

# Financial Formulas

# 3

<b>Financial Formulas</b>	<b>i</b>
In this chapter...	1
Formulas Used in Financial Calculations	1
Statements of Changes in Financial Position (Total \$)	1
Cash Flow (\$ millions)	1
Statements of Changes in Financial Position (\$ per Share)	2
Capital Expenditures	2
Cash Flow	2
Equity in Earnings per Share	2
Income Statement (Total \$)	3
Cash Flow (\$ millions)	3
Preferred Dividend Coverage	3
Pretax Income Available for Interest	3
Tax Rate	3
Income Statement (\$ per Share)	3
Cash Flow	3
Depreciation and Amortization	3
Discontinued Operations	3
Earnings per Share (Diluted)	4
Earnings per Share (Basic)	4
Equity in Earnings	4
Extraordinary Items	4
Extraordinary Items and Discontinued Operations	4
Interest Expense	5
Labor and Related Costs	5
Nonoperating Income (Expense)	5
Operating Income After Depreciation	5
Operating Income Before Depreciation	5
Operating Income Before Depreciation (Restated)	5
Pension Expense	5
Pretax Income	6

Research and Development Expense	6
Sales (Net)	6
Operating Margins	6
(Item) as a % of sales	6
Cash Flow Margin	8
Net Profit Margin (After-tax Profit Margin)	9
Operating Profit Margin After Depreciation	10
Operating Profit Margin Before Depreciation	10
Pretax Profit Margin	10
Balance Sheet (Total \$ Millions)	10
Gross Assets	10
Invested Capital (Total)	10
Net Operating Assets	11
Stockholders' Equity (Net Worth)	11
Total Debt	11
Total Earning Assets	11
Working Capital	11
Balance Sheet (\$ per Share)	11
Capital Expenditures	11
Common Equity – Tangible	11
Common Equity – Liquidating Value	12
Common Equity – Total	13
Gross Assets	13
Invested Capital	13
Net Operating Assets	13
Property, Plant, and Equipment – Total (Net)	14
Total Net Assets	14
Working Capital	14
Retained Earnings Statement (Total \$)	15
Retained Earnings	15
Turnover Ratios	15
Accounts Receivable Turnover	15
(Item) as a % of Sales	15
Inventory Turnover	15
Number of Days' Sales	16
Sales per \$ Cash and Short-Term Investments	16
Sales per \$ Common Equity	16
Sales per \$ Gross Assets	16
Sales per \$ Inventory	16
Sales per \$ Invested Capital	17
Sales per \$ Net Assets	17
Sales per \$ Property, Plant, and Equipment	17
Sales per \$ Receivable – Current	17
Sales per \$ Stockholders' Equity	17
Rates of Return	19
After-tax Return	19
Pretax Return	23
Sales per \$ Working Capital	25
Working Capital as a % of Sales	25
Capitalization Ratios	25
Invested Capital	25
Criteria of Financial Soundness	28
(Item) as a % of Average Long-Term Debt	28
(Item) as a % of Average Total Debt	30

(Item) as a % of Current Assets	30
(Item) as a % of Intangibles	30
(Item) as a % of Total Assets	30
(Item) as a % of Total Debt	31
(Item) as a % of Total Liabilities	31
(Item) as a % of Total Liabilities and Stockholders' Equity	33
Capital Expenditure Coverage	33
Current Ratio	33
Debt/Equity Ratios	33
Interest Coverage	34
Quick Ratio (Acid Test)	34
Management Decision Statistics	34
(Item) as a % of Cash Flow	34
(Item) as a % of Income Before Extraordinary Items – Adjusted for Common Stock Equivalents	36
(Item) as a % of Property, Plant, and Equipment – Total (Gross)	36
(Item) as a % of Property, Plant, and Equipment – Total (Net)	36
Price and Market Data	37
Price – High – Adjusted	37
Price – Low – Adjusted	37
Price – Close – Adjusted	37
Common Shares Outstanding – Adjusted	38
Common Shares Traded – Adjusted	38
Common Shares Used to Calculate Earnings per Share (Basic) – Adjusted	38
Common Shares Used to Calculate Earnings per Share – 12 Months Moving – Adjusted	38
Market Return	38
Market to Book (Fiscal Year End/Quarter End)	40
Treasury Stock – Number of Common Shares	40
Market Value Statistics	40
Income Before Extraordinary Items Adjusted for Common Stock Equivalents per \$100 of Market Value	40
Income Before Extraordinary Items per \$100 of Market Value	42
Market Value of Common Stock	42
Pretax Income per \$100 of Market Value	42
Sales per \$100 of Market Value	42
Price Ratios	44
Price – Earnings Ratio	44
Dividend Payout Ratio	44
Dividend Yield	44
Formulas Used in COMPUSTAT Prices, Dividends, and Earnings (PDE) Financial Calculations	45
Company Data	45
Index Data	46



## In this chapter...

To assist you in your financial applications, COMPUSTAT (North America) has developed a number of predefined formulas and calculations. These commonly used formulas are by no means all-inclusive; rather, they offer a starting point upon which you can expand.

Due to the availability of certain data, not all of the calculations can be applied to all companies. However, the calculations are designed to help you obtain a basic understanding of COMPUSTAT (North America) data, their definitions, and their usage.

Within the equations, numbers shown in a different typeface and boldface (for example, **100**) are actual values and do **not** refer to data item numbers. When doing calculations based on ratios, take into account annual and quarterly time periods. Be aware of time period references (subscript **t**, **t-1**, etc.) in these calculations.

Period information refers to quarterly calculations that include quarterly items that return year-to-date data. This is because the quarterly data items used in the calculation are cash flow data, which is year-to-date information.

## Formulas Used in Financial Calculations

### Legend

- Period information

Annual  
Data Item #

Quarterly  
Data Item #

### ***Statements of Changes in Financial Position (Total \$)***

#### ***Cash Flow (\$ millions)***

##### **Definition 1**

Income Before Extraordinary Items *plus* Depreciation and Amortization      123 + 125      ● 76 + 77

##### **Definition 2**

Income Before Extraordinary Items *plus* Depreciation and Amortization *plus* Deferred Taxes *plus* Equity in Net Loss (Earnings) *plus* Extraordinary Items and Discontinued Operations *plus* Minority Interest (Income Account)      123 + 125 + 126 + 106 + 124 + 49      NA

##### **Definition 3**

Income Before Extraordinary Items *plus* Depreciation and Amortization *plus* Deferred Taxes *plus* Equity in Net Loss (Earnings) (Statement of Cash Flows) *plus* Extraordinary Items and Discontinued Operations      123 + 125 + 126 + 106 + 124      ● 76 + 77 + 79 + 80 + 78

## Statements of Changes in Financial Position (\$ per Share)

	Annual Data Item #	Quarterly Data Item #
<b>Capital Expenditures</b>		
Capital Expenditures (Statement of Cash Flows) <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	128/(54 * 27)	● 90/(15 * 17)
<b>Cash Flow</b>		
<b>Definition 1</b>		
(Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows)) <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(123 + 125)/(54 * 27)	● (76 + 77)/(15 * 17)
<b>Definition 2</b>		
(Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows) <i>plus</i> Deferred Taxes (Statement of Cash Flows) <i>plus</i> Equity in Net Loss (Earnings) (Statement of Cash Flows) <i>plus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows) <i>plus</i> Minority Interest (Income Account)) <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(123 + 125 + 126 + 106 + 124 + 49)/(54 * 27)	NA
<b>Definition 3</b>		
(Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows) <i>plus</i> Deferred Taxes (Statement of Cash Flows) <i>plus</i> Equity in Net Loss (Earnings) (Statement of Cash Flows) <i>plus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows)) <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(123 + 125 + 126 + 106 + 124)/(54 * 27)	● (76 + 77 + 79 + 80 + 78)/(15 * 17)
<b>Equity in Earnings per Share</b>		
Equity in Net Loss (Earnings) (Statement of Cash Flows) <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	106/(54 * 27)	● 80/(15 * 17)

## Income Statement (Total \$)

	Annual Data Item #	Quarterly Data Item #
<b>Cash Flow (\$ millions)</b>		
Income Before Extraordinary Items <i>plus</i> Depreciation and Amortization	18 + 14	8 + 5
<b>Preferred Dividend Coverage</b>		
Income Before Extraordinary Items <i>divided by</i> Dividends – Preferred	18/19	8/24
<b>Pretax Income Available for Interest</b>		
Pretax Income <i>plus</i> Interest Expense	170 + 15	23 + 22
<b>Tax Rate</b>		
Income Taxes – Total <i>divided by</i> Pretax Income	(16/170) * 100	(6/23) * 100

