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## Financial Management

### *Cash Flow Forecasting and Financing Needs*

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## Importance of Financial Forecasting

- Financial forecasting is the process of estimating future business performance (sales, costs, earnings)
- Corporations use forecasting to do financial planning, which includes an assessment of their future financial needs. Forecasting also is important for production planning, human resource planning, etc.
- Forecasting is also used by outsiders to value companies and their securities.
- Here we are taking the aggregate perspective of the whole firm, rather than looking at individual projects.

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## Key concepts


- **Growth** is a key theme behind financial forecasting. Remember that growth should not be the underlying goal of a corporation – creating shareholder value is the appropriate goal. In many cases, however, shareholder value creation is enabled through corporate growth.
- Financial planning is enabled by creating **pro forma** income statements and balance sheets. Since different income statement and balance sheet items grow at different rates, in order for a balance sheet to really balance, we may have to play with a **plug** variable, such as future debt financing, equity issues, dividend payout rates. As we shall see, this requires an iterative process.

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## 1. Corporate Financial Planning and Raising Capital

- Corporate financial planning formulates the method by which financial goals are to be achieved.
- There are two dimensions (+ scenario analysis):
  1. A Time Frame
    - Short run is probably anything less than a year.
    - Long run is anything over that; usually taken to be a two-year to five-year period.
  2. A Level of Aggregation
    - Each division and operational unit should have a plan.
    - As the capital-budgeting analyses of each of the firm's divisions are added up, the firm aggregates these small projects as a big project.

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- Scenario Analysis

- Each division might be asked to prepare three different plans for the near term future:
  - *A Worst Case*
  - *A Normal Case*
  - *A Best Case*

***IMPORTANT: You should have a back-up financing plan for the "Worst Case Scenario"***

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## Pro Forma Statements

- As in your cash flow preparation, the financial plan will have a forecast balance sheet, a forecast income statement, and a forecast sources-and-uses-of-cash statement.
- These are called *pro forma* statements or *pro formas*.

### Asset Requirements

- The financial plan will describe projected capital spending.
- In addition it will discuss the proposed uses of net working capital (build up inventory, provide financing for customers i.e. accounts receivables.)

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## Financial Requirements

- The plan will include a section on financing arrangements.
- Dividend policy and capital structure policy should be addressed.
- If new funds are to be raised, the plan should consider what kinds of securities must be sold and what methods of issuance are most appropriate.

OPTIONS: (Huge number here, I just list a few at this time).

- Stock: Private equity, IPO or seasoned equity, Debt etc.

Constraints – may have these frequently:

1. Current ratio (Current Assets/Current Liab) must not fall below 2.0.
2. Total debt/assets ratio must not rise above 0.40.

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## 2. EFN - External Funds Needed

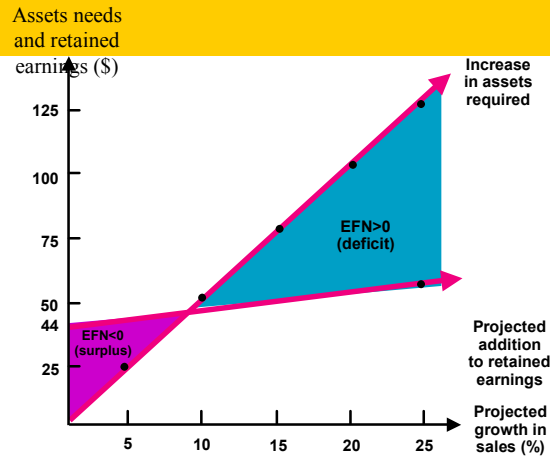
- The external funds needed can be expressed as follows – where  $p$  is the profitability margin (depreciation added back),  $1-d$  is the retention ratio – assuming that the firm maintains a constant debt to sales ratio.

$$EFN = \left( \frac{Assets}{Sales} \right) \times \Delta Sales - (p \times Projected Sales) \times (1-d)$$

- This did assume that the debt ratio remained constant and thus that the debt finance component of EFN increased as follows:

$$\frac{Debt}{Sales} \times \Delta Sales$$

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What happens if the firm cannot (or does not want to) raise money externally? Growth is limited to cash flows produced internally.

