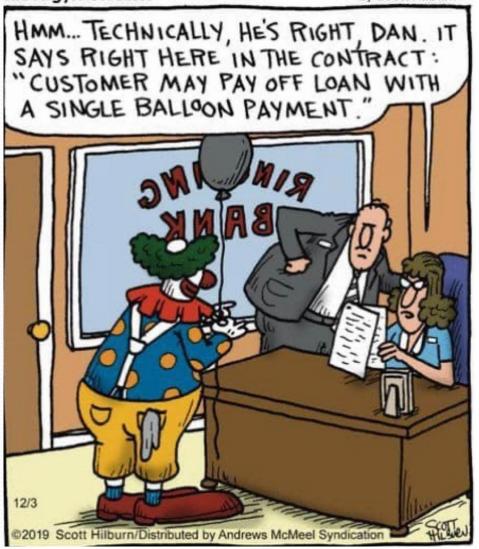
Welcome

The Argyle Sweater

By Scott Hilburn



Curtis Litchfield, CCE

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Tools and Techniques

- Common-Size Financial Statements
- Key Financial Ratios
- Trend Analysis
- Structural Analysis
- Industry Comparisons
- Common Sense and Judgment

Summary of Financial Statement Analysis How to Use Financial Ratios Debt Asset Return **Profitability** Liquidity to Investors Management. Management Liquidity: Coverage Short Run Amount Operating Earnings of Current Margins. Returns per Share Efficiency Solvency of Debt of Debt Assets Accounts **Beturn** Average Times Gross Return on Current Receivable Collection Debt/Assets Profit on Total Interest Total Assets Ratio Period Margin. Assets Turnover Earned Fixed Operating Return Return Inventory Inventory Quick Patio Charge Profit Debt/Equity Turnover Turnover on Equity on Equity Margin. Coverage Long-Term Cash Flow Price/ Fixed Asset **Net Profit** Cash Flow Cash Return Debt Liquidity Earnings Adequacy Turnover Margin on Assets Total Ratio Capitalization Total Asset Cash Flow Dividend Turnover Margin Yield. Financial Leverage Index Return on × Total Assets

Two types of Balance Sheet and Income Statement Analysis

- Comparative (Horizontal)
- Comparative Common Size (Vertical)
- Why use these comparative types
 - Facilitate internal or structural analysis
 - Evaluate trends
 - Make industry comparisons

Common Sizing

- Express each account on the Balance Sheet as a percentage of total assets
- Express each account on the Income Statement as a percentage of net sales

Comparative (Horizontal)

- Requires two consecutive periods of information
- Objective is to find and identify changes that have occurred over the accounting period
- This is done in absolute and relative change values
- Relative Change is done by taking change and divided it by the prior period amount to determine the percentage change

Comparative Common Size (Vertical)

- Requires only one time period
- Common Size means that every numerical item of the Balance Sheet and Income Statement is converted to represent a fraction part of Total Assets or Total Revenue/Sales
- Shows the relative magnitude and the relative importance of various accounts to the total
- You may do further analysis where you look at the fraction percentage within a subset like Current Assets and Current Liabilities

Key Link between Income Statement and Balance Sheet

 Beginning Retained Earnings [plus/minus] Net Income (loss) [minus] Dividends [equals] Ending Retained Earnings

Beginning Retained Earnings	104,043,978
Net Income	10,274,490
Ending Retained Earnings	114,318,468
Retained Earnings Show	111,408,375
Difference	2,910,093

Why?