## Income Statement (\$ per Share)

	Annual Data Item #	Quarterly Data Item #
<b>Cash Flow</b>		
[Income Before Extraordinary Items <i>plus</i> Depreciation and Amortization] <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(18 + 14)/(54 * 27)	(8 + 5)/(15 * 17)
<b>Depreciation and Amortization</b>		
Depreciation and Amortization <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	14/(54 * 27)	5/(15 * 17)
<b>Discontinued Operations</b>		
Discontinued Operations <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	66/(54 * 27)	33/(15 * 17)

## Income Statement (\$ per Share) (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Earnings per Share (Diluted)</b>		
<b>Excluding Extraordinary Items</b>		
Earnings per Share (Diluted) – Excluding Extraordinary Items <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	57/27	9/17
<b>Including Extraordinary Items</b>		
Earnings per Share (Diluted) – Including Extraordinary Items <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	169/27	7/17
<b>Earnings per Share (Basic)</b>		
<b>Excluding Extraordinary Items</b>		
Earnings per Share (Basic) – Excluding Extraordinary Items <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	58/27	19/17
<b>Excluding Extraordinary Items – 12-Months Moving</b>		
Earnings per Share (Basic) – Excluding Extraordinary Items – 12-Months Moving <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	27/17
<b>Including Extraordinary Items</b>		
Earnings per Share (Basic) – Including Extraordinary Items <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	53/27	11/17
<b>Equity in Earnings</b>		
Equity in Earnings <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	55/(54 * 27)	NA
<b>Extraordinary Items</b>		
Extraordinary Items <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	192/(54 * 27)	119/(15 * 17)
<b>Extraordinary Items and Discontinued Operations</b>		
Extraordinary Items and Discontinued Operations <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	48/(54 * 27)	26/(15 * 17)

## Income Statement (\$ per Share) (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Interest Expense</b>		
Interest Expense <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	15/(54 * 27)	22/(15 * 17)
<b>Labor and Related Costs</b>		
Labor and Related Expenses <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	42/(54 * 27)	NA
<b>Nonoperating Income (Expense)</b>		
Nonoperating Income (Expense) <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	61/(54 * 27)	31/(15 * 17)
<b>Operating Income After Depreciation</b>		
Operating Income After Depreciation <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	178/(54 * 27)	(21 – 5)/(15 * 17)
<b>Operating Income Before Depreciation</b>		
Operating Income Before Depreciation <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	13/(54 * 27)	21/(15 * 17)
<b>Operating Income Before Depreciation (Restated)</b>		
Sales (Restated) <i>minus</i> Cost of Goods Sold (Restated) <i>minus</i> Selling, General, and Administrative Expense (Restated)	117-131-132	NA
<b>Pension Expense</b>		
Pension and Retirement Expense <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	43/(54 * 27)	NA

## Income Statement (\$ per Share) (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Pretax Income</b>		
Pretax Income <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	170/(54 * 27)	23/(15 * 17)
<b>Research and Development Expense</b>		
Research and Development Expense <i>divided by</i> (Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	46/(54 * 27)	4/(15 * 17)
<b>Sales (Net)</b>		
Sales (Net) <i>divided by</i> [Common Shares Used to Calculate Earnings per Share (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date]	12/(54 * 27)	2/(15 * 17)

## Operating Margins

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of sales</b>		
<b>Advertising Expense</b>		
Advertising Expense <i>divided by</i> Sales (Net)	(45/12) * 100	NA
<b>Available For Interest</b>		
(Pretax Income <i>plus</i> Interest Expense) <i>divided by</i> Sales (Net)	((170 + 15)/12) * 100	((23 + 22)/2) * 100
<b>Cost of Goods Sold</b>		
Cost of Goods Sold <i>divided by</i> Sales (Net)	(41/12) * 100	(30/2) * 100
<b>Depreciation and Amortization</b>		
Depreciation and Amortization <i>divided by</i> Sales (Net)	(14/12) * 100	(5/2) * 100
<b>Interest Expense</b>		
Interest Expense <i>divided by</i> Sales (Net)	(15/12) * 100	(22/2) * 100
<b>Labor and Related Expenses</b>		
Labor and Related Expenses <i>divided by</i> Sales (Net)	(42/12) * 100	NA
<b>Nonoperating Income (Expense)</b>		
Nonoperating Income (Expense) <i>divided by</i> Sales (Net)	(61/12) * 100	(31/2) * 100

(Net)

## Operating Margins (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of sales (cont.)</b>		
<b>Pension and Retirement Expense</b>		
Pension and Retirement Expense <i>divided by</i> Sales (Net)	$(43/12) * 100$	NA
<b>Rental Expense</b>		
Rental Expense <i>divided by</i> Sales (Net)	$(47/12) * 100$	NA
<b>Research and Development Expense</b>		
Research and Development Expense <i>divided by</i> Sales (Net)	$(46/12) * 100$	$(4/2) * 100$
<b>Selling, General, and Administrative Expenses</b>		
Selling, General, and Administrative Expenses <i>divided by</i> Sales (Net)	$(189/12) * 100$	$(1/2) * 100$
<b>Cash Flow Margin</b>		
<b>Definition 1</b>		
[Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows)] <i>divided by</i> Sales (Net)	$[(123 + 125)/12] * 100$	• $[(76 + 77)/2] * 100$
<b>Definition 2</b>		
[Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows) <i>plus</i> Deferred Taxes (Statement of Cash Flows) <i>plus</i> Equity in Net Loss (Earnings) (Statement of Cash Flows) <i>plus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows) <i>plus</i> Minority Interest (Income Account)] <i>divided by</i> Sales (Net)	$[(123 + 125 + 126 + 106 + 124 + 49)/12] * 100$	$[(76 + 77 + 79 + 80 + 78 + 3)/2] * 100$
<b>Definition 3</b>		
[Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows) <i>plus</i> Deferred Taxes (Statement of Cash Flows) <i>plus</i> Equity in Net Loss (Earnings) (Statement of Cash Flows) <i>plus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows)] <i>divided by</i> Sales (Net)]	$[(123 + 125 + 126 + 106 + 124)/12] * 100$	• $[(76 + 77 + 79 + 80 + 78)/2] * 100$
<b>Definition 4</b>		
(Income Before Extraordinary Items <i>plus</i> Depreciation and Amortization) <i>divided by</i> Sales (Net)	$((18 + 14)/12) * 100$	$((8 + 5)/2) * 100$

**Net Profit Margin (After-tax Profit Margin)**

Income Before Extraordinary Items *divided by* Sales (18/12) \* 100 (8/2) \* 100  
(Net)

## Operating Margins (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Operating Profit Margin After Depreciation</b>		
(Operating Income Before Depreciation <i>minus</i> Depreciation and Amortization) <i>divided by</i> Sales (Net)	$((13 - 14)/12) * 100$ <i>or</i> $(178/12) * 100$	$((21 - 5)/2) * 100$
<b>Operating Profit Margin Before Depreciation</b>		
Operating Income Before Depreciation <i>divided by</i> Sales (Net)	$(13/12) * 100$	$(21/2) * 100$
<b>Pretax Profit Margin</b>		
Pretax Income <i>divided by</i> Sales (Net)	$(170/12) * 100$	$(23/2) * 100$

## Balance Sheet (Total \$ Millions)

	Annual Data Item #	Quarterly Data Item #
<b>Gross Assets</b>		
Assets – Total/Liabilities and Stockholders/Equity – Total <i>plus</i> Depreciation, Depletion, and Amortization (Accumulated)	6 + 196	44 + 41
<b>Invested Capital (Total)</b>		
<b>Definition 1</b>		
Invested Capital – Total	37	62
<b>Definition 2</b>		
Invested Capital – Total <i>minus</i> Minority Interest (Balance Sheet)	37 – 38	62 – 53
<b>Definition 3</b>		
Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>minus</i> Minority Interest (Balance Sheet)	37 + 35 – 38	62 + 52 – 53
<b>Definition 4</b>		
Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet)	37 + 35	62 + 52

