



Practical Skills Module: Financial Modeling

Blu Containers Company

May 1, 2023

Financial Model Solution - Vertical Orientation




Powered by:






Blu Containers Company

Summary Outputs




SUMMARY VALUES - BASE CASE

(\$ Millions)	Trend	2020A	2021A	2022A	Projected				
					2023	2024	2025	2026	2027
Income Statement Items									
Net Revenue		\$214	\$237	\$205	\$252	\$234	\$281	\$281	\$268
Growth			10.8%	(13.4%)	23.3%	(7.5%)	20.4%	(0.0%)	(4.6%)
EBITDA		\$50	\$68	\$33	\$74	\$47	\$86	\$77	\$54
Margin		23.5%	28.9%	16.2%	29.3%	20.2%	30.7%	27.3%	20.3%
Growth			36.3%	(51.6%)	123.2%	(36.2%)	83.5%	(11.3%)	(29.2%)
Net Income		\$14	\$24	\$2	\$30	\$13	\$39	\$33	\$19
Margin		6.6%	10.0%	1.1%	11.8%	5.5%	13.8%	11.8%	7.2%
Growth			68.1%	(90.7%)	1250.1%	(56.6%)	201.2%	(14.1%)	(41.7%)

SUMMARY VALUES - BEST CASE

(\$ Millions)	Trend	2020A	2021A	2022A	Projected				
					2023	2024	2025	2026	2027
Income Statement Items									
Net Revenue		\$214	\$237	\$205	\$264	\$245	\$297	\$300	\$282
Growth			10.8%	(13.4%)	29.0%	(7.4%)	21.5%	1.1%	(6.3%)
EBITDA		\$50	\$68	\$33	\$86	\$59	\$102	\$95	\$71
Margin		23.5%	28.9%	16.2%	32.4%	23.9%	34.3%	31.7%	25.1%
Growth			36.3%	(51.6%)	158.3%	(31.6%)	74.4%	(6.7%)	(25.9%)
Net Income		\$14	\$24	\$2	\$37	\$20	\$49	\$46	\$30
Margin		6.6%	10.0%	1.1%	14.1%	8.3%	16.6%	15.2%	10.7%
Growth			68.1%	(90.7%)	1594.2%	(45.3%)	141.8%	(7.6%)	(33.8%)

SUMMARY VALUES - WORST CASE

(\$ Millions)	Trend	2020A	2021A	2022A	Projected				
					2023	2024	2025	2026	2027
Income Statement Items									
Net Revenue		\$214	\$237	\$205	\$238	\$220	\$263	\$260	\$245
Growth			10.8%	(13.4%)	16.4%	(7.7%)	19.3%	(1.0%)	(5.9%)
EBITDA		\$50	\$68	\$33	\$61	\$34	\$68	\$57	\$34
Margin		23.5%	28.9%	16.2%	25.5%	15.4%	26.0%	21.9%	14.0%
Growth			36.3%	(51.6%)	83.8%	(44.3%)	101.5%	(16.4%)	(40.1%)
Net Income		\$14	\$24	\$2	\$21	\$4	\$26	\$20	\$5
Margin		6.6%	10.0%	1.1%	8.9%	1.9%	10.1%	7.6%	2.1%
Growth			68.1%	(90.7%)	864.8%	(80.8%)	548.6%	(25.6%)	(74.1%)

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Inputs and Assumptions

GENERAL

- First year of forecast in financial model: **2023**
- Three scenarios have been used for Inflation, Product Pricing and sales volume growth

PRODUCT PRICING

- The product pricing cases used in the model are as follows:

Pricing Case **2023 - 2027**

Base Case	Research Forecast
Best Case	+4%
Worst Case	(4%)

COSTS

<u>Cost Item</u>	<u>2023</u>	<u>Increases</u>
Raw Materials	\$226.0 per Unit	Inflation on a unit basis
Utilities	\$66.2 per Unit	Inflation on a unit basis
Rent	\$23.5 MM	Inflation on a total basis
Operating Labour	\$43.5 MM	Inflation on a total basis
Other	\$2.0 MM	Inflation on a total basis
SG&A	\$3.9 MM	Inflation on a total basis