					Accumulated	
	Capita	al Stock	Patrons' Equity	General	Other Comprehensive	
	Common	Preferred	Credits	Reserve	Loss	Total
Balance, September 1, 2014	\$ 26,420	\$ 500	\$ 2,227,730	\$ 92,911,578	\$ (9,367,576)	\$ 85,798,652
Net savings	-	-	-	12,709,003	-	12,709,003
Unrealized gain in value of securities Unrecognized gains and losses related to	-	-	-	-	11,583	11,583
the defined benefit pension plan	-	-	-	-	(2,528,844)	(2,528,844)
Stock issued Patronage distribution	445	-	-	(3,000,000)	-	(3,000,000)
Adjustment to prior year patronage distribution	-	-	-	401,491	-	401,491
Retirements and transfers	(335)	(500)	(1,131,602)	1,021,906		(110,531)
Balance, August 31, 2015	26,530	-	1,096,128	104,043,978	(11,884,837)	93,281,799
Net savings	_	-	-	10,274,490	-	10,274,490
Unrealized gain in value of securities Unrecognized gains and losses related to	-	-	-	-	45,358	45,358
the defined benefit pension plan	_	_	-	_	(1,068,553)	(1,068,553)
Stock issued	600	-	-	-	-	600
Patronage distribution	-	-	-	(2,500,000)	-	(2,500,000)
Adjustment to prior year patronage distribution	-	-	-	(395,272)	-	(395,272)
Retirements and transfers	(50)		(1,096,128)	(14,821)		(1,110,999)
Balance, August 31, 2016	\$ 27,080	<u> </u>	<u> </u>	\$ 111,408,375	\$ (12,908,032)	\$ 98,527,423

Five categories of ratios

- Liquidity ratios
- Leverage ratios
- Profitability ratios
- Activity ratios
- Market ratios

Ratios are valuable analytical tools and serve as screening devices, but they

- Do not provide answers in and of themselves
- Are not predictive
- Should be used with other elements of financial analysis

- Measure of a company's ability to pay off debts as they come due
- Measure a firm's ability to meet cash needs as they arise



Liquidity ratios include:

- Current ratio
- Quick or acid-test ratio
- Cash flow liquidity ratio
- Average collection period
- Days inventory held
- Days payable outstanding

Working Capital

 Measures the absolute dollar amount that Current Assets exceed Current Liabilities

Current Assets - Current Liabilities

Current Ratio

- Measures the ability of a firm to meet debt requirements as they come due
- Least stringent liquidity ratio

Current Assets

Current Liabilities

Quick or Acid-Test Ratio

 Measure ability to meet short-term cash needs more rigorously by eliminating inventory