### Balance Sheet (Total \$ Millions) (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Net Operating Assets</b>		
Property, Plant, and Equipment – Total (Net) <i>plus</i> Current Assets – Total <i>minus</i> Current Liabilities – Total	8 + 4 – 5	42 + 40 – 49
<b>Stockholders' Equity (Net Worth)</b>		
<b>Alternative Definition</b>		
Preferred Stock – Liquidating Value <i>plus</i> Common Equity – Tangible	10 + 11	NA
<b>Total Debt</b>		
Long- Term Debt – Total <i>plus</i> Debt in Current Liabilities	9 + 34	51 + 45
<b>Total Earning Assets</b>		
Property, Plant, and Equipment – Total (Net) <i>plus</i> Current Assets – Total	8 + 4	42 + 40
<b>Working Capital</b>		
Current Assets – Total <i>minus</i> Current Liabilities – Total	4 – 5	40 – 49

### Balance Sheet (\$ per Share)

	Annual Data Item #	Quarterly Data Item #
<b>Capital Expenditures</b>		
Property, Plant, and Equipment – Capital Expenditures (Schedule V) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	30/(25 * 27)	NA
<b>Common Equity – Tangible</b>		
Common Equity – Tangible <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	11/(25 * 27)	NA

**Common Equity – Liquidating Value**

Common Equity – Liquidation Value *divided*  
*by*[(Common Shares Outstanding *multiplied by*  
Adjustment Factor (Cumulative) *by* Ex-Date)

235/(25 \* 27)

NA

## Balance Sheet (\$ per Share) (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Common Equity – Total</b>		
Common Equity – Total <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	60/(25 * 27)	59/(61 * 17)
<b>Gross Assets</b>		
(Assets – Total/Liabilities and Stockholders' Equity Total <i>plus</i> Depreciation, Depletion, and Amortization (Accumulated)) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(6 + 196)/(25 * 27)	(44 + 41)/(61 * 17)
<b>Invested Capital</b>		
<b>Definition 1</b>		
Invested Capital – Total <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	37/(25 * 27)	62/(61 * 17)
<b>Definition 2</b>		
(Invested Capital – Total <i>minus</i> Minority Interest (Balance Sheet)) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(37 – 38)/(25 * 27)	(62 – 53)/(61 * 17)
<b>Definition 3</b>		
(Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>minus</i> Minority Interest (Balance Sheet)) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(37 + 35 – 38)/(25 * 27)	(62 + 52 – 53)/(61 * 17)
<b>Definition 4</b>		
(Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet)) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(37 + 35)/(25 * 27)	(62 + 52)/(61 * 17)
<b>Net Operating Assets</b>		
(Property, Plant, and Equipment – Total (Net) <i>plus</i> Current Assets – Total <i>minus</i> Current Liabilities – Total) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(8 + 4 – 5)/(25 * 27)	(42 + 40 – 49)/(61 * 17)

## Balance Sheet (\$ per Share) (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Net Operating Assets (cont.)</b>		
<b>Fiscal Year</b>		
Price – Fiscal Year – High <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	199/27	NA
<b>1st Month of Quarter</b>		
Price – Close– 1st Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	12/17
<b>2nd Month of Quarter</b>		
Price – Close – 2nd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	13/17
<b>3rd Month of Quarter</b>		
Price – Close – 3rd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	14/17
<b>Property, Plant, and Equipment – Total (Net)</b>		
Property, Plant, and Equipment – Total (Net) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment – Factor (Cumulative) Ex-Date)	8/(25 * 27)	42/(61 * 17)
<b>Total Net Assets</b>		
Assets – Total/Liabilities and Stockholders’ Equity Total <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	6/(25 * 27)	44/(61 * 17)
<b>Working Capital</b>		
(Current Assets – Total <i>minus</i> Current Liabilities – Total) <i>divided by</i> (Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date)	(4 – 5)/(25 * 27)	(40 – 49)/(61 * 17)

## Retained Earnings Statement (Total \$)

	Annual Data Item #	Quarterly Data Item #
<b>Retained Earnings</b>		
<b>Beginning of Year</b>		
Retained Earnings <i>t minus 1</i>	36( <b>t - 1</b> )	58( <b>t - 1</b> )
<b>End of Year</b>		
Retained Earnings <i>t</i>	36 <b>t</b>	58 <b>t</b>
<b>Other Changes</b>		
Retained Earnings <i>t minus</i> Retained Earnings <i>t minus 1</i> <i>minus</i> Retained Earnings Restatement <i>minus</i> Income Before Extraordinary Items (Statement of Cash Flows) <i>minus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows) <i>plus</i> Cash Dividends (Statement of Cash Flows)	36 <b>t - 36(t - 1) - 99 -</b> 123 - 124 + 127	NA

## Turnover Ratios

	Annual Data Item #	Quarterly Data Item #
<b>Accounts Receivable Turnover</b>		
Sales (Net) <i>divided by</i> [(Receivables - Total <i>t plus</i> Receivables - Total <i>t minus 1</i> ) <i>divided by</i> 2]	12/((2 <b>t + 2(t - 1))</b> /2)	2/((37 <b>t + 37(t - 1))</b> /2)
<b>(Item) as a % of Sales</b>		
<b>Accounts Receivables</b>		
Receivables - Total <i>divided by</i> Sales (Net)	(2/12) * 100	(37/2) * 100
<b>Cash and Short-Term Investments</b>		
Cash and Short-Term Investments <i>divided by</i> Sales (Net)	(1/12) * 100	(36/2) * 100
<b>Inventories</b>		
Inventories - Total <i>divided by</i> Sales (Net)	(3/12) * 100	(38/2) * 100
<b>Inventory Turnover</b>		
<b>Definition 1</b>		
Cost of Goods Sold <i>divided by</i> ((Inventories - Total <i>t</i> <i>plus</i> Inventories - Total <i>t minus 1</i> ) <i>divided by</i> 2)	41/((3 <b>t + 3(t - 1))</b> /2)	30/((38 <b>t + 38(t - 1))</b> /2)
<b>Definition 2</b>		
Sales (Net) <i>divided by</i> ((Inventories - Total <i>t plus</i> Inventories - Total <i>t minus 1</i> ) <i>divided by</i> 2)	12/((3 <b>t + 3(t - 1))</b> /2)	2/((38 <b>t + 38(t - 1))</b> /2)

## Turnover Ratios (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Number of Days' Sales</b>		
<b>in Inventories – Definition 1</b>		
((Inventories – Total <i>t</i> plus Inventories – Total <i>t</i> minus 1) divided by 2) divided by (Cost of Goods Sold divided by 365)	$((3t + 3(t - 1))/2)/(41/365)$	$((38t + 38(t - 1))/2)/(30/90)$
<b>in Inventories – Definition 2</b>		
((Inventories – Total <i>t</i> plus Inventories – Total <i>t</i> minus 1) divided by 2) divided by (Sales (Net) divided by 365)	$(3t + 3(t - 1))/2)/(12/365)$	$(38t + 38(t - 1))/2)/(2/90)$
<b>in Receivables</b>		
((Receivables – Total <i>t</i> plus Receivables – Total <i>t</i> minus 1) divided by 2) divided by (Sales (Net) divided by 365)	$((2t + 2(t - 1))/2)/(12/365)$	$((37t + 37(t - 1))/2)/(2/90)$
<b>Sales per \$ Cash and Short-Term Investments</b>		
Sales (Net) divided by Cash and Short-Term Investments	12/1	2/36
<b>Sales per \$ Common Equity</b>		
Sales (Net) divided by Common Equity – Total	12/60	2/59
<b>Tangible</b>		
Sales (Net) divided by Common Equity – Tangible	12/11	NA
<b>Liquidating Value</b>		
Sales (Net) divided by Common Equity – Liquidation Value	12/235	NA
<b>Sales per \$ Gross Assets</b>		
Sales (Net) divided by (Assets – Total/Liabilities and Stockholders' Equity – Total plus Depreciation, Depletion, and Amortization (Accumulated))	12/(6 + 196)	2/(44 + 41)
<b>Sales per \$ Inventory</b>		
Sales (Net) divided by Inventories – Total	12/3	2/38