DEPRECIATION

- Depreciation Methodology Used: **Straight Line**
- Years remaining for depreciation of existing assets: **25 years**
- Years used for depreciation of new assets: **30 years**

EQUITY

Stock Price - 12/10/22	\$11.50
Fully Diluted Shares O/S (MM) - Dec. 31, 2022	14.80
Common Dividend Payout Rate	20.0%

OPERATIONS

Annual Factory Capacity (000's units):	420
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INTEREST RATES

Interest earned on Cash balances:	1.0%
Interest rate on Bank Revolver:	6.0%
Interest rate on Senior Secured Term Debt:	6.0%

TAXES

Tax rate assumed in the model:	35.0%
Additional tax assumptions in "Other Assumptions" box	

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Inputs and Assumptions

OTHER ASSUMPTIONS			2023	2024	2025	2026	2027
Income Statement							
Cost Adjustments - Gain/(Loss)	MM		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Cash Flow Statement							
Investing Activities - Other	MM		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Capital Expenditures	MM		\$16.0	\$17.0	\$17.3	\$17.5	\$18.0
Income Tax							
Reduction in EBT for timing differences	MM		\$5.0	\$5.0	\$5.0	\$5.0	\$5.0
Working Capital Days							
Accounts Receivable	days		48.0	44.0	40.0	40.0	40.0
Inventories	days		70.0	65.0	60.0	60.0	55.0
Prepaid Expenses	days		30.0	30.0	30.0	30.0	30.0
Other Assets	days		3.0	3.0	3.0	3.0	3.0
Accounts Payable	days		40.0	40.0	40.0	40.0	40.0
Other Liabilities	days		10.0	10.0	10.0	10.0	10.0
Change in Debt & Equity							
Senior Term Debt Issuance / (Repayment)	MM		(\$25.0)	(\$25.0)	(\$25.0)	(\$25.0)	(\$25.0)
Common Stock Issuance / (Buy-back)	MM		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0

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Economic and Sales Scenarios

SCENARIO SWITCH: Base Case ▼

2023	2024	2025	2026	2027
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ECONOMIC SCENARIOS

Cost Inflation

	2.0%	2.0%	2.0%	2.5%	2.5%
Base Case	2.0%	2.0%	2.0%	2.5%	2.5%
Best Case	1.8%	1.8%	1.8%	2.0%	2.0%
Worst Case	2.5%	2.5%	2.5%	2.5%	2.5%

SALES SCENARIOS

Sales Price - \$/Unit

	800.0	725.0	825.0	800.0	750.0
Base Case	800.0	725.0	825.0	800.0	750.0
Best Case: +4.0%	832.0	754.0	858.0	832.0	780.0
Worst Case: -4.0%	768.0	696.0	792.0	768.0	720.0

Sales Volume Growth

	5.0%	4.0%	4.0%	4.0%	4.0%
Base Case	5.0%	4.0%	4.0%	4.0%	4.0%
Best Case	5.0%	4.0%	5.0%	5.0%	4.0%
Worst Case	4.0%	4.0%	3.0%	3.0%	2.0%

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Revenue Schedule

		2020A	2021A	2022A	Projected				
					2023	2024	2025	2026	2027
Pricing									
Gross Sales Price	(\$/unit)			694.4	800.0	725.0	825.0	800.0	750.0
Cost Inflation	(%)				2.0%	2.0%	2.0%	2.5%	2.5%
Freight & Warehousing	(\$/unit)			100.0	102.0	104.0	106.1	108.8	111.5
Net Sales Price	(\$/unit)			594.4	698.0	621.0	718.9	691.2	638.5
Sales Volume									
Annual Factory Capacity	(000's units)				420.0	420.0	420.0	420.0	420.0
Sales Volume Growth	(%)				5.0%	4.0%	4.0%	4.0%	4.0%
Annual Sales Volume	(000's units)			344.5	361.7	376.2	391.2	406.9	420.0
Implied Operating Rate					86.1%	89.6%	93.1%	96.9%	100.0%
Revenue									
Gross Revenue	(\$ MM)			239.2	289.4	272.7	322.7	325.5	315.0
Freight & Warehousing	(\$ MM)			34.4	36.9	39.1	41.5	44.3	46.8
Net Revenue	(\$ MM)			\$204.8	\$252.5	\$233.6	\$281.2	\$281.2	\$268.2