Current Assets - Inventory

Current Liabilities

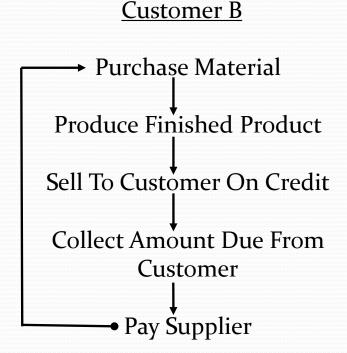
Company A					Company B				
				Variance					Variance
	Current Yr	Prior Yr	Variance	Percentage		Current Yr	Prior Yr	Variance	Percentage
Cash and Cash Equivalents	15,170,717	11,800,916	3,369,801	28.56%	Cash and Cash Equivalents	5,170,717	11,800,916	(6,630,199)	-56.18%
Notes Receivables	8,054,362	7,418,978	635,384	8.56%	Notes Receivables	8,054,362	7,418,978	635,384	8.56%
Accounts Receivables, Net of	7,848,005	11,198,777	(3,350,772)	-29.92%	Accounts Receivables, Net of	20,348,005	11,198,777	9,149,228	81.70%
allowance for doubtful Accounts					allowance for doubtful Accounts				
Inventory	23,573,283	26,298,719	(2,725,436)	-10.36%	Inventory	29,133,283	26,298,719	2,834,564	10.78%
Prepaid Expenses	203,106	303,075	(99,969)	-32.98%	Prepaid Expenses	203,106	303,075	(99,969)	-32.98%
Total Current Assets	54,849,473	57,020,465	(2,170,992)	-3.81%	Total Current Assets	62,909,473	57,020,465	5,889,008	10.33%
Cash Overdraft Current Maturities of Long Term Debt Accounts Payable Customer Prepaid Balances Accrued Wages and Taxes Income Taxes Payable Other Current Liabilities	1,251,955 2,500,000 13,254,659 5,344,494 2,298,771 133,542 2,033,455	3,133,221 1,852,458 10,652,112 3,413,379 2,425,392 293,986 2,012,076	(1,881,266) 647,542 2,602,547 1,931,115 (126,621) (160,444) 21,379	34.96% 24.43% 56.57% -5.22% -54.58%	Cash Overdraft Current Maturities of Long Term Debt Accounts Payable Customer Prepaid Balances Accrued Wages and Taxes Income Taxes Payable Other Current Liabilities	1,251,955 1,980,000 16,834,659 9,824,494 2,298,771 133,542 2,033,455	3,133,221 1,852,458 10,652,112 3,413,379 2,425,392 293,986 2,012,076	(1,881,266) 127,542 6,182,547 6,411,115 (126,621) (160,444) 21,379	-60.04% 6.89% 58.04% 187.82% -5.22% -54.58% 1.06%
Total Current Liabilities	25,018,026	28,511,757	(3,493,731)	-12.25%	Total Current Liabilities	33,078,026	28,511,757	4,566,269	16.02%
Working Capital	29,831,447	28,508,708	1,322,739	4.64%	Working Capital	29,831,447	28,508,708	1,322,739	4.64%
Current Ratio	2.19	2.00			Current Ratio	1.90	2.00		
Quick Ratio	1.25	1.08			Quick Ratio	1.02	1.08		
Sales	293,397,624	356,479,764	(63,082,140)	-17.70%	Sales	264,057,862	320,831,788	(56,773,926)	-17.70%

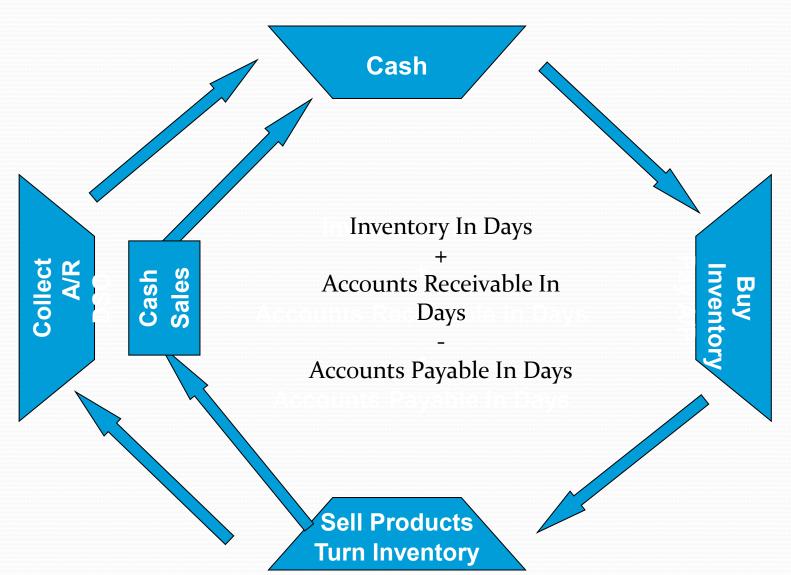
- Measures the operating cycle in days of a business that consists of:
 - Purchasing or Manufacturing Inventory
 - Some purchases on credit, thus the creation of accounts payable
 - Selling inventory with some sales on credit, thus the creation of accounts receivable, and
 - Collecting the Cash.

