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Profit Margin Analysis

by [CI Staff](#)

A company's stock price, in large part, is driven by the company's ability to generate earnings. Therefore, it is useful for investors to analyze the profitability of a company before investing in it. One way to do this is by calculating and tracking various profit margins, which reflect how efficiently a company uses its resources.

Profit margins are expressed as a ratio, specifically "earnings" as a percentage of sales. By expressing margins as a percentage, we are able to compare the profitability of different companies more easily. Margins allow investors to judge, over time, management's ability to manage costs and expenses and to generate profits. Management's success or failure determines the company's profitability. Strong sales growth is meaningless if management allows costs and expenses to grow disproportionately.

In this Fundamental Focus, we highlight three key profit margin ratios—gross profit margin, operating profit margin and net profit margin.

Gross Profit Margin

The gross profit margin (gross margin) measures the profit a company makes from its cost of goods sold (cost of sales). Cost of sales represents expense related to labor, raw materials and manufacturing overhead used in the production process. This ratio measures how efficiently management uses labor and raw materials in the production process, and it is calculated as follows:

Gross profit margin = (sales – cost of goods sold) ÷ sales

A company uses its gross income to fund such company activities as research and development and marketing, which are important for generating future sales. A prolonged decline in the gross profit margin is a red flag for possible impending negative pressure on sales and, ultimately, earnings.

Trends in the gross margin reflect a company's basic pricing decisions and material costs. However, management generally cannot exercise complete control over these costs. Rising

labor costs and raw materials costs will cut into a company's gross profit margin if the firm cannot pass these rising costs onto its customers in the form of higher prices.

Note that not all firms disclose their cost of goods sold on their income statements, notably financial and other service-related companies. In such instances it is not possible to calculate the company's gross profit margin.

Operating Profit Margin

The operating profit margin (operating margin) compares a company's operating income (earnings before interest and taxes, or EBIT) to sales. It indicates how successful management has been in generating income from operating the business. The calculation is as follows:

Operating profit margin = [sales – cost of goods sold – selling, general & administrative (SG&A) costs] ÷ sales

SG&A expense is the sum of all direct and indirect selling expenses and all general and administrative expenses of a company. Direct selling expenses are directly tied to the sale of a specific unit, such as credit, warranty and advertising expenses. Indirect selling expenses cannot be directly linked to the sale of a specific unit, but are proportionally allocated to all units sold during a certain period—for example, telephone, interest and postal charges. General and administrative expenses include salaries of non-sales personnel, rent, heat and lights.

Management has greater control over SG&A expenses, so it is important when conducting margin analysis to scrutinize operating margin. Trends in operating margin—positive or negative—are, for the most part, directly tied to management decisions.

Companies with higher operating margins relative to their peers might possibly have more effective price controls, or they might be growing sales more than operating costs.

Among analysts, operating margin is often considered a more valid or reliable profitability measure than net profit margin (below), as operating income tends to be more difficult to manipulate than net earnings.

Net Profit Margin

Net profit is profit that is generated from all phases of the business, including interest and taxes. This is the “bottom line” that garners most of the attention in discussions of a company's profitability. The net profit margin (net margin) compares net income to sales, such that:

Net profit margin = net income after taxes ÷ sales

A consistently high net margin is often indicative of a company with one or more competitive advantages. Furthermore, a high net margin provides a company with a cushion during downturns in its business.

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Margin Analysis

When analyzing profit margins, it is useful to examine the trends for individual companies over time as well as to compare a company's levels to its competitors and to industry norms. However, it is important to note that margins can differ drastically from company to company and industry to industry. Some industries, historically, have much higher margins relative to others. For this reason, when comparing companies on the basis of their profit margins, it is vital to compare firms in similar lines of business. Differences in margins for companies in the same industry provide insights into industry- and company-specific cost structures.

Table 1 presents the gross margins, operating margins and net margins for three airlines for the last 12 months (current) and for each of the last seven fiscal years. The companies are AMR Corporation (AMR), parent company of American Airlines; Delta Air Lines, Inc. (DAL); and Southwest Airlines Co. (LUV). In addition, we present the median industry statistics for comparison. Two of these airlines have participated in the recent consolidation in the industry: Delta purchased Northwest in 2008, and earlier this year Southwest purchased AirTran. The driving force behind mergers is often lower costs through economies of scale and synergies.

