangible assets approximate their respective fair market value.

# The Anatomy of a Multiple

- What causes a Price/Earnings multiple to be high?
- What causes a Price/Earnings multiple to be low?

# Cost Approach

- Used to establish a floor value
- Businesses generating a low return on assets
- Little or no intangible value (start-ups?)

# Reconciliation of Valuation Methods

- Income vs. Market Approach
  - Explicit vs. Implicit Assumptions
    - Risk
    - Growth
- Cost approach
  - Avg. of Race horse vs. Burgers?

# What Financial Metrics Impact Value?

- Existing customer penetration
- New customers
- Geographic expansion
- New product/service offering

- Margin stability
- Price pressures/increases
- Economies of scale/efficiencies
- Fixed expenses

Revenue  
Growth

Profit  
Margins

## External Forces:

Regulatory environment  
Economic conditions  
Industry conditions &  
competitive environment

Asset  
Utilization

Financial  
Leverage

- Working capital requirements
- Fixed Assets / Expenditure levels

- Debt capacity/excess debt
- Cost of debt
- Hybrid securities /Preferred Stock



# Typical Business Life Cycle