- The cash conversion cycle should be compared to the cash flow from operating activities to understand
 - Why cash flow generation has improved or deteriorated by analyzing the key operating accounts on the balance sheet
 - Inventory
 - Accounts Receivable
 - Accounts Payable

The time period between the acquisition of goods and the final cash realization from sales

Customer A Purchase Inventory Cash Sale To Customer Pay Supplier





	Current Yr	Prior Yr
Receivables Sales / 360	= 15.1	14.0
Inventory Cost of Goods Sold / 360	= 51.2	44.0
Operating Cycle - The number of days to convert inventory into sales plus the number of days it takes to collect AR	66.3	58.0
Accounts Payables Cost of Goods Sold / 360	= 15.6	12.2
Cash Flow Cycle	50.8	45.9

- The use of debt is referred to as financial leverage
- Leverage ratios measure the extent of a firm's financing with debt relative to equity and its ability to cover interest and other fixed charges.

Leverage ratios include:

- Debt to equity
- Debt ratio
- Long-term debt to total capitalization
- Times interest earned
- Fixed charge coverage
- Cash flow adequacy

Debt to Equity

 Measures the riskiness of the firm's capital structure in terms of the relationship between the funds supplied by creditors (debt) and investors (equity)

Total Liabilities

Stockholder (Owner) Equity

Debt to Asset Ratio

 Considers the proportion of all assets that are financed with debt

Total Liabilities

Total Assets

Stockholder (Owner) Equity

Measures how much of the business the owners own

Total Equity

Total Assets

Times Interest Earned

Indicates how well operating earnings cover fixed interest expenses

Operating Profit

Interest Expense

	0					Variance
	Current Yr		Prior Yr		Variance	Percentage
Current Assets	70 000 004	E7 440/	75 407 500	F7 0 404	1 00 1 100	0.470/
Total Current Assets	76,802,084	57.11%	75,167,588	57.04%	1,634,496	2.17%
B						
Property and Equipment Land and Land Improvements	3,728,894	2.77%	3,517,403	2.67%	211,491	6.01%
	34,776,203	25.86%	34,434,213	26.13%	341,990	0.99%
Buildings Equipment	62,453,787	46.44%	57,322,612	43.50%	5,131,175	8.95%
	57,204	0.04%	110,761	0.08%	(53,557)	-48.35%
Construction In Progress	101,016,088	75.12%	95,384,989	72.38%	5,631,099	5.90%
Loos: Accumulated Depressiation		-54.28%	(68,822,260)	-52.23%		
Less: Accumulated Depreciation Net Property and Equipment	(72,996,451) 28,019,637	20.84%	26,562,729	20.16%	(4,174,191) 1,456,908	6.07% 5.48%
Net Property and Equipment	26,019,037	20.64%	20,502,729	20.10%	1,450,908	5.46%
Investments and Other Assets						
Investment in Cooperatives	24,173,195	17.98%	24,744,112	18.78%	(570,917)	-2.31%
Investment in LLC's	4,399,022	3.27%	3,992,151	3.03%	406,871	10.19%
Intangible Assets	0	0.00%	10,389	0.01%	(10,389)	-100.00%
Note Receivables	160,400	0.12%	76,483	0.06%	83,917	109.72%
Account Receivables	926,852	0.69%	1,223,567	0.93%	(296,715)	-24.25%
Total Other Assets	29,659,469	22.05%	30,046,702	22.80%	(387,233)	-1.29%
Total Assets	134,481,190	100.00%	131,777,019	100.00%	2,704,171	2.05%
Current Liabilities						
Total Current Liabilities	25,018,026	18.60%	28,511,757	21.64%	(3,493,731)	-12.25%
lana Taum Liabilisiaa						
Long Term Liabilities Other Long Term Liabilities	146,695	0.11%	222.645	0.100/	(OF 000)	20.040/
Pension Obligations	9,837,046	7.31%	232,615 9,035,348	0.18% 6.86%	(85,920) 801,698	-36.94% 8.87%
Deferred federal Income Taxes	9,837,046					
	10,935,741	0.71% 8.13%	715,500 9,983,463	0.54% 7.58%	236,500 952,278	33.05% 9.54%
Total Long Term Liabilities	10,935,741	0.13%	9,963,463	7.36%	952,276	9.54%
Total Liabilities	35,953,767	26.74%	38,495,220	29.21%	(2,541,453)	-6.60%
Sharahaldara' and Batrona' Estitu						
Shareholders' and Patrons' Equity Capital Stock	27,080	0.02%	26,530	0.02%	550	2.07%
Patrons' Equity Credits	27,080	0.02%	1,096,128	0.02%	(1,096,128)	-100.00%
General Reserve	111,408,375	0.00% 82.84%	1,096,128	78.95%	7,364,397	7.08%
				-9.02%		
Accumulated Other Comprehensive Loss Total Shareholders' and Patron	(12,908,032) 98,527,423	-9.60% 73.26%	(11,884,837) 93,281,799	-9.02% 70.79%	(1,023,195) 5,245,624	8.61% 5.62%
Equity	90,027,423	73.20%	93,201,799	70.79%	5,245,624	5.02%
Total Liabilities and Equity	134,481,190	100.00%	131,777,019	100.00%	2,704,171	2.05%