## Turnover Ratios (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Sales per \$ Invested Capital</b>		
<b>Definition 1</b>		
Sales (Net) <i>divided by</i> Invested Capital – Total	12/37	2/62
<b>Definition 2</b>		
Sales (Net) <i>divided by</i> (Invested Capital – Total <i>minus</i> Minority Interest (Balance Sheet))	12/(37 – 38)	2/(62 – 53)
<b>Definition 3</b>		
Sales (Net) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>minus</i> Minority Interest (Balance Sheet))	12/(37 + 35 – 38)	2/(62 + 52 – 53)
<b>Definition 4</b>		
Sales (Net) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet))	12/(37 + 35)	2/(62 + 52)
<b>Sales per \$ Net Assets</b>		
Sales (Net) <i>divided by</i> Assets – Total/Liabilities and Stockholders' Equity – Total	12/6	2/44
<b>Sales per \$ Property, Plant, and Equipment</b>		
<b>Gross</b>		
Sales (Net) <i>divided by</i> Property, Plant, and Equipment – Total (Gross)	12/7	2/(41 + 42)
<b>Net</b>		
Sales (Net) <i>divided by</i> Property, Plant, and Equipment – Total (Net)	12/8	2/42
<b>Sales per \$ Receivable – Current</b>		
Sales (Net) <i>divided by</i> Receivables – Total	12/2	2/37
<b>Sales per \$ Stockholders' Equity</b>		
<b>Tangible</b>		
Sales (Net) <i>divided by</i> (Preferred Stock – Liquidating Value <i>plus</i> Common Equity – Tangible)	12/(10 + 11)	NA
<b>Total</b>		
Sales (Net) <i>divided by</i> Stockholders' Equity – Total	12/216	2/60



## Rates of Return

	Annual Data Item #	Quarterly Data Item #
<b>After-tax Return</b>		
<b>on Average Common Equity – Total</b>		
Income Before Extraordinary Items – Adjusted for Common Stock Equivalents <i>divided by</i> ((Common Equity – Total <i>t plus</i> Common Equity – Total <i>t minus 1</i> ) <i>divided by 2</i> )	$(237/((60t + 60(t - 1))/2)) * 100$	$(25/((59t + 59(t - 1))/2)) * 100$
<b>on Common Equity – Tangible</b>		
Income Before Extraordinary Items – Adjusted for Common Stock Equivalents <i>divided by</i> Common Equity – Tangible	$(237/11) * 100$	NA
<b>on Common Equity – Total</b>		
Income Before Extraordinary Items – Adjusted for Common Stock Equivalents <i>divided by</i> Common Equity – Total	$(237/60) * 100$	$(25/59) * 100$
<b>on Gross Assets – Definition 1</b>		
[Income Before Extraordinary Items <i>divided by</i> (Assets – Total/Liabilities and Stockholders' Equity – Total <i>plus</i> Depreciation, Depletion, and Amortization (Accumulated) (Balance Sheet))]	$[18/(6 + 196)] * 100$	$[8/(44 + 41)] * 100$
<b>on Gross Assets – Definition 2</b>		
[Income Before Extraordinary Items <i>plus</i> Interest Expense <i>divided by</i> (Assets – Total/Liabilities and Stockholders' Equity – Total <i>plus</i> Depreciation, Depletion, and Amortization (Accumulated) (Balance Sheet))]	$[(18 + 15)/(6 + 196)] * 100$	$[(8 + 22)/(44 + 41)] * 100$
<b>on Gross Assets – Definition 3</b>		
[Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income)))) <i>divided by</i> (Assets – Total/Liabilities and Stockholders' Equity – Total <i>plus</i> Depreciation, Depletion, and Amortization (Accumulated) (Balance Sheet))]	$[(18 + (15 * (1 - (16/170))))/(6 + 196)] * 100$	$[(8 + (22 * (1 - (6/23))))/(44 + 41)] * 100$
<b>on Gross Assets – Definition 4</b>		
[Income Before Extraordinary Items <i>plus</i> Interest Expense <i>plus</i> Minority Interest (Income Account) <i>divided by</i> (Assets – Total/Liabilities and Stockholders' Equity – Total <i>plus</i> Depreciation, Depletion, and Amortization (Accumulated) (Balance Sheet))]	$[(18 + 15 + 49)/(6 + 196)] * 100$	$[(8 + 22 + 3)/(44 + 41)] * 100$
<b>on Gross Assets – Definition 5</b>		
[Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income)))) <i>plus</i> Minority Interest (Income Account) <i>divided by</i> (Assets –	$[(18 + (15 * (1 - (16/170))) + 49)/(6 + 196)] * 100$	$[(8 + (22 * (1 - (6/23))) + 3)/(44 + 41)] * 100$

Total/Liabilities and Stockholders' Equity – Total *plus*  
Depreciation, Depletion, and Amortization  
(Accumulated) (Balance Sheet)]

## Rates of Return (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>After-tax Return (cont.)</b>		
<b>on Invested Capital – Definition 1A</b>		
[Income Before Extraordinary Items <i>plus</i> Interest Expense <i>plus</i> Minority Interest (Income Account)] <i>divided by</i> Invested Capital – Total	$[(18 + 15 + 49)/37] * 100$	$((8 + 22 + 3)/62) * 100$
<b>on Invested Capital – Definition 1B</b>		
(Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income))) <i>plus</i> Minority Interest (Income Account)) <i>divided by</i> Invested Capital – Total	$((18 + (15 * (1 - (16/170))) + 49)/37) * 100$	$((8 + (22 * (1 - (6/23))) + 3)/62) * 100$
<b>on Invested Capital – Definition 2A</b>		
(Income Before Extraordinary Items <i>plus</i> Interest Expense) <i>divided by</i> (Invested Capital – Total <i>minus</i> Minority Interest (Balance Sheet))	$((18 + 15)/(37 - 38)) * 100$	$((8 + 22)/(62 - 53)) * 100$
<b>on Invested Capital – Definition 2B</b>		
(Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income)))) <i>divided by</i> (Invested Capital – Total <i>minus</i> Minority Interest (Balance Sheet))	$((18 + (15 * (1 - (16/170))))/(37 - 38)) * 100$	$((8 + (22 * (1 - (6/23))))/(62 - 53)) * 100$
<b>on Invested Capital – Definition 3A</b>		
(Income Before Extraordinary Items <i>plus</i> Interest Expense) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>minus</i> Minority Interest (Balance Sheet))	$((18 + 15)/(37 + 35 - 38)) * 100$	$((8 + 22)/(62 + 52 - 53)) * 100$
<b>on Invested Capital – Definition 3B</b>		
(Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income)))) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>minus</i> Minority Interest (Balance Sheet))	$((18 + (15 * (1 - (16/170))))/(37 + 35 - 38)) * 100$	$((8 + (22 * (1 - (6/23))))/(62 + 52 - 53)) * 100$
<b>on Invested Capital – Definition 4A</b>		
(Income Before Extraordinary Items <i>plus</i> Interest Expense <i>plus</i> Minority Interest (Income Account)) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet))	$((18 + 15 + 49)/(37 + 35)) * 100$	$((8 + 22 + 3)/(62 + 52)) * 100$
<b>on Invested Capital – Definition 4B</b>		
(Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income))) <i>plus</i> Minority Interest	$((18 + (15 * (1 - (16/170))) + 49)/(37 + 35)) * 100$	$((8 + (22 * (1 - (6/23))) + 3)/(62 + 52)) * 100$

(Income Account)) *divided by* (Invested Capital – 35)) \* 100  
Total *plus* Deferred Taxes and Investment Tax Credit  
(Balance Sheet))

52)) \* 100

## Rates of Return (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>After-tax Return (cont.)</b>		
<b>on Property, Plant, and Equipment – Total (Net) – Definition 1</b>		
Income Before Extraordinary Items <i>divided by</i> Property, Plant, and Equipment – Total (Net)	$(18/8) * 100$	$(8/42) * 100$
<b>on Property, Plant, and Equipment – Total (Net) – Definition 2</b>		
(Income Before Extraordinary Items <i>plus</i> Interest Expense) <i>divided by</i> Property, Plant, and Equipment – Total (Net)	$((18 + 15)/8) * 100$	$((8 + 22)/42) * 100$
<b>on Property, Plant, and Equipment – Total (Net) – Definition 3</b>		
(Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income)))) <i>divided by</i> Property, Plant, and Equipment – Total (Net)	$((18 + (15 * (1 - (16/170))))/8) * 100$	$((8 + (22 * (1 - (6/23))))/42) * 100$
<b>on Property, Plant, and Equipment – Total (Net) – Definition 4</b>		
(Income Before Extraordinary Items <i>plus</i> Interest Expense <i>plus</i> Minority Interest (Income Account)) <i>divided by</i> Property, Plant, and Equipment – Total (Net)	$((18 + 15 + 49)/8) * 100$	$((8 + 22 + 3)/42) * 100$
<b>on Property, Plant, and Equipment – Total (Net) – Definition 5</b>		
(Income Before Extraordinary Items <i>plus</i> (Interest Expense <i>multiplied by</i> (1 <i>minus</i> (Income Taxes – Total <i>divided by</i> Pretax Income)))) <i>plus</i> Minority Interest (Income Account)) <i>divided by</i> Property, Plant, and Equipment – Total (Net)	$((18 + (15 * (1 - (16/170))) + 49)/8) * 100$	$((8 + (22 * (1 - (6/23))) + 3)/42) * 100$
<b>on Stockholders' Equity – Definition 1</b>		
Income Before Extraordinary Items <i>divided by</i> Stockholders' Equity – Total	$(18/216) * 100$	$(8/60) * 100$
<b>on Stockholders' Equity – Definition 2</b>		
Income Before Extraordinary Items <i>divided by</i> (Preferred Stock – Liquidating Value <i>plus</i> Common Equity – Tangible)	$(18/(10 + 11)) * 100$	NA
<b>Pretax Return</b>		
<b>on Net Operating Assets</b>		
(Operating Income Before Depreciation <i>minus</i> Depreciation and Amortization) <i>divided by</i> (Property, Plant, and Equipment – Total (Net) <i>plus</i> Current Assets – Total <i>minus</i> Current Liabilities – Total) or	$((13 - 14)/(8 + 4 - 5)) * 100$ or $(178/(8 + 4 - 5)) * 100$	$((21 - 5)/(42 + 40 - 49)) * 100$