Table 1. Comparing Profit Margins

<i>Gross Profit Margin (%)</i>	Current	2010	2009	2008	2007	2006	2005	2004
AMR Corporation (AMR)	18.5	18.6	15.5	15.0	21.8	21.7	18.8	19.0
Delta Air Lines, Inc. (DAL)	18.3	19.3	11.3	10.8	17.2	10.4	5.2	9.3
Southwest Airlines Co. (LUV)	25.2	25.1	21.4	22.1	26.6	30.5	31.6	29.0
Airline industry median	25.2	25.8	22.4	21.0	25.6	26.4	24.1	28.7

<i>Operating Profit Margin (%)</i>	Current	2010	2009	2008	2007	2006	2005	2004
AMR Corporation (AMR)	1.7	1.4	-5.0	-7.9	4.2	4.7	-0.4	-0.7
Delta Air Lines, Inc. (DAL)	5.0	5.8	-1.5	-36.6	12.1	-35.1	-17.5	-21.9
Southwest Airlines Co. (LUV)	8.3	8.2	2.5	4.1	8.0	10.3	9.6	6.2
Airline industry median	3.9	6.8	3.7	3.7	6.0	6.8	4.6	6.2

<i>Net Profit Margin (%)</i>	Current	2010	2009	2008	2007	2006	2005	2004
AMR Corporation (AMR)	-1.8	-2.1	-7.4	-8.9	2.0	1.0	-4.1	-4.0
Delta Air Lines, Inc. (DAL)	1.6	1.9	-4.4	-39.3	8.4	-35.4	-23.3	-34.2
Southwest Airlines Co. (LUV)	3.6	3.8	1.0	1.6	6.5	5.5	6.4	3.3
Airline industry median	3.5	3.7	1.0	0.8	3.6	4.0	3.0	3.3

Source: AAll's Stock Investor Pro/Thomson Reuters. Data as of May 6, 2011.

Gross Profit Margins

For airlines, gross profit is revenues less flight operations expenses, which include salaries and benefits, jet fuel, ground handling, and computer reservation system charges (according to Thomson Reuters). For these three airlines, the two largest costs are fuel and labor—over 50% of revenues in each case.

Over the last seven years, Southwest Airlines has consistently had gross margins that have bested the two rivals and have been on par with or exceeded the industry norm. For Southwest, wages and fuel expense make up the vast majority of cost of goods sold (roughly 78%, versus 73% for AMR Corp. and 56% for Delta). Being a low-cost carrier, Southwest does not have the same costs as full-service airlines do, which is reflected in its margins.

The three airlines have seen their gross margins rebound from the economic downturn of 2008, which included a decline in oil prices from their 2008 highs. However, AMR and Delta saw their gross margins dip in recent quarters (as reflected in the current values relative to those for 2010). Both carriers rely heavily on MD-80 aircraft, which are relatively inefficient compared to newer aircraft. As a result, both carriers have been hurt disproportionately by

rising oil prices.

Operating Margins

Looking at the operating margins for these three firms, we again see that Southwest stands apart from the competitors. It is the only one of these three companies to have positive operating income in each of the last seven years, and it has matched or exceeded the industry median in all but one of the last seven years. This points to management's ability to manage expenses without hindering sales growth.

AMR Corporation, on the other hand, has operating margins that consistently lag its industry medians, a sign that management has been ineffective at controlling operating costs relative to sales.

Net Margins

Again we see that Southwest is the only one of the three airlines here to have generated positive earnings over each of the last seven years. Also, again, we see that the company's net margin has matched or beat the industry median in each of the last seven years. Based on these trends, it is safe to say that this airline enjoys a distinct competitive advantage.

Despite a rebounding economy and lower oil prices over the past couple of years, AMR Corp. has not been able to pull itself out of the red. History also shows us that Delta has had some significant losses over the last seven years.

Conclusion

Analyzing company profit margins is a quick and easy way to get a handle on a firm's profitability (or lack thereof). Margins tell us how effective management is at turning sales into profits and whether the company is favorably positioned to weather a downturn or withstand competition. Like all forms of financial analysis, however, margin analysis is only as good as the timeliness and quality of the underlying financial statement data. Furthermore, it is important to consider the company's industry and its position in its business cycle to put its margins in proper context.

Lastly, remember that margin analysis is only one piece of the analysis puzzle. While profit margins can tell us a lot about a company, they do not tell us the whole story.

→ [CI Staff](#) .

Discussion

Carl from MA posted over 3 years ago:

Very good article. This article has motivated me to create a screen in SI Pro to identify companies that are worthy of further consideration for this type of analysis. I guess the trick is figuring out which companies in an industry you want to run comparisons on. Thanks, AAI.

Robert from PA posted over 3 years ago:

Very good article - clearly defines accounting lingo, the importance of each term, and also how to use it as a tool to find the best company within a sector/industry.

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