Leverage Ratios With Specific Investments Included									
	Current	Yr	Prior Y	·r	Variance	Variance Percentage			
Total Assets	134,481,190	100.00%	131,777,019	100.00%	2,704,171	2.05%			
Total Liabilities	35,953,767	26.74%	38,495,220	29.21%	(2,541,453)	-6.60%			
Total Shareholders' and Patron Equity	98,527,423	73.26%	93,281,799	70.79%	5,245,624	5.62%			
Debt to Equity		36.49%		41.27%					
Debt to Asset		26.74%		29.21%					
Stockholder (Owner) Equity		73.26%		70.79%					

Leverage Ratios With Specific Investments Excluded									
	2,016		2,015		Variance	Variance Percentage			
Total Assets	110,307,995	100.00%	107,032,907	100.00%	3,275,088	3.06%			
Total Liabilities	35,953,767	32.59%	38,495,220	35.97%	(2,541,453)	-6.60%			
Total Shareholders' and Patron Equity	74,354,228	67.41%	68,537,687	64.03%	5,816,541	8.49%			
Debt to Equity		48.35%		56.17%					
Debt to Asset		32.59%		35.97%					
Stockholder (Owner) Equity		67.41%		64.03%					

Profitability ratios include:

- Gross Profit Margin
- Operating Profit Margin
- Net Profit Margin
- Cash Flow Margin
- Return on Total Assets (ROA)
- Return on Investment (ROI)
- Return on Equity (ROE)
- Cash Return on Assets

Gross Profit and Gross Profit Margin

- First step of profit measurement
- Difference between Net Sales and Cost of Good Sold (COGS)
- The relationship between Gross Profit and Net Sales is called Gross Profit Margin
- Measures ability of a company to control costs of inventories or manufacturing of products and to pass along price increases through sales to customers
- Change in the COGS percentage may be caused by changes in cost or changes in selling price

Gross Profit and Gross Profit Margin

- Gross profit margin remain relatively constant in stable industries and may change significantly in volatile industries
- Generally speaking, business try to maintain or increase Gross Profit and Gross Profit Margin

Net Sales
-Cost of Good Sold
Gross Profit

Gross Profit

Net Sales

Operating Profit and Operating Profit Margin

- Second step of profit measurement
- Operating Profit is also referred to as EBIT
- The relationship between Operating Profit and Net Sales is called Operating Profit Margin
- Measures overall operating efficiency and incorporates all of the expenses associated with ordinary business activities

Operating Profit and Operating Profit Margin

 Provides a basis for assessing success of a business apart from financing and investing activities and separate from tax considerations

Gross Profit

Operating ExpensesOperating Profit

Operating Profit

Net Sales

Net Profit and Net Profit Margin

- Third step of profit measurement
- The relationship between Net Profit and Net Sales is called Net Profit Margin
- Net Profit Margin shows the percentage of profit earned on every sales dollar

