

Financial statement analysis applies analytical tools and techniques to financial statements to determine the operating and financial success of a firm. The emphasis of the analysis depends on one's viewpoint. A credit analyst extending a short-term, unsecured loan to a company might emphasize the firm's cash flow and liquidity. An equity investor, on the other hand, may look closely at growth in sales, earnings and dividends. He would be interested in the variables that might have a significant impact on a firm's financial structure, sales, earnings production and dividend policy.

In this installment of Spreadsheet Corner, we present a template that uses data from the balance sheet, income statement and cash flow statement to produce financial comparisons of interest to investors. We have attempted to make the line items industry-neutral so they are adaptable across companies in differing lines of business.

As the spreadsheet is very long, it is broken into four parts for easier viewing here, labeled Figure 1 Parts A through D. Raw data is entered from the balance sheet and income statement is shown in Part A and Part C. The calculations appear in Part B and Part D. Data for the next year can be added by copying the previous year's formulas two columns to the right and entering the new data. You can download the spreadsheet by going to the online version of this article at the Computerized Investing website ([www.computerizedinvesting.com](http://www.computerizedinvesting.com)).

izedinvesting.com). The formulas and steps necessary to program the worksheet appear in Table 1.

## Data Sources

These days, it is easy to locate detailed financial statement data online. Our comparison of the top online fundamental stock screening services appearing in this issue shows which of these offers statement data. A detailed table specifying the financial statement items provided by an expanded list of screening services is available at the online version of the comparison article at Computerized-Investing.com. For this article, we used data from Reuters.com, which offers five years of detailed financial statement data to registered users.

When looking at the raw financial statements a company provides in their annual or quarterly SEC-filed reports, be aware that the level of detail will differ from company to company. For example, some firms may only list a net property, plant and equipment figure on their balance sheet, while others will present a gross figure along with accumulated depreciation. Similarly, many companies do not break out depreciation and amortization expense on their income statement, opting to lump it in with selling, general and administrative expenses and report it on the cash flow statement. Lastly, some firms, especially financial companies, do not report current assets or current liabilities.

## Principal Analysis Tools

The worksheet employs two principal tools for financial statement analysis—comparative financial statements and common size statements.

## Comparative Financial Statements

Financial statements for a firm are easily compared by setting them up next to each other and examining how line items change from year to year. This statement data spanning several fiscal years and quarters is readily available on many investing websites.

When comparing the financial statements of a company, the goal is to identify trends and their rate of change. This can be accomplished by examining the statements over a number of years. It is vital to compare the changes of related items. For example, while sales may be increasing at a rate of 10% a year, cost of goods sold may be increasing at a rate of 15% a year. Perhaps material costs are rising and a new competitor is preventing the company from passing the higher cost on to customers. This will have implications for the earnings growth rate and, eventually, the share price, reshaping investor expectations.

## Common Size Statements

Common size statements examine the proportion of a single line item to the total statement. For balance sheets, all assets are expressed as a percentage of total assets, while

**Table 1. Spreadsheet Formulas**

The formulas necessary to compute one year's data set are provided below. When each column is complete, it can be copied to other columns as needed.

**Formula to compute common size assets:**

D80: D6/D\$34 (copy to D81..D89, D94..D100, D102..D104, D106)

**Formula to compute common size liabilities and stockholders' equity:**

D112: D40/D\$70 (copy to D113..D117, D119, D123..D126, D128, D130, D133..D140, D142)

**Formula to compute common size income statement:**

D182: D149/D\$149 (copy to D183..D184, D187..D193, D196..D199, D201, D203, D206, D208)

