FUNDAMENTAL ANALYSIS: A CLOSER LOOK AT GROSS MARGINS

By Marcus W. Robins

Amidst all the detailed numbers on the income statement, gross margin is one figure that may be worth obsessing over, because it sits at the middle of several of the key accounting formulas that determine business success.

Stock analysts with a fundamental bent commonly calculate gross profit margins for the companies they follow to two decimal places, and populate their reports with statements such as "Gross margin for the third quarter fell 85 basis points to 40.35%," or "A new, high-margin product line contributed to a gratifying increase in gross margin to 28.11%."

At first glance, it seems a little obsessive. But under closer examination, the analysts' obsession with gross margin begins to make sense. Indeed, after working as an analyst myself for 20-plus years now, I'm prepared to say that if I had to make investment recommendations based on just a single series of numbers, I would definitely choose gross margin.

Why?

Gross margin sits at the middle of several of the key accounting formulas that determine business success. It relates gross profits to revenues, so it can reflect trends in those two important quantities.

Gross profit is revenues less cost of goods sold; dividing it by revenues provides the gross margin, which gives a snapshot of efficiency: How much of each dollar the company gets in sales does it keep to run the business? Flip the gross margin percentage over, and it gives you a percentage describing cost of sales. A company with a 40% gross profit margin has a 60% cost of sales margin, which means that selling another $1 million in product will cost the company $600,000.

MARGINAL DIFFERENCES

It could be argued that it would be better to focus on net margin rather than gross margin. Net margin is net income (revenue less all expenses and taxes) divided by revenue. Because it takes into account all expenses including interest and taxes, net margin more closely reflects earnings that could go to shareholders or be reinvested in the business.

However, when you're trying to gauge the success of a company's products in the marketplace, I think it's best to look at gross margin because the additional factors included in calculating net margin are independent of the product and the market. They also are more in the company's control. Management can cut overhead costs and boost earnings at the same time gross margins are eroding. The investor who looked only at net margins might be pleased with the increase in earnings but miss the story told by the gross margin line—that the business was really losing ground in the marketplace.

In addition, situations where the gross margin is sound but net margins are sliding (perhaps because management is adding too many new people to the staff or taking too many expense-account trips to Jamaica) tend to be self-correcting. If management is responsive to shareholders, it will move to trim costs and get the ship, and earnings, back on course.

Net margin is a better measure than gross margin when it comes to manage-

Marcus W. Robins, CFA, is founder and president of RedChip Review, a newsletter providing independent research on smaller capitalization firms; 519 S.W. Third Ave., Suite 400, Portland, OR 97204, 503/241-1265; 888/733-2447 or visit the Web site at www.redchip.com, recently named Best of the Web by Forbes magazine.

ment efficiency, because it describes what's happening inside the business. Another measure for management efficiency is operating margin, which is operating income (revenue less core business expenses including cost of goods sold, selling, administrative and general expenses, research and development, and depreciation) divided by revenue. Operating income is earnings before a company's cost of funds, financial investments and taxes are considered, and therefore operating margin gives the best picture of management performance not skewed by external factors such as Alan Greenspan.

All three—gross margin, operating margin and net margin—are necessary for a full understanding of a business, and each discloses a different aspect of the whole:

- Gross margin shows you the foundation of the business and answers the question: Is the company making products people are willing to pay for?
- Operating margin adds a picture of how efficiently management is operating upon that foundation: How much does the business itself absorb as it does its work?
- Net margin shows how much truly is left at the end of the day and on the bottom of the balance sheet as earnings: How much profit is available for shareholders and for reinvesting in the business?

BIGGER IS BETTER (USUALLY)

The first thing to remember about gross margin is that bigger is better. That's not only because it means higher profits, earnings, and stock appreciation, but also because it makes running the business easier and less risky. A bigger margin provides a margin of safety, it eases cash flow considerably, and it provides for an inherently better return on capital invested, which is the sharp-eyed investor's final goal. It may also indicate price protection provided by patents or natural barriers of entry into its line of business.

For example, when a software company that enjoys an 80% gross margin sells an additional dollar of product, it has spent only an additional $0.20 to do so. But a supermarket chain typically has to lay out $0.72, $0.76 or even $0.78 before it can sell an additional dollar of product.