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Costs of Production Schedule

		2020A	2021A	2022A	Projected				
					2023	2024	2025	2026	2027
Annual Sales Volume	(000's units)			344.5	361.7	376.2	391.2	406.9	420.0
Cost Inflation	(%)					2.0%	2.0%	2.5%	2.5%
COSTS PER UNIT									
Variable Costs									
Raw Materials	(\$/unit)				226.0	230.5	235.1	241.0	247.0
Utilities	(\$/unit)				66.2	67.5	68.9	70.6	72.4
Total Variable Costs	(\$/unit)				292.2	298.0	304.0	311.6	319.4
Fixed Costs									
Rent	(\$/unit)				65.0	63.7	62.5	61.6	61.2
Operating Labour	(\$/unit)				120.3	118.0	115.7	114.0	113.2
Other	(\$/unit)				5.5	5.4	5.3	5.2	5.2
Total Fixed Costs	(\$/unit)				190.8	187.1	183.5	180.9	179.6
Total Costs	(\$/unit)				483.0	485.1	487.5	492.5	499.0
COSTS IN MILLIONS									
Variable Costs									
Raw Materials	(\$ MM)				81.7	86.7	92.0	98.1	103.8
Utilities	(\$ MM)				23.9	25.4	26.9	28.7	30.4
Total Variable Costs	(\$ MM)				105.7	112.1	118.9	126.8	134.1
Fixed Costs									
Rent	(\$ MM)				23.5	24.0	24.4	25.1	25.7
Operating Labour	(\$ MM)				43.5	44.4	45.3	46.4	47.5
Other	(\$ MM)				2.0	2.0	2.1	2.1	2.2
Total Fixed Costs	(\$ MM)				69.0	70.4	71.8	73.6	75.4
Total Costs	(\$ MM)				174.7	182.5	190.7	200.4	209.6

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Income Statement

(\$ Millions)

	2020A	2021A	2022A	<i>Projected</i>				
				2023	2024	2025	2026	2027
Sales Volume (000's units)			344.5	361.7	376.2	391.2	406.9	420.0
Revenue								
Gross Revenue	244.8	269.3	239.2	289.4	272.7	322.7	325.5	315.0
Freight & Warehousing	31.3	32.7	34.4	36.9	39.1	41.5	44.3	46.8
Net Revenue	213.5	236.6	204.8	252.5	233.6	281.2	281.2	268.2
Cost of Sales	159.9	164.6	167.9	174.7	182.5	190.7	200.4	209.6
S,G & A	3.4	3.6	3.8	3.9	4.0	4.1	4.2	4.3
Total Costs	163.3	168.2	171.7	178.6	186.5	194.8	204.5	213.8
Cost Adjustments - Gain/(Loss)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EBITDA	50.2	68.4	33.1	73.9	47.1	86.5	76.7	54.3
Depreciation	15.4	15.5	15.8	16.2	16.7	17.3	17.9	18.5
EBIT	34.8	52.9	17.3	57.7	30.4	69.2	58.8	35.9
Interest Expense	15.0	15.0	14.0	12.0	10.6	9.5	7.6	6.0
EBT	19.8	37.9	3.3	45.7	19.8	59.7	51.3	29.9
Current Income Taxes	3.0	8.0	0.0	14.2	5.2	19.1	16.2	8.7
Deferred Income Taxes	2.7	6.2	1.1	1.8	1.8	1.8	1.8	1.8
Total Income Taxes	5.7	14.2	1.1	16.0	6.9	20.9	17.9	10.5
Net Income	\$14.1	\$23.7	\$2.2	\$29.7	\$12.9	\$38.8	\$33.3	\$19.4