**Figure 1. Financial Statement Analysis Spreadsheet**

Part A								Part B							
A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H
Consolidated Balance Sheets				Corning Incorporated (GLW)				Balance Sheets -- Common Size				Corning Incorporated (GLW)			
=====								=====							
3	Assets (\$ Mills)		1/28/2012	1/29/2011	1/30/2012			77	Assets		1/28/2012	1/29/2011	1/30/2012		
4								78							
5	Current Assets:							79	Current Assets:						
6	Cash.....	0		0		0		80	Cash.....		0.0%		0.0%		0.0%
7	Cash and equivalents.....	4,661		4,598		2,541		81	Cash and equivalents.....		16.7%		17.8%		11.9%
8	Short-term investments.....	1,164		1,752		1,042		82	Short-term investments.....		4.2%		6.8%		4.9%
9	Gross accounts receivable.....	0		0		0		83	Gross accounts receivable.....		0.0%		0.0%		0.0%
10	Less allowance of doubtful accounts.....	0		0		0		84	Less allowance of doubtful accounts.....		0.0%		0.0%		0.0%
11	Net accounts receivable.....	1,082		973		753		85	Net accounts receivable.....		3.9%		3.8%		3.5%
12	Inventory.....	975		738		579		86	Inventory.....		3.5%		2.9%		2.7%
13	Prepaid expenses.....	0		0		0		87	Prepaid expenses.....		0.0%		0.0%		0.0%
14	Other current assets.....	795		798		606		88	Other current assets.....		2.9%		3.1%		2.8%
15	Total Current Assets.....	8,677		8,859		5,521		89	Total Current Assets.....		31.2%		34.3%		25.9%
16								90							
17	Long-Term Investments.....	4,726		4,372		3,992		91	Long-Term Investments.....		17.0%		16.9%		18.7%
18								92							
19	Tangible Fixed Assets:							93	Tangible Fixed Assets:						
20	Buildings.....	0		0		0		94	Buildings.....		0.0%		0.0%		0.0%
21	Land and improvements.....	0		0		0		95	Land and improvements.....		0.0%		0.0%		0.0%
22	Construction in progress.....	0		0		0		96	Construction in progress.....		0.0%		0.0%		0.0%
23	Other property, plant and equipment.....	0		0		0		97	Other property, plant and equipment.....		0.0%		0.0%		0.0%
24	Gross property, plant and equipment....	17,875		15,363		13,498		98	Gross property, plant and equipment..		64.2%		59.5%		63.4%
25	Less accumulated depreciation.....	7,204		6,420		5,503		99	Less accumulated depreciation.....		25.9%		24.9%		25.8%
26	Net Tangible Fixed Assets.....	10,671		8,943		7,995		100	Net Tangible Fixed Assets.....		38.3%		34.6%		37.5%
27								101							
28	Intangible Assets - Gross.....	0		0		0		102	Intangible Assets - Gross.....		0.0%		0.0%		0.0%
29	Less accumulated amortization.....	0		0		0		103	Less accumulated amortization.....		0.0%		0.0%		0.0%
30	Net Intangible Assets.....	926		716		676		104	Net Intangible Assets.....		3.3%		2.8%		3.2%
31								105							
32	Other long-term assets	2,848		2,943		3,111		106	Total Assets.....		100.0%		100.0%		100.0%
33								107							
34	Total Assets.....	27,848		25,833		21,295		108							
35								109	Liabilities and Stockholders' Equity		1/28/2012	1/29/2011	1/30/2012		
36								110							
37	Liabilities and Stockholders' Equity	1/28/2012	1/29/2011	1/30/2012				111	Current Liabilities:						
38								112	Accounts payable.....		3.5%		3.1%		2.6%
39	Current Liabilities:							113	Accrued expenses.....		2.9%		3.6%		3.3%
40	Accounts payable.....	977		798		550		114	Notes payable/Short-term debt.....		0.0%		0.0%		0.0%
41	Accrued expenses.....	805		923		710		115	Current portion of l.t. debt/Capital leases.		0.1%		0.2%		0.3%
42	Notes payable/Short-term debt.....	0		0		0		116	Other.....		1.0%		0.8%		1.0%
43	Current portion of l.t. debt/Capital leases...	27		57		74		117	Total Current Liabilities.....		7.5%		7.7%		7.2%
44	Other.....	288		208		205		118							
45	Total Current Liabilities.....	2,097		1,986		1,539		119	Other Liabilities.....		8.1%		8.4%		10.5%
46								120							
47	Other Liabilities.....	2,258		2,159		2,231		121	Capitalization:						
48								122	Long-Term Debt:						
49	Capitalization:							123	Notes payable, exclusive of current.....		0.0%		0.0%		0.0%
50	Long-Term Debt:							124	Long-term debt, exclusive of current.....		0.0%		0.0%		0.0%
51	Notes payable, exclusive of current.....	0		0		0		125	Capital leases, exclusive of current.....		0.0%		0.0%		0.0%
52	Long-term debt, exclusive of current.....	0		0		0		126	Total Long-Term Debt.....		8.5%		8.8%		9.1%
53	Capital leases, exclusive of current.....	0		0		0		127							
54	Total Long-Term Debt.....	2,364		2,262		1,930		128	Minority Interest.....		0.2%		0.2%		0.2%
55								129							
56	Minority Interest.....	51		51		52		130	Total Liabilities.....		24.3%		25.0%		27.0%
57								131							
58	Total Liabilities.....	6,770		6,458		5,752		132	Stockholders' Equity:						
59								133	Common stock.....		2.9%		3.1%		3.8%
60	Stockholders' Equity:							134	Additional paid-in capital.....		46.8%		49.8%		59.7%
61	Common stock.....	818		813		808		135	Retained earnings (Accumulated deficit)..		33.5%		26.6%		17.1%
62	Additional paid-in capital.....	13,041		12,865		12,707		136	Total.....		0.0%		0.0%		0.0%
63	Retained earnings (Accumulated deficit)....	9,332		6,881		3,636		137	Less Treasury stock.....		7.3%		4.7%		5.7%
64	Total.....	0		0		0		138	Total common stock equity.....		0.0%		0.0%		0.0%
65	Less Treasury stock.....	2,024		1,227		1,207		139	Preferred stock.....		0.0%		0.0%		0.0%
66	Total common stock equity.....	0		0		0		140	Total Stockholders' Equity.....		75.7%		75.0%		73.0%
67	Preferred stock.....	0		0		0		141							
68	Total Stockholders' Equity.....	21,078		19,375		15,543		142	Total Liabilities and Stockholders' Equity.....		100.0%		100.0%		100.0%
69								143							
70	Total Liabilities and Stockholders' Equity.....	27,848		25,833		21,295									
71															
72															
73	Check to Balance Assets & Liabilities/Equity....	0		0		0									

liabilities and equity are expressed as a percentage of total liabilities and shareholders' equity. Income

statement items are expressed as a percentage of revenues.