A big question is why some firms lack *Flexibility* & cannot, or does not wish to, raise external capital.

Q: What is the *maximum* internal growth rate (IGR) achievable?

$$\begin{aligned}
 IGR &= \frac{\text{Retained Earnings}}{\text{Net Income}} * \frac{\text{Net Income}}{\text{Equity}} * \frac{\text{Equity}}{\text{Assets}} \\
 &= \text{retention ratio} * ROE * \frac{\text{Equity}}{\text{Assets}}
 \end{aligned}$$

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### 3. SUSTAINABLE GROWTH RATE

Now assume:

1. no external *equity* financing is available (debt can be raised however in proportion to internal equity retained in business)
2. the current debt/equity ratio is optimal  
(no increase in financial leverage (D/E), similar interest rates, similar profitability etc.)

Q. What is the *maximum* growth rate achievable now?

A. The sustainable growth rate is given by

$$SGR = retention\ ratio * ROE$$

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### Uses of the Sustainable Growth Rate

- A commercial lender would want to compare a potential borrower's actual growth rate with their sustainable growth rate.
- If the actual growth rate is much higher than the sustainable growth rate, the borrower runs the risk of "growing broke" and any lending must be viewed as a down payment on a much more comprehensive lending arrangement than just one round of financing.

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## 4. Putting it into Practice

1. We begin with some simple relationships to show how growth creates a financing need.

From before we note that in DCF we discount each period's cash flows – assuming that if CF is negative we can get \$\$:

$$CF_{t+1} = CF_t(1+g) = EBIAT(DA)_t(1+g) - (FA + NWC)_t(g)$$

(Where EBIAT(DA) is earnings before interest, after tax, depreciation added back. FA is net fixed assets. NWC is net working capital)

Of course this equation ignores the fact that investments **have future cash flow, financing and growth implications**. Cash flows generally occur for multiple periods after initial investment. This can create an **external financing need (EFN)**.

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## Pro forma Financial Statements

Income Statement	2001	2002	2003	Balance Sheet	2001	2002	2003
				Cash			
Sales				Accounts Receivable			
Cost of Goods Sold				Inventories			
Gross Profit				Current Assets			
Operating Expenses				Long Term Assets			
Other Expenses				Total Assets			
Net operating Income				Accounts Payable			
Interest Expense				Current Liabilities			
Net Income before Taxes				Long Term Liabilities			
Taxes (40%)				Total Liabilities			
Net Income				Common Stock			
				Retained Earnings			
				Total Owners Equity			
				Total Liabilities & Equity			

- Often uses spreadsheet software
- Analysis generally spans 1 to 5 years out
- Focus is concentrated on next quarter / year

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# Exercise

	Actual FY01	Forecast FY02
<b>Income Statement</b>		
Sales	\$ 3,000	
Operating Costs	\$ 2,716	
EBIT	\$ 284	
Interest	\$ 88	
EBT	\$ 196	
Taxes (40%)	\$ 78	
NI	\$ 118	
Preferred Dividends	\$ 4	
NI Available to Common	\$ 114	
Dividends to Common	\$ 58	
Additions to Retained Earnings		
<b>Balance Sheet</b>		
Current Assets	\$ 1,000	
Long-term Assets	\$ 1,000	
Total Assets	\$ 2,000	
Current Liabilities	\$ 310	
Debt	\$ 754	
Total Liabilities	\$ 1,064	
Preferred Stock	\$ 40	
Common Stock	\$ 130	
Retained Earnings	\$ 766	
Total Common Equity	\$ 896	
Total Liabilities and Equity	\$ 2,000	

Forecast FY02 Financial Statements using the following assumptions:

1. Sales and costs grow at 10%
2. Long-term assets increase at the same rate as sales
3. Spontaneous accounts increase at the same rate as sales
4. 8% dividend growth
5. Additional financing 100% with debt (6% yield)