Margins								
EBITDA Margin	23.5%	28.9%	16.2%	29.3%	20.2%	30.7%	27.3%	20.3%
EBIT Margin	16.3%	22.4%	8.4%	22.9%	13.0%	24.6%	20.9%	13.4%
Return on Equity			0.9%	10.5%	4.4%	12.0%	9.5%	5.3%

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Cash Flow Statement

(\$ Millions)

	2020A	2021A	2022A	<i>Projected</i>				
				2023	2024	2025	2026	2027
Operating Activities								
Net Income	14.1	23.7	2.2	29.7	12.9	38.8	33.3	19.4
Depreciation & Amortization	15.4	15.5	15.8	16.2	16.7	17.3	17.9	18.5
Deferred Income Taxes	2.7	6.2	1.1	1.8	1.8	1.8	1.8	1.8
Changes in working capital	0.0	0.0	0.0	(2.1)	6.6	(1.3)	(1.1)	3.2
Operating Cash Flow	32.2	45.4	19.1	45.6	37.9	56.6	51.8	42.9
Investing Activities								
CAPEX	(14.1)	(15.0)	(15.5)	(16.0)	(17.0)	(17.3)	(17.5)	(18.0)
Other	(5.0)	4.0	3.0	0.0	0.0	0.0	0.0	0.0
Investing Cash Flow	(19.1)	(11.0)	(12.5)	(16.0)	(17.0)	(17.3)	(17.5)	(18.0)
Financing Activities								
Revolver Issuance / (Repayment)	0.0	0.0	0.0	1.1	6.7	(6.5)	(1.2)	2.6
Term Debt Issuance / (Repayment)	(25.0)	(25.0)	(25.0)	(25.0)	(25.0)	(25.0)	(25.0)	(25.0)
Common Shares Issuance/ (Buy-Back)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Common Dividends	(2.8)	(4.7)	(2.4)	(5.9)	(2.6)	(7.8)	(6.7)	(3.9)
Financing Cash Flow	(27.8)	(29.7)	(27.4)	(29.9)	(20.9)	(39.3)	(32.9)	(26.3)
Change in the Cash Position	(14.7)	4.7	(20.8)	(0.3)	0.0	0.0	1.4	(1.4)
Beginning Cash	31.1	16.4	21.1	0.3	0.0	0.0	0.0	1.4
Ending Cash	16.4	21.1	0.3	0.0	0.0	0.0	1.4	0.0

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Balance Sheet

(\$ Millions)

	2020A	2021A	2022A	<i>Projected</i>				
				2023	2024	2025	2026	2027
ASSETS								
Cash	16.4	21.1	0.3	0.0	0.0	0.0	1.4	0.0
Accounts Receivable	27.0	27.8	28.3	33.2	28.1	30.8	30.8	29.4
Inventory	36.5	36.1	35.1	33.5	32.4	31.4	32.9	31.6
Prepaid Expenses	14.6	14.4	14.9	14.4	15.0	15.7	16.5	17.2
Other	1.4	1.8	1.2	1.4	1.5	1.6	1.6	1.7
Total Current Assets	95.9	101.2	79.8	82.5	76.9	79.4	83.3	79.9
Net PP&E	398.5	398.0	397.7	397.5	397.8	397.8	397.4	397.0
Other	19.0	15.0	12.0	12.0	12.0	12.0	12.0	12.0
Total Long Term Assets	417.5	413.0	409.7	409.5	409.8	409.8	409.4	409.0
Total Assets	\$513.4	\$514.2	\$489.5	\$492.0	\$486.7	\$489.2	\$492.7	\$488.9
LIABILITIES AND EQUITY								
Bank Debt - Revolver	0.0	0.0	0.0	1.1	7.7	1.2	0.0	2.6
Accounts Payable	18.3	18.7	18.2	19.1	19.9	20.9	22.0	23.0
Other	4.7	4.9	4.8	4.8	5.0	5.2	5.5	5.7
Total Current Liabilities	23.0	23.6	23.0	25.0	32.7	27.4	27.4	31.3
Deferred Income Taxes	0.7	6.9	8.0	9.8	11.5	13.3	15.0	16.8
Senior Secured Term Debt	250.0	225.0	200.0	175.0	150.0	125.0	100.0	75.0
Total Long Term Liabilities	250.7	231.9	208.0	184.8	161.5	138.3	115.0	91.8
Total Liabilities	273.7	255.5	231.0	209.8	194.2	165.6	142.4	123.1
Common Shares	120.0	120.0	120.0	120.0	120.0	120.0	120.0	120.0
Retained Earnings	119.7	138.7	138.5	162.3	172.6	203.6	230.3	245.8
Shareholder's Equity	239.7	258.7	258.5	282.3	292.6	323.6	350.3	365.8
Total Liabilities and Equity	\$513.4	\$514.2	\$489.5	\$492.0	\$486.7	\$489.2	\$492.7	\$488.9
<i>Check</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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Depreciation Schedule