Operating Income After Depreciation *divided by*  
(Property, Plant, and Equipment – Total (Net) *plus*  
Current Assets – Total *minus* Current Liabilities –  
Total)  $(178/(8 + 4 - 5)) * 100$

## Rates of Return (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Pretax Return (cont.)</b>		
<b>on Total Earning Assets</b>		
(Operating Income Before Depreciation <i>minus</i> Depreciation and Amortization) <i>divided by</i> (Property, Plant, and Equipment – Total (Net) <i>plus</i> Current Assets – Total) or Operating Income After Depreciation <i>divided by</i> (Property, Plant, and Equipment – Total (Net) <i>plus</i> Current Assets – Total)	$((13 - 14)/(8 + 4)) * 100$ <i>or</i> $(178/(8 + 4)) * 100$	$((21 - 5)/(42 + 40)) * 100$
<b>Sales per \$ Working Capital</b>		
Sales (Net) <i>divided by</i> (Current Assets – Total <i>minus</i> Current Liabilities – Total)	$12/(4 - 5)$	$2/(40 - 49)$
<b>Working Capital as a % of Sales</b>		
(Current Assets – Total <i>minus</i> Current Liabilities – Total) <i>divided by</i> Sales (Net)	$((4 - 5)/12) * 100$	$((40 - 49)/2) * 100$

## Capitalization Ratios

	Annual Data Item #	Quarterly Data Item #
<b>Invested Capital</b>		
<b>Definition 1</b>		
Long-Term Debt – Total <i>plus</i> Preferred Stock – Carrying Value <i>plus</i> Common Equity – Total <i>plus</i> Minority Interest (Balance Sheet)	$9 + 130 + 60 + 38$	$51 + 55 + 59 + 53$
<b>Common Equity – Tangible as a % of Invested Capital</b>	$(11/37) * 100$	NA
<b>Common Equity – Total as a % of Invested Capital</b>	$(60/37) * 100$	$(59/62) * 100$
<b>Long-Term Debt – Total as a % of Invested Capital</b>	$(9/37) * 100$	$(51/62) * 100$
<b>Minority Interest (Balance Sheet) as a % of Invested Capital</b>	$(38/37) * 100$	$(53/62) * 100$
<b>Preferred Stock – Carrying Value as a % of Invested Capital</b>	$(130/37) * 100$	$(55/62) * 100$
<b>Preferred Stock – Liquidating Value as a % of Invested Capital</b>	$(10/37) * 100$	NA

## Capitalization Ratios (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Invested Capital (cont.)</b>		
<b>Total Debt as a % of Invested Capital</b> (Long-Term Debt – Total <i>plus</i> Debt in Current Liabilities) <i>divided by</i> Invested Capital – Total	$((9 + 34)/37) * 100$	$((51 + 45)/62) * 100$
<b>Definition 2</b> Long-Term Debt – Total <i>plus</i> Preferred Stock – Carrying Value <i>plus</i> Common Equity – Total	$9 + 130 + 60$	$51 + 55 + 59$
<b>Common Equity – Tangible as a % of Invested Capital</b>	$(11/(37 - 38)) * 100$	NA
<b>Common Equity – Total as a % of Invested Capital</b>	$(60/(37 - 38)) * 100$	$(59/(62 - 53)) * 100$
<b>Long-Term Debt as a % of Invested Capital</b>	$(9/(37 - 38)) * 100$	$(51/(62 - 53)) * 100$
<b>Preferred Stock – Carrying Value as a % of Invested Capital</b>	$(130/(37 - 38)) * 100$	$(55/(62 - 53)) * 100$
<b>Preferred Stock – Liquidating Value as a % of Invested Capital</b>	$(10/(37 - 38)) * 100$	NA
<b>Total Debt as a % of Invested Capital</b> (Long-Term Debt – Total <i>plus</i> Debt in Current Liabilities) <i>divided by</i> (Invested Capital – Total <i>minus</i> Minority Interest (Balance Sheet))	$((9 + 34)/(37 - 38)) * 100$	$((51 + 45)/(62 - 53)) * 100$
<b>Definition 3</b> Long-Term Debt – Total <i>plus</i> Preferred Stock – Carrying Value <i>plus</i> Common Equity – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet)	$9 + 130 + 60 + 35$	$51 + 55 + 59 + 52$
<b>Common Equity – Tangible as a % of Invested Capital</b>	$(11/(37 + 35 - 38)) * 100$	NA
<b>Common Equity – Total as a % of Invested Capital</b>	$(60/(37 + 35 - 38)) * 100$	$(59/(62 + 52 - 53)) * 100$
<b>Deferred Taxes and Investment Tax Credit as a % of Invested Capital</b>	$(35/(37 + 35 - 38)) * 100$	$(52/(62 + 52 - 53)) * 100$
<b>Long-Term Debt as a % of Invested Capital</b>	$(9/(37 + 35 - 38)) * 100$	$(51/(62 + 52 - 53)) * 100$
<b>Preferred Stock – Carrying Value as a % of Invested Capital</b>	$(130/(37 + 35 - 38)) * 100$	$(55/(62 + 52 - 53)) * 100$

<b>Preferred Stock – Liquidating Value as a % of Invested Capital</b>	$(10 / (37 + 35 - 38)) * 100$	NA
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## Capitalization Ratios (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Invested Capital (cont.)</b>		
<b>Total Debt as a % of Invested Capital</b> (Long-Term Debt – Total <i>plus</i> Debt in Current Liabilities) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>minus</i> Minority Interest (Balance Sheet))	$((9 + 34)/(37 + 35 - 38)) * 100$	$((51 + 45)/(62 + 52 - 53)) * 100$
<b>Definition 4</b> Long-Term Debt – Total <i>plus</i> Preferred Stock – Carrying Value <i>plus</i> Minority Interest (Balance Sheet) <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>plus</i> Common Equity – Total	$9 + 130 + 38 + 35 + 60$	$52 + 55 + 53 + 52 + 59$
<b>Common Equity – Tangible as a % of Invested Capital</b>	$(11/(37 + 35)) * 100$	NA
<b>Common Equity – Total as a % of Invested Capital</b>	$(60/(37 + 35)) * 100$	$(59/(62 + 52)) * 100$
<b>Deferred Taxes and Investment Tax Credit as a % of Invested Capital</b>	$(35/(37 + 35)) * 100$	$(52/(62 + 52)) * 100$
<b>Long-Term Debt as a % of Invested Capital</b>	$(9/(37 + 35)) * 100$	$(51/(62 + 52)) * 100$
<b>Minority Interest (Balance Sheet) as a % of Invested Capital</b>	$(38/(37 + 35)) * 100$	$(53/(62 + 52)) * 100$
<b>Preferred Stock – Carrying Value as a % of Invested Capital</b>	$(130/(37 + 35)) * 100$	$(55/(62 + 52)) * 100$
<b>Preferred Stock – Liquidating Value as a % of Invested Capital</b>	$(10/(37 + 35)) * 100$	NA
<b>Total Debt as a % of Invested Capital</b> (Long-Term Debt – Total <i>plus</i> Debt in Current Liabilities) <i>divided by</i> (Invested Capital – Total <i>plus</i> Deferred Taxes and Investment Tax Credit (Balance Sheet))	$((9 + 34)/(37 + 35)) * 100$	$((51 + 45)/(62 + 52)) * 100$