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# Solution

	Actual FY01		First Pass Forecast FY02		Second Pass Forecast FY02		Final Forecast FY02
<b>Income Statement</b>							
Sales	\$ 3,000	x 1.1	\$ 3,300		\$ 3,300		\$ 3,300
Operating Costs	\$ 2,716	x 1.1	\$ 2,988		\$ 2,988		\$ 2,988
EBIT	\$ 284		\$ 312		\$ 312		\$ 312
Interest	\$ 88	=	\$ 88	+ 6	\$ 94	+ 0.2	\$ 94
EBT	\$ 196		\$ 224		\$ 218		\$ 218
Taxes (40%)	\$ 78		\$ 90		\$ 87		\$ 87
NI	\$ 118		\$ 135		\$ 131		\$ 131
Preferred Dividends	\$ 4	=	\$ 4		\$ 4		\$ 4
NI Available to Common	\$ 114		\$ 131		\$ 127		\$ 127
Dividends to Common	\$ 58	X 1.08	\$ 63		\$ 63		\$ 63
Additions to Retained Earnings			\$ 68		\$ 64		\$ 64
<b>Balance Sheet</b>							
Current Assets	\$ 1,000	x 1.1	\$ 1,100		\$ 1,100		\$ 1,100
Long-term Assets	\$ 1,000	x 1.1	\$ 1,100		\$ 1,100		\$ 1,100
Total Assets	\$ 2,000		\$ 2,200		\$ 2,200		\$ 2,200
Current Liabilities	\$ 310	x 1.1	\$ 341		\$ 341		\$ 341
Debt	\$ 754	=	\$ 754	+ 101	\$ 855	+ 4	\$ 859
Total Liabilities	\$ 1,064		\$ 1,095		\$ 1,196		\$ 1,200
Preferred Stock	\$ 40	=	\$ 40		\$ 40		\$ 40
Common Stock	\$ 130	=	\$ 130		\$ 130		\$ 130
Retained Earnings	\$ 766		\$ 834		\$ 830		\$ 830
Total Common Equity	\$ 896		\$ 964		\$ 960		\$ 960
Total Liabilities and Equity	\$ 2,000		\$ 2,099		\$ 2,196		\$ 2,200
Additional Funds Needed			101		4		(0)

## The Starbuck's Case Study

- Valuing Starbuck's common stock in 1998
  - Produce 5-years of pro forma financial statements to estimate cash flows
  - Make assumptions about long-term growth
  - Estimate the appropriate discount rates
  - Value = DPV of Future Cash flows
  - Buy if DPV "Intrinsic Value" > Current Price "Market Value"

**Later we will review the case of the Starbuck's case and see how I did!**

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## Starbucks Corp. (circa 1998)

- Premium coffee retailer with sales of nearly \$1 billion
- Established 1971 with one store in Seattle, Washington
- 1,381 stores in North America
- Average \$800,000 in revenue per store
- Expanding into new products (bottled drinks, ice cream, beans) to exploit name brand
- Current Stock Price (1998) = \$48 (79m Shares)
- Market Capitalization = \$3.8 billion

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## Sales and Cost Assumptions

### ➤ Sales

- Same store sales growth of 6% (1997 actual)
- 500 new stores in 1998 (SBUX), then 440 per year, same revenue per store as existing
- Calculation: 1998 Sales = (Avg# stores \* Avg Rev/Store \* same store growth = 1,601 \* \$805.5 \* 1.06 = \$1,367)

### ➤ Costs

- Cost growth = sales growth
- Taxes = 40%
- Interest expense = 8% \* debt

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## Pro Forma Income Statement