(\$ Millions)

		2020A	2021A	2022A	<i>Projected</i>				
					2023	2024	2025	2026	2027
Years Remaining Existing Assets:									
Depreciation Years on New Assets									
Depreciation to Existing Assets					\$15.9	\$15.9	\$15.9	\$15.9	\$15.9
CAPEX									
2023	\$16.0				0.3	0.5	0.5	0.5	0.5
2024	\$17.0					0.3	0.6	0.6	0.6
2025	\$17.3						0.3	0.6	0.6
2026	\$17.5							0.3	0.6
2027	\$18.0								0.3
Total Depreciation					\$16.2	\$16.7	\$17.3	\$17.9	\$18.5

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Income Tax Schedule

(\$ Millions)

		<i>Projected</i>				
		2023	2024	2025	2026	2027
Tax Rate	35.0%					
Accounting EBT (as is on I/S)	A	\$45.7	\$19.8	\$59.7	\$51.3	\$29.9
Less: Reduction in EBT for timing differences ⁽¹⁾		5.0	5.0	5.0	5.0	5.0
Government EBT	B	\$40.7	\$14.8	\$54.7	\$46.3	\$24.9
Accounting Taxes (35% of A)		16.0	6.9	20.9	17.9	10.5
Taxes as Appearing on Income Statement						
Current Tax (35% of B)		14.2	5.2	19.1	16.2	8.7
Increase (Decrease) in Deferred Income Taxes		1.8	1.8	1.8	1.8	1.8
Total Income Taxes (Same as Accounting Taxes Above)		16.0	6.9	20.9	17.9	10.5

(1) Assumes aggregate reduction in government pre-tax earnings due to timing differences between accounting and government rules.

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Working Capital Schedule

(\$ Millions)

		2020A	2021A	2022A	Projected					
					2023	2024	2025	2026	2027	
Days per Year	(days)		365	365	365	366	365	365	365	
Income Statement Items										
Net Revenue	(\$ MM)		236.6	204.8	252.5	233.6	281.2	281.2	268.2	
Cost of Sales	(\$ MM)		164.6	167.9	174.7	182.5	190.7	200.4	209.6	
Days In										
Accounts Receivable	(days)		42.9	50.4	48.0	44.0	40.0	40.0	40.0	
Inventories	(days)		80.1	76.3	70.0	65.0	60.0	60.0	55.0	
Prepaid Expenses	(days)		31.9	32.4	30.0	30.0	30.0	30.0	30.0	
Other Assets	(days)		4.0	2.6	3.0	3.0	3.0	3.0	3.0	
Accounts Payable	(days)		41.5	39.6	40.0	40.0	40.0	40.0	40.0	
Other Liabilities	(days)		10.9	10.4	10.0	10.0	10.0	10.0	10.0	
Account Balances										
Accounts Receivable	(\$ MM)		27.8	28.3	33.2	28.1	30.8	30.8	29.4	
Inventories	(\$ MM)		36.1	35.1	33.5	32.4	31.4	32.9	31.6	
Prepaid Expenses	(\$ MM)		14.4	14.9	14.4	15.0	15.7	16.5	17.2	
Other Assets	(\$ MM)		1.8	1.2	1.4	1.5	1.6	1.6	1.7	
Accounts Payable	(\$ MM)		18.7	18.2	19.1	19.9	20.9	22.0	23.0	
Other Liabilities	(\$ MM)		4.9	4.8	4.8	5.0	5.2	5.5	5.7	
Net Working Capital	(\$ MM)		56.5	56.5	58.6	52.0	53.3	54.4	51.2	
Change in Working Capital	(\$ MM)				\$0.0	(\$2.1)	\$6.6	(\$1.3)	(\$1.1)	\$3.2