## Criteria of Financial Soundness

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of Average Long-Term Debt</b>		
<b>Interest</b> (Interest Expense <i>divided by</i> ((Long-Term Debt – Total <i>t plus</i> Long-Term Debt – Total <i>t minus</i> 1))	$(15/((9t + 9(t - 1))/2)) * 100$	$(22/((52t + 51(t - 1))/2)) * 100$

*divided by 2)*

$$(t - 1)/2) * 100$$

$$(t - 1)/2) * 100$$

## Criteria of Financial Soundness (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of Average Total Debt</b>		
<b>Interest</b>		
Interest Expense <i>divided by</i> ((Long-Term Debt – Total <i>t</i> plus Long-Term Debt – Total <i>t</i> minus 1 plus Debt in Current Liabilities <i>t</i> plus Debt in Current Liabilities <i>t</i> minus 1) <i>divided by</i> 2)	$(15/((9t + 9(t - 1) + 34t + 34(t - 1))/2)) * 100$	$(22/((51t + 51(t - 1) + 45t + 45(t - 1))/2)) * 100$
	100	100
<b>(Item) as a % of Current Assets</b>		
<b>Cash and Short-Term Investments</b>		
Cash and Short-Term Investments <i>divided by</i> Current Assets – Total	$(1/4) * 100$	$(36/40) * 100$
<b>Current Assets – Other</b>		
Current Assets – Other <i>divided by</i> Current Assets – Total	$(68/4) * 100$	$(39/40) * 100$
<b>Inventory</b>		
Inventories – Total <i>divided by</i> Current Assets – Total	$(3/4) * 100$	$(38/40) * 100$
<b>Receivables</b>		
Receivables – Total <i>divided by</i> Current Assets – Total	$(2/4) * 100$	$(37/40) * 100$
<b>(Item) as a % of Intangibles</b>		
<b>Goodwill</b>		
Goodwill <i>divided by</i> Intangibles	$(204/33) * 100$	NA
<b>(Item) as a % of Total Assets</b>		
<b>Assets – Other</b>		
Assets – Other <i>divided by</i> Assets – Total/Liabilities and Stockholders' Equity – Total	$(69/6) * 100$	$(43/44) * 100$
<b>Current Assets</b>		
Current Assets – Total <i>divided by</i> Assets – Total/Liabilities and Stockholder's Equity – Total	$(4/6) * 100$	$(40/44) * 100$
<b>Goodwill</b>		
Goodwill <i>divided by</i> Assets – Total/Liabilities and Stockholders' Equity – Total	$(204/6) * 100$	NA
<b>Intangibles</b>		
Intangibles <i>divided by</i> Assets – Total/Liabilities and Stockholders' Equity – Total	$(33/6) * 100$	NA

## Criteria of Financial Soundness (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of Total Assets (cont.)</b>		
<b>Investments and Advances</b>		
(Investments and Advances – Equity Method <i>plus</i> Investment and Advances – Other) <i>divided by</i> Assets – Total/Liabilities and Stockholders’ Equity Total	$((31 + 32)/6) * 100$	NA
<b>Investments and Advances – Equity</b>		
Investments and Advances – Equity Method <i>divided by</i> Assets – Total/Liabilities and Stockholders’ Equity Total	$(31/6) * 100$	NA
<b>Property, Plant, and Equipment – Total (Gross)</b>		
Property, Plant, and Equipment – Total (Gross) <i>divided by</i> Assets – Total/Liabilities and Stockholders’ Equity – Total	$(7/6) * 100$	$((41 + 42)/44) * 100$
<b>Property, Plant, and Equipment – Total (Net)</b>		
Property, Plant, and Equipment – Total (Net) <i>divided by</i> Assets – Total/Liabilities and Stockholders’ Equity Total	$(8/6) * 100$	$(42/44) * 100$
<b>Total Debt</b>		
(Long-Term Debt – Total <i>plus</i> Debt in Current Liabilities) <i>divided by</i> Assets – Total/Liabilities and Stockholders’ Equity – Total	$((9 + 34)/6) * 100$	$((51 + 45)/44) * 100$
<b>(Item) as a % of Total Debt</b>		
<b>Short-Term Debt</b>		
Debt in Current Liabilities <i>divided by</i> (Long-Term Debt – Total <i>plus</i> Debt in Current Liabilities)	$(34/(9 + 34)) * 100$	$(45/(45 + 51)) * 100$
<b>(Item) as a % of Total Liabilities</b>		
Current Liabilities – Total <i>divided by</i> Liabilities – Total	$(5/181) * 100$	$(49/54) * 100$
<b>Deferred Taxes and Investment Tax Credit</b>		
Deferred Taxes and Investment Tax Credit (Balance Sheet) <i>divided by</i> Liabilities – Total	$(35/181) * 100$	$(52/54) * 100$
<b>Interest</b>		
Interest Expense <i>divided by</i> Liabilities – Total	$(15/181) * 100$	$(22/54) * 100$
<b>Liabilities – Other</b>		
Liabilities – Other <i>divided by</i> Liabilities – Total	$(75/181) * 100$	$(501/54) * 100$

**Long-Term Debt**

Long-Term Debt *divided by* Liabilities – Total

$$(9/181) * 100$$

$$(51/54) * 100$$

## Criteria of Financial Soundness (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of Total Liabilities (cont.)</b>		
<b>Minority Interest</b>		
Minority Interest (Balance Sheet) <i>divided by</i> Liabilities – Total	(38/181) * 100	(53/54) * 100
<b>Preferred Stock – Carrying Value</b>		
Preferred Stock – Carrying Value <i>divided by</i> Liabilities – Total	(130/180) * 100	(55/54) * 100
<b>Preferred Stock – Liquidating Value</b>		
Preferred Stock – Liquidating Value <i>divided by</i> Liabilities – Total	(10/181) * 100	NA
<b>(Item) as a % of Total Liabilities and Stockholders' Equity</b>		
<b>Common Equity – Total</b>		
Common Equity – Total <i>divided by</i> Assets – Total/Liabilities and Stockholders' Equity Total	(60/6) * 100	(59/44) * 100
<b>Stockholders' Equity – Total</b>		
Stockholders' Equity – Total <i>divided by</i> Assets – Total/Liabilities and Stockholders' Equity Total	(216/6) * 100	(60/44) * 100
<b>Capital Expenditure Coverage</b>		
(Depreciation and Amortization <i>plus</i> Income Before Extraordinary Items – Adjusted for Common Stock Equivalents <i>minus</i> Dividends – Common)	(14 + 20 – 21)/30	NA
<b>Current Ratio</b>		
Current Assets – Total <i>divided by</i> Current Liabilities – Total	4/5	40/49
<b>Debt/Equity Ratios</b>		
<b>Long-Term Debt – Definition 1</b>		
Long-Term Debt – Total <i>divided by</i> Common Equity – Total	9/60	51/59
<b>Long-Term Debt – Definition 2</b>		
Long-Term Debt – Total <i>divided by</i> Common Equity – Tangible	9/11	NA
<b>Long-Term Debt – Definition 3</b>		
Long-Term Debt – Total <i>divided by</i> Stockholders' Equity – Total	9/216	51/60

## Criteria of Financial Soundness (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Debt/Equity Ratios (cont.)</b>		
<b>Long-Term Debt – Definition 4</b>		
Long-Term Debt – Total <i>divided by</i> (Preferred Stock – Liquidating Value <i>plus</i> Common Equity – Tangible)	9/(10 + 11)	NA
<b>Total Liabilities – Definition 1</b>		
Liabilities – Total <i>divided by</i> Common Equity – Total	181/60	54/59
<b>Total Liabilities – Definition 2</b>		
Liabilities – Total <i>divided by</i> Common Equity – Tangible	181/11	NA
<b>Total Liabilities – Definition 3</b>		
Liabilities – Total <i>divided by</i> Stockholders' Equity – Total	181/216	54/60
<b>Total Liabilities – Definition 4</b>		
Liabilities – Total <i>divided by</i> (Preferred Stock – Liquidating Value <i>plus</i> Common Equity – Tangible)	181/(10 + 11)	NA
<b>Interest Coverage</b>		
<b>After-tax</b>		
(Interest Expense <i>plus</i> Income Before Extraordinary Items) <i>divided by</i> Interest Expense	(15 + 18)/15	(22 + 8)/22
<b>Pretax</b>		
(Interest Expense <i>Pretax Income</i> ) <i>divided by</i> Interest Expense	(15 +170)/15	(22 + 23)/22
<b>Quick Ratio (Acid Test)</b>		
(Cash and Short-Term Investments <i>plus</i> Receivables – Total) <i>divided by</i> Current Liabilities – Total	(1 + 2)/5	(36 + 37)/49