Common size analysis is sometimes

called structural analysis because it examines the internal structure of the financial statements. For bal-

Figure 1. Financial Statement Analysis Spreadsheet (Continued)

Part C								Part D							
A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H
145	Consolidated Income Statement			Corning Incorporated (GLW)				178	Income Statement -- Common Size			Corning Incorporated			
146	=====							179	=====						
147	(\$ Mills)		1/28/2012	1/29/2011	1/30/2012	180			1/28/2012	1/29/2011	1/30/2012				
148	-----							181	-----						
149	Total Operating Revenue.....		7,890	6,632	5,395	182	Total Operating Revenue.....	100.0%	100.0%	100.0%					
150	Cost of Goods Sold.....		4,324	3,583	3,302	183	Cost of Goods Sold.....	54.8%	54.0%	61.2%					
151	Gross Profit.....		3,566	3,049	2,093	184	Gross Profit.....	45.2%	46.0%	38.8%					
152	-----							185	-----						
153	Expenses:							186	Expenses:						
154	Selling, general & administrative.....		1,033	1,015	881	187	Selling, general & administrative.....	13.1%	15.3%	16.3%					
155	Research and development.....		671	603	563	188	Research and development.....	8.5%	9.1%	10.4%					
156	Depreciation expense.....		15	8	10	189	Depreciation expense.....	0.2%	0.1%	0.2%					
157	Amortization of intangibles.....		0	0	0	190	Amortization of intangibles.....	0.0%	0.0%	0.0%					
158	Interest expense (income), net operating.....		0	0	0	191	Interest expense (income), net operating.....	0.0%	0.0%	0.0%					
159	Unusual expense (income).....		153	(348)	248	192	Unusual expense (income).....	1.9%	(5.2%)	4.6%					
160	Operating Earnings		1,694	1,771	391	193	Operating Earnings.....	21.5%	26.7%	7.2%					
161	-----							194	-----						
162	Other Expense/(Income)							195	Other Expense/(Income)						
163	Interest expense (income), net non-op.....		89	109	82	196	Interest expense (income), net non-op.....	1.1%	1.6%	1.5%					
164	Non-operating expense.....		0	0	0	197	Non-operating expense.....	0.0%	0.0%	0.0%					
165	Non-operating income.....		(1,450)	(1,947)	(1,392)	198	Non-operating (income).....	(18.4%)	(29.4%)	(25.8%)					
166	Earnings Before Taxes.....		3,213	3,845	1,936	199	Earnings Before Taxes.....	40.7%	58.0%	35.9%					
167	-----							200	-----						
168	Income Tax Expense.....		408	287	(74)	201	Income Tax Expense.....	5.2%	4.3%	(1.4%)					
169	-----							202	-----						
170	Net Income.....		2,805	3,558	2,010	203	Net Income.....	35.6%	53.6%	37.3%					
171	=====							204	=====						
172								205							
173	Preferred Dividends.....		0	0	0	206	Preferred Dividends.....	0.0%	0.0%	0.0%					
174	-----							207	-----						
175	Net Income Available for Common.....		2,805	3,558	2,010	208	Net Income Available for Common.....	35.6%	53.6%	37.3%					
176	=====							209	=====						

ance sheets, examining the asset side of things reveals how the firm has invested its capital to produce revenues. Examination of liabilities and equity reveals how the assets have been financed. Common size income statements reveal how well management is able to translate sales into earnings. Comparisons over a number of years are important, since no one year can capture the full dynamics of a firm.

Common size statements also allow for comparisons across companies in the same industry. This analysis disregards the absolute size of companies, and reduces all firms to a uniform format. These intercompany comparisons can identify weak or strong areas that might otherwise be overlooked through standard time series analysis across firms. Industry average ratios can be found at sites

such as Reuters.com.

The formula for computing the proportion of one item to another is rather simple—the item being compared is divided by the comparison benchmark. For determining the proportion of cost of goods sold to revenues—also called the gross margin—the formula is:

$$\% \text{ of sales} = \text{cost of goods sold} \div \text{revenues}$$

When programming the spreadsheet template, the benchmark should be made an absolute row reference so that the formula can be entered only once and then copied down. To program the example above using Microsoft Excel, the following formula would be entered in cell D183:


$$D183: D150/D\$149$$


The formula in cell D183 could then be copied down and across to compute the percentage of sales figures for other line items and other years.

Common size statements are usually prepared for the income statement and balance sheet, expressing information as follows:

- Income statement items expressed as a percentage of total revenue; and
- Balance sheet items expressed as a percentage of total assets.

## Conclusion

When examining financial statements, we are trying to get a feel for management performance, capabilities, and even philosophy along with the company's potential growth and profitability. Common size statements allow investors to compare the financial statements of different-sized companies in similar industries or examine trends in one company over time. 

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