Income Statement	1995	1996	1997	1998	1999	2000	2001	2002
Sales	\$ 465	\$ 698	\$ 967	\$ 1,367	\$ 1,847	\$ 2,380	\$ 3,001	\$ 3,720
Cost of Goods Sold	\$ 360	\$ 337	\$ 741	\$ 1,047	\$ 1,416	\$ 1,824	\$ 2,300	\$ 2,851
Gross Profit	\$ 105	\$ 361	\$ 226	\$ 319	\$ 432	\$ 556	\$ 701	\$ 869
Operating Expenses	\$ 42	\$ 268	\$ 85	\$ 120	\$ 162	\$ 209	\$ 264	\$ 327
Other Expenses	\$ 16	\$ 17	\$ 41	\$ 58	\$ 78	\$ 101	\$ 127	\$ 158
Net operating income	\$ 47	\$ 76	\$ 100	\$ 141	\$ 191	\$ 246	\$ 310	\$ 385
Interest Expense	\$ 4	\$ 8	\$ 7	\$ 13	\$ 13	\$ 13	\$ 13	\$ 13
Net Income before Taxes	\$ 43	\$ 68	\$ 93	\$ 128	\$ 178	\$ 233	\$ 297	\$ 371
Taxes (40%)	\$ 17	\$ 26	\$ 36	\$ 51	\$ 71	\$ 93	\$ 119	\$ 149
Net Income	\$ 26	\$ 42	\$ 57	\$ 77	\$ 107	\$ 140	\$ 178	\$ 223
Dividends Paid	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Additions to Retained Earnings	\$ 26	\$ 42	\$ 57	\$ 77	\$ 107	\$ 140	\$ 178	\$ 223

[Dollars are in Millions]

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## Balance Sheet Assumptions

- Short-term assets and liabilities grow at the same rate as sales
- Long-term assets grow at the same rate as stores
- Debt used for required funding

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## Pro forma Out-of-Balance Sheet

<b>Balance Sheet</b>	1995	1996	1997	1998	1999	2000	2001	2002
Cash	\$ 63	\$ 229	\$ 153	\$ 216	\$ 292	\$ 377	\$ 475	\$ 589
Accounts Receivable	\$ 19	\$ 27	\$ 44	\$ 62	\$ 84	\$ 108	\$ 137	\$ 169
Inventories	\$ 124	\$ 83	\$ 120	\$ 170	\$ 229	\$ 295	\$ 372	\$ 462
Current Assets	\$ 206	\$ 339	\$ 317	\$ 448	\$ 606	\$ 780	\$ 984	\$ 1,219
Plant & Equipment	\$ 245	\$ 369	\$ 483	\$ 637	\$ 791	\$ 945	\$ 1,120	\$ 1,294
Other Long Term Assets	\$ 17	\$ 18	\$ 51	\$ 72	\$ 97	\$ 126	\$ 158	\$ 196
Net Fixed Assets	\$ 262	\$ 387	\$ 534	\$ 709	\$ 888	\$ 1,070	\$ 1,278	\$ 1,491
<b>Total Assets</b>	<b>\$ 468</b>	<b>\$ 726</b>	<b>\$ 851</b>	<b>\$ 1,157</b>	<b>\$ 1,494</b>	<b>\$ 1,850</b>	<b>\$ 2,262</b>	<b>\$ 2,710</b>
Accounts Payable	\$ 29	\$ 38	\$ 46	\$ 65	\$ 88	\$ 113	\$ 143	\$ 177
Short term Notes Payable	\$ 13	\$ 16	\$ 26	\$ 37	\$ 50	\$ 64	\$ 81	\$ 100
Accrued Expenses	\$ 29	\$ 47	\$ 67	\$ 95	\$ 128	\$ 165	\$ 208	\$ 258
Current Liabilities	\$ 71	\$ 101	\$ 139	\$ 196	\$ 266	\$ 342	\$ 431	\$ 535
Bonds (LTD)	\$ 80	\$ 165	\$ 165	\$ 165	\$ 165	\$ 165	\$ 165	\$ 165
<b>NEW BONDS</b>								
Other Long Term Liabilities	\$ 5	\$ 9	\$ 15	\$ 21	\$ 29	\$ 37	\$ 47	\$ 58
<b>Total Liabilities</b>	<b>\$ 156</b>	<b>\$ 275</b>	<b>\$ 319</b>	<b>\$ 383</b>	<b>\$ 459</b>	<b>\$ 544</b>	<b>\$ 643</b>	<b>\$ 757</b>
Owners Equity								
Common Stock	\$ 266	\$ 361	\$ 387	\$ 387	\$ 387	\$ 387	\$ 387	\$ 387
Retained Earnings	\$ 47	\$ 90	\$ 145	\$ 222	\$ 329	\$ 468	\$ 647	\$ 870
Total Owners Equity	\$ 313	\$ 451	\$ 532	\$ 609	\$ 716	\$ 855	\$ 1,034	\$ 1,257
<b>Total Liabilities &amp; Equity</b>	<b>\$ 469</b>	<b>\$ 726</b>	<b>\$ 851</b>	<b>\$ 992</b>	<b>\$ 1,175</b>	<b>\$ 1,399</b>	<b>\$ 1,677</b>	<b>\$ 2,014</b>
<b>L&amp;E - Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ (166)</b>	<b>\$ (319)</b>	<b>\$ (451)</b>	<b>\$ (585)</b>	<b>\$ (696)</b>