Net Profit and Net Profit Margin

 Measures profitability after consideration of all revenue and expense, including interest, taxes, and non-operating items

Operating Profit
-Interest, taxes & etc.
Net Profit

Net Income

Net Sales

						Variance
	Current Yr		Prior Yr		Variance	Percentage
Sales - Supply	191,514,862		228,036,857		(36,521,995)	-16.02%
Sales - Marketing	101,882,762		128,442,907		(26,560,145)	-20.68%
Total Sales	293,397,624		356,479,764		(63,082,140)	-17.70%
Cost of Sales - Supply	158,580,247	82.80%	192,624,154	84.47%	(34,043,907)	-17.67%
Cost of Sales - Marketing	98,639,675	96.82%	122,670,189	95.51%	(24,030,514)	-19.59%
Total Cost of Sales	257,219,922	87.67%	315,294,343	88.45%	(58,074,421)	-18.42%
Gross Margin - Supply	32,934,615	17.20%	35,412,703	15.53%	(2,478,088)	-7.00%
Gross Margin - Marketing	3,243,087	3.18%	5,772,718	4.49%	(2,529,631)	-43.82%
Total Gross Margin	36,177,702	12.33%	41,185,421	11.55%	(5,007,719)	-12.16%
Other Revenue	9,738,986	3.32%	10,616,542	2.98%	(877,556)	-8.27%
Operating Expenses	39,767,418	13.55%	42,364,001	11.88%	(2,596,583)	-6.13%
Operating Profit	6,149,270	2.10%	9,437,962	2.65%	(3,288,692)	-34.85%
Patronage Refunds	2,476,162	0.84%	4,862,006	1.36%	(2,385,844)	-49.07%
Income from Investments in Affiliated	414,370	0.14%	484,583	0.14%	(70,213)	
Businesses						-14.49%
Other Non-Operating Revenue	1,425,438	0.49%	1,839,708	0.52%	(414,270)	-22.52%
Other Non-Operating Expenses	(157,730)	-0.05%	(259,546)	-0.07%	101,816	-39.23%
Interest Expense	(145,643)	-0.05%	(436,673)	-0.12%	291,030	-66.65%
Gain on Disposal of Property, Equipment and Investments	223,123	0.08%	191,963	0.05%	31,160	16.23%
Net Other Revenue (Expense)	4,235,720	1.44%	6,682,041	1.87%	(2,446,321)	-36.61%
Profit Before Income Tax	10,384,990	3.54%	16,120,003	4.52%	(5,735,013)	-35.58%
Provision For Income Tax	110,500	0.04%	3,411,000	0.96%	(3,300,500)	-96.76%
Net Profit	10,274,490	3.50%	12,709,003	3.57%	(2,434,513)	-19.16%

Earnings Before Interest & Tax

- Referred to as EBIT
- Measures the profitability of a company without taking into account its cost of capital or tax implications.
- It is the difference between operating revenues and operating expenses.
 - If the business does not have non-operating income, then operating income is sometimes referred to as EBIT or Operating Profit

Earning Before Interest, Taxes, Depreciation and Amortization Expense

- Referred to as EBITDA
- EBITDA is more likely to be used in the analysis of capital-intensive firms or those amortizing large amounts of intangible assets. Otherwise, the depreciation and/or amortization expense can overwhelm their net earnings, giving the appearance of substantial losses
- A good metric to evaluate profitability, but not cash flow

Earning Before Interest, Taxes, Depreciation and Amortization Expense

- Simplest Formula
 - Operating Profit Depreciation Expense
 Amortization Expense
- Literal Formula
 - Net Profit Interest Taxes Depreciation Expense
 Amortization Expense

"Joan and Joe: A Tale of Woe"

Joe added up profits and went to see Joan,
Assured of obtaining a much-needed loan.
When Joe arrived, he announced with good cheer:
"My firm has had an outstanding year,
"And now I need a loan from your bank."
Eyeing the statements, Joan's heart sank.
"Your profits are fine," Joan said to Joe.
"But where, oh where, is your company's cash flow?
I'm sorry to say: the answer is 'no'."