## Management Decision Statistics

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of Cash Flow</b>		
<b>Cash Dividends – Definition 1</b>		
Cash Dividends (Statement of Cash Flows) <i>divided by</i> (Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization	(127/(123 + 125)) * 100	• (89/(76 + 77)) * 100

(Statement of Cash Flows))

## Management Decision Statistics (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>(Item) as a % of Cash Flow (cont.)</b>		
<b>Cash Dividends – Definition 2</b>		
Cash Dividends (Statement of Cash Flows) <i>divided by</i> (Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows) <i>plus</i> Deferred Taxes (Statement of Cash Flows) <i>plus</i> Equity in Net Loss (Earnings) (Statement of Cash Flows) <i>plus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows) <i>plus</i> Minority Interest (Income Account))	$(127 / (123 + 125 + 126 + 106 + 124 + 49)) * 100$	$(89 / (76 + 77 + 79 + 80 + 78 + 3)) * 100$
<b>Cash Dividends – Definition 3</b>		
Cash Dividends (Statement of Cash Flows) <i>divided by</i> (Income Before Extraordinary Items (Statement of Cash Flows) <i>plus</i> Extraordinary Items and Discontinued Operations (Statement of Cash Flows) <i>plus</i> Depreciation and Amortization (Statement of Cash Flows) <i>plus</i> Deferred Taxes (Statement of Cash Flows) <i>plus</i> Equity in Net Loss (Earnings) (Statement of Cash Flows))	$(127 / (123 + 124 + 125 + 126 + 106)) * 100$	● $(89 / (76 + 77 + 78 + 79 + 80)) * 100$
<b>(Item) as a % of Income Before Extraordinary Items – Adjusted for Common Stock Equivalents</b>		
<b>Cash Dividends</b>		
Cash Dividends (Statement of Cash Flows) <i>divided by</i> Income Before Extraordinary Items – Adjusted for Common Stock Equivalents	$(127 / 20) * 100$	$(89 / 10) * 100$
<b>(Item) as a % of Property, Plant, and Equipment – Total (Gross)</b>		
<b>Depreciation Expense</b>		
Depreciation and Amortization <i>divided by</i> Property, Plant, and Equipment – Total (Gross)	$(14 / 7) * 100$	$(5 / (41 + 42)) * 100$
<b>Property, Plant, and Equipment – Total (Net)</b>		
Property, Plant, and Equipment – Total (Net) <i>divided by</i> Property, Plant, and Equipment – Total (Gross)	$(8 / 7) * 100$	$(42 / (41 + 42)) * 100$
<b>(Item) as a % of Property, Plant, and Equipment – Total (Net)</b>		
<b>Depreciation Expense</b>		
Depreciation and Amortization <i>divided by</i> Property, Plant, and Equipment – Total (Net)	$(14 / 8) * 100$	$(5 / 42) * 100$

## Price and Market Data

	Annual Data Item #	Quarterly Data Item #
<b>Price – High – Adjusted</b>		
<b>Calendar Year</b>		
Price – High <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	22/27	NA
<b>Fiscal Year</b>		
Price – Fiscal Year – High <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	197/27	NA
<b>1st Month of Quarter</b>		
Price – High – 1st Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	63/17
<b>2nd Month of Quarter</b>		
Price – High – 2nd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	64/17
<b>3rd Month of Quarter</b>		
Price – High – 3rd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	65/17
<b>Price – Low – Adjusted</b>		
<b>Calendar Year</b>		
Price – Low <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	23/27	NA
<b>Fiscal Year</b>		
Price – Fiscal Year – Low <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	198/27	NA
<b>1st Month of Quarter</b>		
Price – Low – 1st Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	66/17
<b>2nd Month of Quarter</b>		
Price – Low – 2nd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	67/17
<b>3rd Month of Quarter</b>		
Price – Low – 3rd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	68/17
<b>Price – Close – Adjusted</b>		
<b>Calendar Year</b>		
Price – Close <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	24/27	NA

## Price and Market Data (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Price – Close – Adjusted (cont.)</b>		
<b>Fiscal Year</b>		
Price – Fiscal Year – Close <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	199/27	NA
<b>1st Month of Quarter</b>		
Price – Close – 1st Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	12/17
<b>2nd Month of Quarter</b>		
Price – Close – 2nd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	13/17
<b>3rd Month of Quarter</b>		
Price – Close – 3rd Month of Quarter <i>divided by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	14/17
<b>Common Shares Outstanding – Adjusted</b>		
Common Shares Outstanding <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date	25 * 27	61 * 17
<b>Common Shares Traded – Adjusted</b>		
Common Shares Traded <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date	28 * 27	18 * 17
<b>Common Shares Used to Calculate Earnings per Share (Basic) – Adjusted</b>		
Common Shares Used to Calculate Earnings per Share – (Basic) <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date	54 * 27	15 * 17
<b>Common Shares Used to Calculate Earnings per Share – 12 Months Moving – Adjusted</b>		
Common Shares Used to Calculate Earnings per Share – 12 Months Moving <i>multiplied by</i> Adjustment Factor (Cumulative) by Ex-Date	NA	28 * 17
<b>Market Return</b>		
<b>by Ex-Date (Fiscal Year End) This excludes the affects of cash equivalent distributions</b>		
((Price – Fiscal Year – Close <i>t plus</i> Dividends per Share by Ex-Date) <i>divided by</i> Price – Fiscal Year – Close <i>t minus 1</i> ) <i>minus 1</i>	$\frac{((199t + 26)/199(t - 1)) - 1}{t - 1} * 100$	NA

To calculate a total return including the affects of cash equivalent distributions, you must use the PDE file, see the calculation for *Total Investment Return* on page 32.

## Price and Market Data (cont.)

	Annual Data Item #	Quarterly Data Item #
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### Market Return (cont.)

**by Ex-Date (Quarter End) This excludes the affects of cash equivalent distributions**

((Price – Close – 3rd Month of Quarter <i>plus</i> Dividends per Share by Ex-Date <i>t plus</i> Dividends per Share by Ex-Date <i>t minus 1 plus</i> Dividends per Share by Ex-Date <i>t minus 3</i> ) divided by Price – Close – 3rd Month of Quarter <i>t minus 1</i> ) minus 1	NA	$((14 + 16t + 16(t - 1) + 16(t - 2) + 16(t - 3)) / 14(t - 1) - 1) * 100$
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To calculate a total return including the affects of cash equivalent distributions, you must use the PDE file, see the calculation for *Total Investment Return* on page 32.

**by Payable Date (Fiscal Year End)**

((Price – Fiscal Year – Close <i>t plus</i> Dividends per Share by Payable Date) divided by Price – Fiscal Year – Close <i>t minus 1</i> ) minus 1	$((199t + 201) / 199(t - 1) - 1) * 100$	NA
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**by Payable Date (Quarter End)**

((Price – Close – 3rd Month of Quarter <i>plus</i> Dividends per Share by Payable Date <i>t plus</i> Dividends per Share by Payable Date <i>t minus 1 plus</i> Dividends per Share by Payable Date <i>t minus 3</i> ) divided by Price – Close – 3rd Month of Quarter <i>t minus 1</i> ) minus 1	NA	$((14 + 72t + 72(t - 1) + 72(t - 2) + 72(t - 3)) / 14(t - 1) - 1) * 100$
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### Market to Book (Fiscal Year End/Quarter End)

Price – Fiscal Year – Close (3rd Month of Quarter) divided by (Common Equity – Total divided by Common Shares Outstanding)	199/(60/25)	14/(59/61)
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### Treasury Stock – Number of Common Shares

Treasury Stock – Number of Common Shares multiplied by Adjustment Factor (Cumulative) by Ex-Date	87 * 27	NA
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## Market Value Statistics

	Annual Data Item #	Quarterly Data Item #
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### Income Before Extraordinary Items Adjusted for Common Stock Equivalents per \$100 of Market Value

Calendar Year End

Income Before Extraordinary Items – Adjusted for Common Stock Equivalents <i>divided by</i> (Price – Close <i>multiplied by</i> Common Shares Outstanding)	20/((24 * 25)/ 100)	NA
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## Market Value Statistics (cont.)