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## Pro forma Balance Sheet

<b>Balance Sheet</b>	1995	1996	1997	1998	1999	2000	2001	2002
Cash	\$ 63	\$ 229	\$ 153	\$ 216	\$ 292	\$ 377	\$ 475	\$ 589
Accounts Receivable	\$ 19	\$ 27	\$ 44	\$ 62	\$ 84	\$ 108	\$ 137	\$ 169
Inventories	\$ 124	\$ 83	\$ 120	\$ 170	\$ 229	\$ 295	\$ 372	\$ 462
Current Assets	\$ 206	\$ 339	\$ 317	\$ 448	\$ 606	\$ 780	\$ 984	\$ 1,219
Plant & Equipment	\$ 245	\$ 369	\$ 483	\$ 637	\$ 791	\$ 945	\$ 1,120	\$ 1,294
Other Long Term Assets	\$ 17	\$ 18	\$ 51	\$ 72	\$ 97	\$ 126	\$ 158	\$ 196
Net Fixed Assets	\$ 262	\$ 387	\$ 534	\$ 709	\$ 888	\$ 1,070	\$ 1,278	\$ 1,491
<b>Total Assets</b>	<b>\$ 468</b>	<b>\$ 726</b>	<b>\$ 851</b>	<b>\$ 1,157</b>	<b>\$ 1,494</b>	<b>\$ 1,850</b>	<b>\$ 2,262</b>	<b>\$ 2,710</b>
Accounts Payable	\$ 29	\$ 38	\$ 46	\$ 65	\$ 88	\$ 113	\$ 143	\$ 177
Short term Notes Payable	\$ 13	\$ 16	\$ 26	\$ 37	\$ 50	\$ 64	\$ 81	\$ 100
Accrued Expenses	\$ 29	\$ 47	\$ 67	\$ 95	\$ 128	\$ 165	\$ 208	\$ 258
Current Liabilities	\$ 71	\$ 101	\$ 139	\$ 196	\$ 266	\$ 342	\$ 431	\$ 535
Bonds (LTD)	\$ 80	\$ 165	\$ 165	\$ 165	\$ 165	\$ 165	\$ 165	\$ 165
<b>NEW BONDS</b>				\$ 174	\$ 344	\$ 500	\$ 666	\$ 816
Other Long Term Liabilities	\$ 5	\$ 9	\$ 15	\$ 21	\$ 29	\$ 37	\$ 47	\$ 58
<b>Total Liabilities</b>	<b>\$ 156</b>	<b>\$ 275</b>	<b>\$ 319</b>	<b>\$ 557</b>	<b>\$ 803</b>	<b>\$ 1,044</b>	<b>\$ 1,309</b>	<b>\$ 1,573</b>
Owners Equity								
Common Stock	\$ 266	\$ 361	\$ 387	\$ 387	\$ 387	\$ 387	\$ 387	\$ 387
Retained Earnings	\$ 47	\$ 90	\$ 145	\$ 214	\$ 304	\$ 419	\$ 566	\$ 750
<b>Total Owners Equity</b>	<b>\$ 313</b>	<b>\$ 451</b>	<b>\$ 532</b>	<b>\$ 601</b>	<b>\$ 691</b>	<b>\$ 806</b>	<b>\$ 953</b>	<b>\$ 1,137</b>
<b>Total Liabilities &amp; Equity</b>	<b>\$ 469</b>	<b>\$ 726</b>	<b>\$ 851</b>	<b>\$ 1,157</b>	<b>\$ 1,494</b>	<b>\$ 1,851</b>	<b>\$ 2,262</b>	<b>\$ 2,710</b>
<b>L&amp;E - Assets</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ (0)</b>