Other considerations are also important. Some years ago, Safeway put a message to customers on its grocery bags pointing out that an average supermarket made only $0.015 in net, aftertax profits for each dollar of customer purchases. This campaign didn't last long, because some analysts pointed out that Safeway was leaving out an important part of the equation. If Safeway made a 1% profit on each gallon of milk, it would indeed not be making very much money if the average gallon of milk sat on the cooler shelf for a year. But if a gallon of milk were on the shelf, say, a week, then it could make a 52% return in a year, and if it were on the shelf only a day, then Safeway would make 365% a year on milk. Profit margin is part of the story, but time is a critical element too.

This goes to show that if you had only numbers for the profit margin on a company's products, the first thing you'd need to know is some estimate of the length of the sales cycle—the time between a company's investment and when it actually pays off in cash—because it shows how quickly the company can get that money back, plus the profit, and then reinvest that money in the next go-round. This explains analysts' additional obsessions with such things as "inventory turns," "days sales outstanding" (which measures the amount customers have yet to pay on products they've received), and all the measures that capture accounts receivable, accounts payable, their quality and aging.

Gross margin, fortunately, already captures some of those issues, since it's measured in a standard, year-by-year format. However, companies are always eager to show good numbers, and that means that sometimes they come up with clever ways to boost gross margin through smoke and mirrors—usually methods involving deferring expenses or booking revenues before they actually appear.

When you use gross margin to evaluate investment candidates, seek industries with high gross margins and companies with high gross margins relative to their peers. As it turns out, you can emphasize either end—the industry or the company—with about equal success. The main difference is that investing in areas with high gross margins across the board usually means buying into high-growth industries with their attendant high stock prices and high volatility, while finding a stock in a more sedate sector that posts a gross margin better than its peers may give you a smoother ride going forward.

Look at the trend over a period of time. How long? Three years usually is sufficient. Look for stable gross margins. Increasing gross margins are a rare bonus and to be especially prized, except in the case of very young companies, where they commonly appear as part of a honeymoon period that most young companies go through. What happens is that as they ramp up sales, they are able to spread the cost of their fixed base over a larger volume, improve production, fix designs and generally pick the low-hanging fruit of improvements to efficiency. Indeed, if you are looking at a company that is less than three years out of the gate and it isn't showing an improvement in gross margin, you might have to ask yourself what's wrong.

If bigger gross margins are better, why would anyone invest in businesses with low gross margins? Like everything else on Wall Street, it's a matter of what you have to pay for what you get. In general, companies in emerging industries tend to

TABLE 1. MARGIN STARS

Little-known stocks that deliver excellent gross margin performance:

Firm (Exchange: Ticker)	Gross Profit Margin (%) 1995	1996	1997	1998	1999	Business
Cybex Computer Products Corp. (Nasdaq: CBXC)	65.04	55.41	52.53	52.48	53.40	Network switches
Dionex Corporation (Nasdaq: DNEX)	67.98	68.87	69.41	68.51	68.07	Ion chromatography
Excel Technology, Inc. (Nasdaq: XLTC)	43.38	46.04	49.59	49.05	49.76	Laser equipment
Koala Corporation (Nasdaq: KARE)	60.97	63.74	59.41	54.83	51.28	Children's products

display high margins and rapid growth, while those in mature businesses have lower margins and slower growth. A stock in a low-margin industry can be very attractive if it is priced right.

One important thing to know about low-margin stocks is that they may have better prospects for expanding the gross margin. Take, for example, an automaker earning a gross margin of 14%. Let's say it can boost the margin just a bit to 16%, by adding value to its products so they will command higher prices, improving process efficiency, finding cheaper sources of supply, or reducing labor costs. That extra 2% translates to a 14% boost in earnings (2% divided by 14%), and probably a spike in the share price. A drug company with an 80% gross margin, on the other hand, will not be able to boost it so easily. If it cuts costs or raises prices 2%, it has expanded its margin leverage exactly 2.5% (2% divided by 80%).

That's one reason investment strategies that seek stocks with low price-to-sales ratios (share price divided by sales per share, a measure of stock valuation relative to sales) have done so well over time. The theory is that if you can buy a dollar of sales for a few cents, you're in a great position: The company doesn't even have to grow sales; it merely has to wring another penny or two of profits from its existing sales to provide some substantial appreciation of your investment.

Another thing in favor of low-gross margin stocks is that they typically are in good defensive positions. Entrepreneurs do not line up to take flyers on low-margin, capital-intensive businesses. People don't start up too many steel companies today. On the other hand, a tech company posting 80% gross margins must feel like Daffy Duck on the first day of duck hunting season—everyone is gunning for it. Juicy margins attract intense, aggressive competition.

LIKE GRAVITY

Gross margins are not like helium balloons, which rise to their optimal level under their own power and then stay there, happily sailing along. Forces as sure as gravity keep pulling them down.