	Annual Data Item #	Quarterly Data Item #
<b>Income Before Extraordinary Items Adjusted for Common Stock Equivalents per \$100 of Market Value (cont.)</b>		
<b>Fiscal Year End/Quarter End</b>		
Income Before Extraordinary Items – Adjusted for Common Stock Equivalents <i>divided by</i> (Price – Fiscal Year – Close <i>multiplied by</i> Common Shares Outstanding)	20/((199 * 25)/ 100)	10/((14 * 61)/ 100)
<b>Income Before Extraordinary Items per \$100 of Market Value</b>		
<b>Calendar Year End</b>		
Income Before Extraordinary Items <i>divided by</i> (Price – Close <i>multiplied by</i> Common Shares Outstanding)	18/((24 * 25)/ 100)	NA
<b>Fiscal Year End/Quarter End</b>		
Income Before Extraordinary Items <i>divided by</i> (Price – Fiscal Year – Close <i>multiplied by</i> Common Shares Outstanding)	18/((199 * 25)/ 100)	8/(14 * 61)/ 100)
<b>Market Value of Common Stock</b>		
<b>Calendar Year End</b>		
Price – Close <i>multiplied by</i> Common Shares Outstanding	24 * 25	NA
<b>Fiscal Year End/Quarter End</b>		
Price – Fiscal Year – Close <i>multiplied by</i> Common Shares Outstanding	199 * 25	14 * 61
<b>Pretax Income per \$100 of Market Value</b>		
<b>Calendar Year End</b>		
Pretax Income <i>divided by</i> (Price – Close <i>multiplied by</i> Common Shares Outstanding)	170/((24 * 25)/ 100)	NA
<b>Fiscal Year End/Quarter End</b>		
Pretax Income <i>divided by</i> (Price – Fiscal Year – Close <i>multiplied by</i> Common Shares Outstanding)	170/((199 * 25)/ 100)	23/((14 * 61)/ 100)
<b>Sales per \$100 of Market Value</b>		
<b>Calendar Year End</b>		
Sales (Net) <i>divided by</i> (Price – Close <i>multiplied by</i> Common Shares Outstanding)	12/((24 * 25)/ 100)	NA
<b>Fiscal Year End/Quarter End</b>		

Sales (Net) *divided by* (Price – Fiscal Year – Close  
*multiplied by* Common Shares Outstanding)

12/((199 \* 25)/ 100)

2/((14 \* 61)/ 100)

## Price Ratios

	Annual Data Item #	Quarterly Data Item #
<b>Price – Earnings Ratio</b>		
<b>Fiscal Year End</b>		
Price – Fiscal Year – Close <i>divided by</i> Earnings per Share (Basic) – Excluding Extraordinary Items	199/58	NA
<b>Quarter End</b>		
Price – Close – 3rd Month of Quarter <i>divided by</i> Earnings per Share (Basic) – Excluding Extraordinary Items – 12-Months Moving	NA	14/27
<b>Dividend Payout Ratio</b>		
Dividends – Common <i>divided by</i> Income Before Extraordinary Items – Adjusted for Common Stock Equivalents	21/20	NA
<b>Dividend Yield</b>		
<b>Fiscal Year End</b>		
Dividends per Share by Ex-Date <i>divided by</i> Price – Fiscal Year – Close	(26/199) * 100	NA
<b>Quarter End</b>		
Dividends – Common – Indicated Annual <i>divided by</i> Price – Close – 3rd Month of Quarter	NA	(20/14) * 100

# Formulas Used in COMPUSTAT Prices, Dividends, and Earnings (PDE) Financial Calculations

## Company Data

The following is a list of formulas used in various calculations. These formulas are by no means all-inclusive and can be used in most cases for monthly, quarterly, yearly, 5-year, and 10-year analysis. Remember that the data on the PDE file is *adjusted*. To readjust the data to its originally reported state, multiply all per share data (price, earnings) by the cumulative adjustment factor and divide the shares traded data by the cumulative adjustment factor.

### Annualized Dividend Rate

### Book Value per Share

### Cash Equivalent Distributions per Share by Ex-Date

### Common Shares Outstanding

### Common Shares Traded

### Common Stock Float Shares (Canadian PDE file)

### Dividends per Share

### Earnings per Share from Operations – 12 Months Moving

### Earnings per Share – 12 Months Moving

### Historical Earnings per Share (Canadian PDE file)

### Net Asset Value per Share

### Price – Close

### Price – High

### Price – Low

### Price to Earnings Ratio

Price (High, Low, or Close)/Earnings per Share – 12 Months Moving

### Price – High to Earnings as a Percentage of Price – Low to Earnings

$((\text{Price – High}/\text{Earnings per Share})/(\text{Price – Low}/\text{Earnings per Share})) * 100$

### Average Monthly Price

$$\sum A / B$$

A = prices

B = months

### Price – High to Earnings as a Percentage of Price – Low to Earnings

$((\text{Price – High}/\text{Earnings per Share})/(\text{Price – Low}/\text{Earnings per Share})) * 100$

## Company Data (cont.)

### Current Price Deviation from Mean Price

$$\sum_n \frac{C}{((A_n + B_n) / 2) / n}$$

A = monthly high price

B = monthly low price

C = current close price

n = number of months

### Dividend Yield – High

(Annualized Dividend Rate/ Price – High) \* 100

### Dividend Yield – Low

(Annualized Dividend Rate/ Price – Low) \* 100

### Dividend Yield – Close

(Annualized Dividend Rate/ Price – Close) \* 100

### Dividend Payout Ratio

( $\sum$  Dividends per Share Paid – 12 Months /Earnings per Share) \* 100

### Total Investment Return

$$(((A + (\sum B + \sum D))/C) - 1) * 100$$

A = current close price

B = dividends per share, beginning month through last month

C = close price, beginning month

D = cash equivalent distributions

### Market Value of Shares Traded

Price – Close \* Common Shares Traded

## Index Data

The index data contained in the PDE file has a wide range of potential uses. Some of these general areas of usage are:

- **Relative Performance Analysis**

This technique involves the comparison of various company data with industry data for the industry in which the company is classified or with the total market as identified by the S&P Industrial Index or S&P 500 Index data. For example, price relatives can be calculated by dividing the company price by the index price at the same point in time. Price relatives, when observed over time, can be useful in projecting the company's future price performance compared to the market or compared to the company's industry.

The same type of analysis can be performed with earnings, price to earnings ratios, dividends, dividend yields, book values, returns on book value, and total investment returns (holding period returns). For instance, both the industry price and 12 months–moving earnings per share can be obtained from the PDE file for any selected month and used to calculate the industry price to earnings ratio. This figure can then be divided into the calculated price to earnings for the company for the same month. This company data is available via the various COMPUSTAT data files.

- **Industry Analysis**

The index data in the PDE file can also be used independently of other data in attempting to obtain a clear picture of the performance of specific industries. For example, compound or least-squares growth rates of various index data such as earnings per share, price, dividends per share, annualized dividend rate, and book value per share can be calculated over varying periods to aid in determining the future direction and growth of the industry.

- **Industry Comparisons**

The various calculations performed with the industry data can be compared with the same calculations for other industries and for the market in order to determine past relative performances and project future performance. For example, various regression techniques could be used to compare monthly price variability of selected industries with each other or with the market.

- **Beta Analysis**

The S&P Industrial Index and S&P 500 Index contained on the PDE file are exceptionally well-suited for the calculations necessary in beta analysis.

- **Technical Price Analysis**

It is possible to apply various technical formulas to the price data available on the PDE file. Technical analysis can also be applied to price to relative data calculated from the industry index data on the PDE file.

- **S&P Industry Relatives**

Relatives may also be calculated against the S&P 500, S&P Industrial, S&P Transportation, S&P Utilities, and S&P Financial indexes, as well as, the New York Stock Exchange.

Virtually all items, which can be calculated for an individual company, can also be calculated on a relative basis.

**Year End Price**

(Company Price – Close / Industry Price – Close) \* 100

**Earnings per Share – 12 Months Moving**

(Company Earnings per Share – 12 Months Moving / Industry Earnings per Share – 12 Months Moving) \* 100

**Year End Close Price to Earnings**

((Company Price – Close / Earnings per Share – 12 Months Moving) / (Industry Close Price / Earnings per Share – 12 Months Moving)) \* 100

**Year End Yield**

((Company Annualized Dividend Rate / company Price – Close) / (Industry Annualized Dividend Rate / Industry Price – Close)) \* 100

(Example: Comparing the company return in relation to the S&P Industry Index return over a 12-month period.)

$$B = \frac{n \sum XY - \sum X \sum Y}{n \sum X^2 - (\sum X)^2}$$

B = Beta

X = S&P Industrial Index  $\Delta$  in Price + Yield ((Annualized Dividend Rate/Price)/12)

Y = Company  $\Delta$  in Price + Yield ((Annualized Dividend Rate/Price)/12)

n = Number of time periods minus 1; 13 months – 1