—L. Fraser

When analyzing the Statement of Cash Flow, one should consider

- Cash Flow from Operating Activities
 - Fluctuation in Cash Flow from Operation over time
 - Magnitude of positive or negative Cash Flow From Operation
 - Understand the causes of the positive or negative Cash Flow from Operations
 - Generating cash from operations is the preferred method for obtaining excess cash to finance
 - capital expenditures and expansion
 - repayment of debt
 - payment of dividends

- Success or failure of the business is in generating cash from operations
- Cash inflows
- Cash outflows
 - The necessity of the outflow
 - How are outflows financed
- Importance of internal cash generation and the implications for investing and financing activities when this does and does not occur

- Generally, it is best to finance
 - Short term assets with short-term debt
 - Long term assets with long-term debt or issuance of stock
- Notes reveal future debt repayments and are useful in assessing how much cash will be needed in upcoming years to repay outstanding debt.

Cash Flow Margin

- Measures the firm's ability to translate sales into cash.
- The relationship between cash generated from operations and from sales is another measure of operating performance.
- Cash Flow Margin is cash profits generated internally from operations.
- Cash Flow Margin is not accrual accounting profits that a firm needs to service debt financing, pay dividends and invest in new capital assets.

Cash Flow Margin

Cash Flow from Operating Activities

Net Sales

Cash Flow From Operating Activities	Current Yr	Prior Yr
Net Income (Net Profit)	10,274,490	12,709,003
Adjustment to reconcile Net Income to Net Cash provided by operating		
activities		
Depreciation and Amortization	5,197,531	4,956,727
Gain on disposal of property, equipment and investments	(223,123)	(191,963)
Adjustment to record property at net realizable value	0	26,708
Noncash patronage refunds received and partnership profit allocations	(1,289,083)	(2,106,318)
Pension contributions in excess of expense	(627,952)	(1,927,180)
Provision for deferred taxes	767,500	1,146,000
Changes in Assets and Liabilities		
Notes and Accounts Receivables (Net)	2,928,186	2,105,254
Miscellaneous Receivables	(1,790,232)	860,596
Brokerage Accounts	(664,621)	794,135
Forward Contracts (Net)	840,523	(1,934,676)
Inventory	4,665,436	1,168,262
Prepaid Inventory and Expenses	(2,947,877)	(5,845,304)
Accounts Payable and Other Liabilities	108,147	433,845
Customer Prepaid Balances	(568,885)	(102,472)
Net Cash provided or used by Operating Activities	16,670,040	12,092,617

Cash Flow From Investing Activities	Current Yr	Prior Yr
Proceeds from sale of Property and Equipment	236,715	252,016
Proceeds from sale and retirement of Investments	1,486,840	1,517,941
Expenditures for Property and Equipment	(6,657,642)	(6,548,878)
Purchase of Investments	(126,757)	(33,765)
Net Cash provided or used by Investing Activities	(5,060,844)	(4,812,686)
Cash Flow From Financing Activities		
Capital Stock sold	600	445
Capital Stock redeemed	(50)	(835)
Patrons' Equity redeemed	(1,110,949)	(109,696)
Patrons' refunds paid	(3,395,272)	(3,098,509)
Payment on Long Term Loans	(1,852,458)	(2,181,600)
Net change in bank overdrafts	(1,881,266)	(551,905)
Net Cash provided or used by Financing Activities	(8,239,395)	(5,942,100)
Net Increase or decrease in Cash and Cash Equivalents	3,369,801	1,337,831
Cash and Cash Equivalents at beginning of Year	11,800,916	10,463,085
Cash and Cash Equivalents at end of year	15,170,717	11,800,916

Financial Statement Analysis

Questions

Thank You