Maintaining a thin profit margin in an established industry is not as hard as some other business challenges. But each additional percentage point of gross margin makes it much more difficult. What are the forces that try to pull gross margins back to earth?

Competition. In competitive industries, the margin a business can obtain is limited by what the competition charges. Certain unique or unusually desirable products may be exceptions, but even those eventually encounter competitors seeking greater market share.

Advancing technology. The 386 enjoys good margins until the 486 comes out, and the 486 cranks out profits until the Pentium displaces it, and by then you can't even get the computer recycling program at your local high school to take your old 386.

The American Electronics Association reports that high-tech companies now draw about 50% of their revenues from products less than two years old. InFocus Systems, Inc. (Nasdaq: INFS) which makes computer-driven projectors, has sometimes received more than 60% of revenues from product lines less than two years old—the speed of innovation in its trade is just that fast.

The slope of the "margin curve," if you will, may not be as steep in industries other than technology, but it is always there. New products command the best prices, and therefore the best margins, while older ones suffer from loss of novelty, more competition in the market, and the erosion of relative value brought by improving technology. Keeping a company's margins up, then, demands a constant flow of new, more advanced products. A misfire can hurt gross margin fast.

Customer choices. Most companies sell a range of products with a range of margins. Not surprisingly, customers may choose to buy more of the lower-margin products because they find them more attractively priced. The company may set out to make high-margin sales, but if customers keep ordering the low-margin products pretty soon the company finds itself with a low margin overall. Some managers try to defuse this ticking time bomb by making margins exactly the same across a company's product range. The trouble with such an approach is that companies rarely have all their products in exactly the same market. Over time, customer choices tend to exert a constant downward pressure on overall margins. When a

Margin Definitions

Cost of goods sold: The cost of raw materials plus the cost of producing the finished goods. For a software vendor such as Microsoft, it also includes the cost of providing technical support that comes with the purchase of the product.

Gross margin: Gross profit (revenue less cost of goods sold) divided by revenue.

Net margin: Net income (revenue less all expenses and taxes) divided by revenue. Takes into account all expenses including interest and taxes.

Operating margin: Operating income (revenue less core business expenses including cost of goods sold, selling, administrative and general expenses, research and development, and depreciation) divided by revenue. Operating income excludes the effects of financial investments, financing and taxes.

Revenue: Also called net sales. Gross sales less returns, allowances, and freight out. Returns are goods returned for credit, allowances are deductions for goods lost or damaged in transit, and freight out is shipping expense passed on to the customer.

Selling, general and administrative expenses: Includes such things as salespersons' salaries and expenses, advertising and promotion, travel and entertainment, office payroll and expenses, and executive salaries.

company finds that margins have slipped to an uncomfortable level, there are basically four things that it can do: raise prices, reduce manufacturing costs, add products that can be sold at higher margins, or say no to low-margin business.

The sales mentality. The sales mentality is what makes it tough to say no to low-margin business. Sales forces are trained to sell, sell, sell, and commission structures that reward them for doing just that become an accomplice to the sales mentality. The sales mentality explains the all-too-common scene that erupts when the proud salesman walks into the office to announce he's bagged a $50,000 order and should be hailed as the conquering hero, even though he had to give a little discount—just 10 points of the margin. This is when the controller gurgles an unintelligible cry and goes for the salesman's throat.

Company management does the same thing when it decides to give up gross margin in pursuit of market share, or when it decides to discount in order to make the quarterly sales numbers its CEO promised Wall Street. The company may make the sales goal, but by letting gross margin slip, it causes cash flow to bog down, and return on equity to fall. The airline industry has provided numerous examples.

EXCUSES, EXCUSES

The forces that constantly pull margins back to earth are powerful and predictable, and should be well known to everyone in business, yet most executives persist in excusing poor results by blaming "pressure on margins" or "softness in the market," as if that were explanation enough.

Here's a pocket translation guide for common explanations of why margins have declined:

- "We experienced an unfavorable product mix" means "We failed to anticipate that buyers might prefer our cheaper products to the expensive ones."
- "The market is unexpectedly soft" means "We had to discount to move the old merchandise because we produced too much."
- "We decided to grow into the ABC market, where lower margins prevail" means "We just wanted to be bigger, darn it."

Of course, there are companies that don't have to make excuses. They maintain healthy gross margins year after year, they grow margins by constantly creating products for which customers are eager to pay top dollar, and they use discipline to keep themselves from trading away margin for short-term boosts to sales.

Table 1 lists several lesser-known stocks that have excellent gross margins. ◆