## Pro forma Income Statement

### With Financing Feedback

<b>Income Statement</b>	1995	1996	1997	1998	1999	2000	2001	2002
Sales	\$ 465	\$ 698	\$ 967	\$ 1,367	\$ 1,847	\$ 2,380	\$ 3,001	\$ 3,720
Cost of Goods Sold	\$ 360	\$ 337	\$ 741	\$ 1,047	\$ 1,416	\$ 1,824	\$ 2,300	\$ 2,851
Gross Profit	\$ 105	\$ 361	\$ 226	\$ 319	\$ 432	\$ 556	\$ 701	\$ 869
Operating Expenses	\$ 42	\$ 268	\$ 85	\$ 120	\$ 162	\$ 209	\$ 264	\$ 327
Other Expenses	\$ 16	\$ 17	\$ 41	\$ 58	\$ 78	\$ 101	\$ 127	\$ 158
Net operating Income	\$ 47	\$ 76	\$ 100	\$ 141	\$ 191	\$ 246	\$ 310	\$ 385
Interest Expense	\$ 4	\$ 8	\$ 7	\$ 27	\$ 41	\$ 53	\$ 66	\$ 78
Net Income before Taxes	\$ 43	\$ 68	\$ 93	\$ 114	\$ 150	\$ 193	\$ 244	\$ 306
Taxes (40%)	\$ 17	\$ 26	\$ 36	\$ 46	\$ 60	\$ 77	\$ 98	\$ 122
Net Income	\$ 26	\$ 42	\$ 57	\$ 69	\$ 90	\$ 116	\$ 146	\$ 184
Dividends Paid	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Additions to Retained Earnings	\$ 26	\$ 42	\$ 57	\$ 69	\$ 90	\$ 116	\$ 146	\$ 184

Note: Before financing feedback

Net Income	\$ 26	\$ 42	\$ 57	\$ 77	\$ 107	\$ 140	\$ 178	\$ 223
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## Pro forma Ratio Analysis

Ratios	1995	1996	1997	1998	1999	2000	2001	2002
<b>Profitability Ratios</b>								
Gross Profit Margin	22.6%	51.7%	23.4%	23.4%	23.4%	23.4%	23.4%	23.4%
Operating Profit Margin	10.1%	10.9%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
Net Profit Margin	5.6%	6.0%	5.9%	5.6%	5.8%	5.9%	5.9%	6.0%
Return on Assets	5.6%	5.8%	6.7%	6.6%	7.1%	7.6%	7.9%	8.2%
Return on Common Equity	8.3%	9.3%	10.7%	12.6%	14.9%	16.3%	17.2%	17.7%
<b>Liquidity Ratios</b>								
Current Ratio	2.9	3.4	2.3	2.3	2.3	2.3	2.3	2.3
Quick Ratio	1.2	2.5	1.4	1.4	1.4	1.4	1.4	1.4
<b>Debt Ratios</b>								
Debt to Assets Ratio	33.3%	37.9%	37.5%	33.1%	30.7%	29.4%	28.4%	27.9%
Debt to Equity	50%	61%	60%	63%	64%	64%	62%	60%
Times Interest Earned	11.8	9.5	14.3	10.7	14.5	18.6	23.5	29.1
<b>Asset Collection Ratios</b>								
Average Collection Period	22.8	19.9	17.4	17.4	17.4	17.4	17.4	17.4
Inventory Turnover	3.8	8.4	8.1	8.1	8.1	8.1	8.1	8.1
Total Asset Turnover	1.0	1.0	1.1	1.2	1.2	1.3	1.3	1.4
<b>Market Value Ratios</b>								
P/E Ratio			66.6					

