Chapter 9

Financial Issues: Business Trend Analysis and Operational Ratios

What's in this chapter:

- revenue and EBITDA trends
- volatility of operating results
- margins and expenses
- capital expenditures

INTEREST COVERAGE AND leverage ratios are financial or credit metrics. They measure how well the company can service aspects of its debt structure. It is also critical to look at how well the underlying business is doing to understand trends that will lead to cash flow increases or declines and impact the credit ratios going forward. This will involve examining trends in the business's performance metrics and operational ratios.

It is also important to examine risks in the business that may not be easily captured with numbers in the financial statements. Sometimes data on these topics is easy to track, but other times, it can take considerable work and

creativity to find sources to monitor some of these items. Checklists or rankings can be good tools to monitor subjective issues such as the following:

- the competitive environment in which the company operates
- the barriers to entry in the industry
- sensitivity to the macro economy or to event risks
- dependence on a few key customers
- how capital-intensive the business is
- whether the company is a price taker or a price setter

Revenue and EBITDA Trends

Presenting the financial data in different ways can often help an analyst look at operational trends in a credit. It is best to focus on basic trends in a company's revenue and EBITDA over the last three to five years, as shown in Exhibit 9.1. When possible, it is also good to analyze this by quarter for at least the latest two years, comparing year-over-year results for each quarter (see Exhibit 9.2). It can also prove helpful to show all or some of the data in a graphic forrnat as shown in Exhibit 9.3. Experiment with different graphic display formats; the same format does not always work for every data series. In Exhibit 9.3, it is easy to see movements and trends in several of the financial items, but because of the scale and the smaller changes in EBITDA, it is hard to visually decipher trends. Therefore, showing it graphically, by itself, or without the revenue line, may provide a better visual for EBITDA.

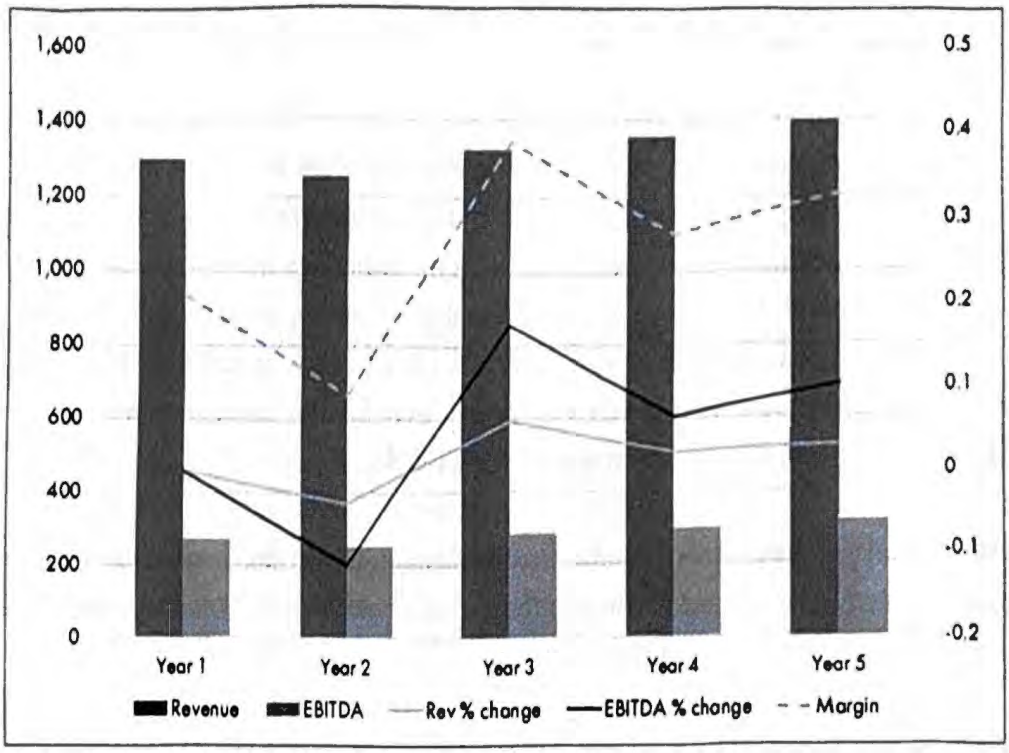
Exhibit 9.1: Simple Trend Analysis Annually in $000,000s