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Debt and Interest Schedule

(\$ Millions)

		<i>Projected</i>				
	2022A	2023	2024	2025	2026	2027
FINANCING COMPONENT						
Cash						
Amount Outstanding - Beginning		0.3	0.0	0.0	0.0	1.4
Change in Cash		(0.3)	0.0	0.0	1.4	(1.4)
Amount Outstanding - Ending	\$0.3	\$0.0	\$0.0	\$0.0	\$1.4	\$0.0
Interest Rate		1.0%	1.0%	1.0%	1.0%	1.0%
Annual Interest Income		\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Revolver						
Operating Cash Flow		45.6	37.9	56.6	51.8	42.9
Investing Cash Flow		(16.0)	(17.0)	(17.3)	(17.5)	(18.0)
Mandatory Debt Repayments		(25.0)	(25.0)	(25.0)	(25.0)	(25.0)
Common Stock Issuance / (Buy-back)		0.0	0.0	0.0	0.0	0.0
Dividends		(5.9)	(2.6)	(7.8)	(6.7)	(3.9)
FCF After Mandatory Debt Repayment and Dividend		(\$1.4)	(\$6.7)	\$6.5	\$2.6	(\$4.0)
Revolver Outstanding - Beginning		0.0	1.1	7.7	1.2	0.0
Additions / (Repayments)		1.1	6.7	(6.5)	(1.2)	2.6
Revolver Outstanding - Ending	\$0.0	\$1.1	\$7.7	\$1.2	\$0.0	\$2.6
Interest Rate		6.0%	6.0%	6.0%	6.0%	6.0%
Annual Interest Expense		\$0.0	\$0.1	\$0.5	\$0.1	\$0.0
Senior Secured Term Debt						
Amount Outstanding - Beginning		200.0	175.0	150.0	125.0	100.0
Additions / (Repayments)		(25.0)	(25.0)	(25.0)	(25.0)	(25.0)
Amount Outstanding - Ending	\$200.0	\$175.0	\$150.0	\$125.0	\$100.0	\$75.0
Interest Rate		6.0%	6.0%	6.0%	6.0%	6.0%
Annual Interest Expense		\$12.0	\$10.5	\$9.0	\$7.5	\$6.0
Net Interest Expense		\$12.0	\$10.6	\$9.5	\$7.6	\$6.0

Blu Containers Company

Shareholders' Equity Schedule

(\$ Millions)

	2022A	2023	2024	2025	2026	2027
			<i>Projected</i>			
Common Shares						
Amount Outstanding - Beginning		120.0	120.0	120.0	120.0	120.0
New Issuance / (Buy-Back)		0.0	0.0	0.0	0.0	0.0
Amount Outstanding - Ending	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0	\$120.0
Dividend Payout Rate		20.0%	20.0%	20.0%	20.0%	20.0%
Net Income		29.7	12.9	38.8	33.3	19.4
Common Dividend		\$5.9	\$2.6	\$7.8	\$6.7	\$3.9
Retained Earnings						
Amount Outstanding - Beginning		138.5	162.3	172.6	203.6	230.3
Net Income		29.7	12.9	38.8	33.3	19.4
Common Dividend		(5.9)	(2.6)	(7.8)	(6.7)	(3.9)
Amount Outstanding - Ending	\$138.5	\$162.3	\$172.6	\$203.6	\$230.3	\$245.8