## Valuation Assumptions

### Cash Flows

Year	CFs	Growth
1998	\$ 69	20%
1999	\$ 90	32%
2000	\$ 116	28%
2001	\$ 146	26%
2002	\$ 184	26%
2003	\$ 224	22%
2004	\$ 269	20%
2005	\$ 317	18%
2006	\$ 365	15%
2007	\$ 402	10%
2008+	\$ 426	6%

Pro  
Forma

Estimated  
Growth  
Ramp

### Discount Rate

Using CAPM

$R_f = 3\%$  (Treasuries)

$R_m = 10\%$  (15% to 8%)

Beta = 1.3 (Bloomberg)

$R_e = 3 + (10-3)*1.3 = 12\%$

## Valuation and Recommendation

Year	CFs	Growth	PV
1998	\$ 69	20%	\$ 61
1999	\$ 90	32%	\$ 72
2000	\$ 116	28%	\$ 82
2001	\$ 146	26%	\$ 93
2002	\$ 184	26%	\$ 104
2003	\$ 224	22%	\$ 114
2004	\$ 269	20%	\$ 122
2005	\$ 317	18%	\$ 128
2006	\$ 365	15%	\$ 132
2007	\$ 402	10%	\$ 129
2008+	\$ 426	6%	\$ 2,284
Total Market Capitalization			\$ 3,321
Shares Outstanding			79
Estimated Stock Price			\$ 42
Actual Stock Price			\$ 48

Overvalued –  
Intrinsic value <  
market value

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## Sensitivity Analysis

		Discount Rate		
		10%	12%	14%
Long-term Growth	4%	\$ 49	\$ 34	\$ 26
	6%	\$ 67	\$ 42	\$ 30
	8%	\$ 120	\$ 57	\$ 36

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## How did I do? – Balance Sheet

	Estimate 2000	Actual 2000
Cash	\$ 377	
Accounts Receivable	\$ 108	
Inventories	\$ 295	
Current Assets	\$ 780	\$ 460
Plant & Equipment	\$ 945	
Other Long Term Assets	\$ 126	
Net Fixed Assets	\$ 1,070	\$ 1,033
<b>Total Assets</b>	<b>\$ 1,850</b>	<b>\$ 1,493</b>
Accounts Payable	\$ 113	
Short term Notes Payable	\$ 64	
Accrued Expenses	\$ 165	
Current Liabilities	\$ 342	\$ 313
Bonds (LTD)	\$ 165	\$ 32
NEW BONDS	\$ 500	
Other Long Term Liabilities	\$ 37	
Total Liabilities	\$ 1,044	
Owners Equity	\$ -	
Capital in XS of Par	\$ -	
Retained Earnings	\$ 419	\$ 409
Total Owners Equity	\$ 806	\$ 1,148
<b>Total Liabilities &amp; Equity</b>	<b>\$ 1,851</b>	<b>\$ 1,493</b>
# Stores	2,701	3,501

## How did I do? – Income Statement

	Estimate 2000	Actual 2000
Income Statement		
Sales	\$ 2,380	\$ 2,169
Cost of Goods Sold	\$ 1,824	
Gross Profit	\$ 556	
Operating Expenses	\$ 209	
Other Expenses	\$ 101	
Net operating Income	\$ 246	\$ 213
Interest Expense	\$ 53	
Net Income before Taxes	\$ 193	\$ 161
Taxes (40%)	\$ 77	
Net Income	\$ 116	\$ 95

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## How did I do? – Valuation

Estimated 1998 Stock Price (4-1 Split) = \$10.50

Actual 1998 Stock Price (4-1 Split) = \$12.00

2001 Stock Price = \$17.50

3-year annualized return for SBUX = 11.3%

3-year annualized return for S&P 500 = 13.5%

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## The Case of the Starbucks Case

### Lessons Learned

- Performing forecasting and valuation require a great deal of expertise and judgment
- “Sometimes its better to be lucky, than good”
- Buy index funds

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## Learning Objective

1. Use the financial forecasting and equity valuation techniques, previously learned in this course, to estimate the value of Starbuck's common stock.
2. Understand the difficulties in performing actual forecasting and valuation.
3. Remember the importance of sensitivity analysis.

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