	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	1,300	1,250	1,325	1,355	1,395
% change		(3.8%)	6.0%	2.3%	3.0%
EBITDA	273	253	282	294	315
% change		(7.5%)	11.8%	4.3%	7.1%
Margin	21.0%	20.2%	21.3%	22.0%	22.6%

Exhibit 9.2: Simple Trend Analysis Quarterly in $000,000s

	Year 2 Q1	Year 3 Q1	Year 2 Q2	Year 3 Q2
Revenue	300	305	310	325
% change		1.7%		4.8%
EBITDA	60	61	64	68
% change		1.9%		7.4%
Margin	20.0%	20.1%	20.5%	21.0%

Exhibit 9.3: Annual Trend Analysis Graphic



This analysis is designed to look for trends and relationships in the patterns of a company's operating data. One common comparison is looking at how well the company has grown revenue relative to broad economic measures, such as the gross domestic product (GDP) in the country in which the company operates. It is also common to compare the growth rates and the margins with the same data for other companies in the same industry.

In analyzing the figures, see if the company made acquisitions or divestitures that had some impact on the numbers. This information should be found in the text of the management's discussion in its financial statement and the statement of cash flows in the Investing Activity section.

If the company has made acquisitions or divestitures of assets of a meaningful size, hopefully it will have supplied pro forma information. Pro forma information typically shows what key financial statistics would look like for the company if the transaction had occurred several periods earlier. As an example, if Atlas Corp. bought Neptune Inc. in January of one year the pro forma data might show what the prior year's revenue, EBITDA, and interest expense would have been for Atlas Corp., combined with the revenue and EBITDA of Neptune Inc. and with any additional interest expense related to the financing. Usually pro forma information will be shown in a format that allows year-over-year comparisons to be made as if the acquisition had actually been completed several periods before. These are not projections, but a view of combined past results.

If a company has several business lines, any trend analysis should also try to break out the details of these business lines. This way, it can be seen which ones are causing the greatest changes in the company's overall results. The breakout of business lines typically appears on either the income statement or in management's description of recent results. However, sometimes it appears in the footnotes to the financial statements. Other times, it can only be found in the earnings press release that a company may file. Some companies simply do not break out divisional or business line results.

Additionally, in the notes to the financial statements, the company usually breaks out business done domestically and internationally. This can also help an analyst know if some of the change in results was due to declines or growth in specific business areas or currency changes.

Volatility of Operating Results

When examining the credit quality of a company and comparing it to other debt issuers, the predictability of a company's financial results can be a differentiating factor. When a company has a higher level of predictability (and/or less volatility in its results), it often can give investors greater comfort with owning an investment in that company, and this can cause the debt to trade at lower yields. A common measure of volatility is standard deviation, which is a measure of the average of how much each data point varies from a dataset's average. For example, examine how much volatility various companies have had in their level of EBITDA each year over the last ten years. An average EBITDA of $150 million and a standard deviation of $20 million means that,

on average, the annual EBITDA of the company is likely to vary up or down by $20 million from $150 million. Compare this to another company and see which has less volatility. This could imply that the company with the lower volatility has greater predictability and perhaps poses less risk in its level of EBITDA.

There are items to consider when using standard deviation. First, an analyst would want to know if there were any events that might have meaningfully moved EBITDA for one company but not others, such as a significant merger. Second, standard deviation does not distinguish between upside and downside volatility. An investor would not mind volatility if all the big changes to EBITDA were due to exceptional growth rather than wild swings between growth and declines. More advanced analysis might measure upside volatility separately from downside volatility. However, the use of standard deviation is a starting place to compare the stability of a company's operational results.[8]

Industry Specific Operational Metrics

Certain key performance indicators (KPIs) are specific to a sector or an industry. Become familiar with KPIs that are specific to a certain industry to get a sense of relative operational performance between credits in the same business sector. Some examples may include comparing drop and handle per square foot of casino space in the gaming industry, or the cost of acquiring subscribers for a cable television company (cost per gross add [CPGA]), or the net present value of gas and oil reserves for an energy company. Sometimes these industry metrics are focused on change over time. When an industry is in a high growth/low cash flow cycle, the focus may be different than when an industry is more mature and generating more cash. Some industries try to push analysts to certain metrics. When this happens, it is always good to question the reason behind the industry's efforts.

8 Standard deviation is usually denoted by the Greek letter σ. To calculate standard deviation for a dataset, you first establish the mean for the dataset. Then for each number in the set, you take the number and subtract the mean. Once each difference is calculated, square each, sum all of these squared differences, and divide by the number of items in the dataset—in other words, take the mean of all these squared differences. Then calculate the square root of that mean.

Margins and Expenses

In our simplified trend analysis exhibit above, there is a line labeled "Margin." This is the EBITDA margin. The EBITDA margin is calculated as EBITDA/revenue, giving a sense of a company's ability to convert revenue to EBITDA. If the company is producing meaningful changes in margins, examine the expense items in greater detail.

One common item for retailers and manufacturers to analyze is the cost of goods sold (COGS). This is usually broken out as a separate item and is labeled the "gross profit margin." The calculation takes revenue less cost of goods, and this totals gross income. Gross profit margin is gross income/revenue. To some extent, this is the value added by the company. In a simplified example, if a can manufacturer buys aluminum as its only material production input, the difference in the company's revenue less the cost of the aluminum should equal the gross profit and is the value added that the company created with that aluminum.

Examining expenses and margins can give a sense of the company's operating leverage, which measures how well its growth in revenue can be translated into cash flow (different from financial leverage or balance sheet leverage).

One aspect of expenses to analyze for a better idea of a company's operating leverage is whether the company has a high portion of its total expenses as fixed expenses, meaning they do not shift when sales go up or down. Expenses that are not fixed are considered variable expenses and tend to move along with the revenue level. Therefore, if there is a high level of fixed expenses, the EBITDA margin can increase significantly as revenues rise. This implies higher operating leverage and margins should go up as revenue rises. Said another way, when there is high operating leverage and revenue is rising, EBITDA should have a higher growth rate than revenue. However, if a company's revenue is declining, fixed costs cannot come down as easily as variable costs, and margins may shrink more rapidly.

Unfortunately, companies typically do not define their fixed and variable costs. Try to estimate these by looking at different time periods and the descriptions of the line items in the expenses (see Exhibit 9.4). Sometimes conversations with management can help, or company presentations can give insights into the level of fixed and variable costs. By looking at many companies in the same

industry over periods of time, an analyst can acquire a better sense of operating leverage in an industry.

When comparing margins among different companies in the same business, note whether one has meaningfully better margins than the other, and try to analyze why. The difference in margin may be due to management styles or because one company operates in an area of the country where rents and employment costs are higher or lower. Another common reason is economies of scale. In many industries, a large company has better pricing for its supplies and perhaps has pricing power for the finished goods, as well as being able to leverage fixed costs. Try to analyze what is causing the differences in margins among similar companies.

Exhibit 9.4: Simple Trend Analysis with Costs Annually in $000,000s

	Year 1	Year 2	% Change	Year 3	% Change
Revenue	1,300	1,250	-3.8%	1,325	6.0%
Cost of goods sold	500	489	-2.2%	522	6.7%
Gross profit	800	761	-4.9%	803	5.5%
Gross margin	61.5%	60.9%		60.6%	
Expenses:					
Selling expenses	400	382	-4.5%	397	3.9%
As a % of revenue	30.8%	30.6%		30.0%	
General and administrative expenses	127	126	-0.8%	124	-1.6%
As a % of revenue	9.8%	10.1%		9.4%	
Depreciation and amortization	72	70		68	
Operating income	201	183		214	
EBITDA	273	253	-7.5%	282	11.8%
Margin	21.0%	20.2%		21.3%	

In Exhibit 9.4, the growth rates appear in a separate column to make the data easier to read. Here are a few items to notice:

1. *Gross margin:* This has gone down at least two years in a row, in both a year of revenue growth and a year of decline. This trend is troubling and may begin to be a long-term problem for the business, even though the change is not large.
2. *Selling expenses:* These are variable, but not as variable as revenue. It would appear that selling expenses have a fixed cost component as well as a variable one. This can include sales salaries, fixed costs for a marketing team, and perhaps promotional spending.
3. *General and administrative expenses:* These appear relatively fixed.

Capital Expenditures

The most common way of looking at capital expenditures is as a percentage of total revenue. However, for different industries it may be worth looking at capital expenditures as a percentage of plant, property, and equipment (which is a proxy for business assets), as a percentage of total capital or as a percentage of EBITDA.

Analysis of capital expenditures can be even more valuable if it is possible to break out the difference between maintenance capital spending and the capital spending related to special projects or expansion plans that are more one-time in nature. The maintenance capital spending can be examined as a percentage of revenue to get a sense of the needed rate of reinvestment in the business to maintain the company's operations.

Capital expenditures can also be useful to look at in a time series to see how they have varied versus revenue levels. This can also give an idea of how much is ongoing maintenance capital spending and how much is related to special projects. It is important to remember that when valuing a company, the level of near-term and ongoing capital expenditures can have an impact on the valuation of the company. The fact that different industries have different levels of capital spending can be part of the reason why one industry's average EBITDA valuation multiple is higher or lower than that of another industry.

When comparing different companies in the same industry, it can be informative to examine whether one company has higher growth rates and is investing in capital more than another company does. A company may, for any number of reasons, defer capital expenditures for a period of time. This may make the FCF generation look higher on both an absolute basis and as a percentage of revenue, for a period of time. But the concern when expenditures are deferred is that the firm may have underinvested and may have to play catch-up for a period of time, during which it experiences a spike in capital spending. Another concern when a company is underinvesting in its business is that it could fall behind competitors. It is important to remember that many expenditures can be capitalized. It is not just physical investment. Capitalized expenses could include investments in intellectual property such as media content or software.

It is worth noting that many textbooks and much equity-based research highlight return-on-investment (ROI) analysis or return-on-equity (ROE) analysis. This is done by using a measure of earnings over a denominator, which uses a percentage of invested capital or some valuation of the equity. This type of analysis is certainly helpful in measuring the value of the company's business investment and differences in the management teams or the quality of company assets.

Other Comments on Business Analysis

There are many other layers of business analysis that can be undertaken, including efficiency of sales and manufacturing, and the interaction between capital efficiency and revenue. One of the struggles in undertaking an analysis from outside the business is that many of the more nuanced aspects that are interesting to explore, such as revenue per salesperson, may not be made publicly available. When analyzing a business from the inside, or on a private basis, more of this information may be accessible. Some of the typical ratios that can be used to analyze a business are derived from public information, including the following:

- turnover ratios for assets: net sales (revenue)/average of total assets
- turnover ratio for accounts payable: sales/average accounts payable
- turnover ratio for accounts receivable: sales/average accounts receivable
- turnover ratio for inventory: cost of goods sold/average inventory
- revenue efficiency: sales/average number of employees (or average assets)

Most industries and companies have specific KPIs they will regularly release, either with their financial results or sometimes monthly. Examples of these include the following:

- *Same-store-sales in retailing*: This measures the change in average sales per store for stores that have been open for at least two periods.
- *Book-to-bill ratio*: Common in the semiconducter industry, this measures new orders received, divided by the amount of product delivered. It is used as a measure of new order trends.
- *Average revenue per unit (ARPU)*: This is common in subscriber businesses that measure pricing trends per unit and was common, for a period, in the cable television and mobile phone industries.

The thing to remember about KPIs is that they are usually developed by the companies, which, generally, determine if they want to make them available to investors and analysts. For example, for many years, companies regularly reported same-store-sales and ARPU. Then, many companies stopped providing the data, which was not available elsewhere. Clearly, the data was no longer helping the companies' stories. Question if the KPIs being given are really valuable or a bit of propaganda. Some KPIs have proven quite misleading as a measure of business value. If the vast majority of companies in an industry use a certain KPI, and one company does not, it should definitely be a warning to dig deeper into the company that excludes it and be extra wary of that credit.

You will also want to develop a series of checks for a company's competitive position in a market. This may include comparing its revenue growth rates to those of its peers. If a company reports product volume or customer count comparisons, track these trends versus those of its peers. The data may give insights into whether the company is gaining or losing market share to the competition. Some industries provide good industry data, derived from industry groups, government agencies, or sometimes even third-party private vendors, which can be used to gauge a company's competitive position. Keep in mind that many industry groups are actually lobbyist organizations for the industry, so their information contains natural biases. Industry research by third-party vendors also contains an innate bias: they need to help the industry survive so they can keep selling the information.

Barriers to entry can be a vital competitive advantage. How strong an industry or company's barriers to entry are is not easily defined in a quantitative number, but it is something that has to be considered as a potential strength or weakness when analyzing a business.

In businesses that are in more developmental stages, management will often try to develop an idea of which other industries they may be taking revenue away from, and what their total addressable market (TAM) might be. TAMs can be definitionally dependent, so always be skeptical: examine how well defined these TAMs really are.

It is not enough just to notice a business trend or catch a change in a company's competitive position. Try to understand what is causing these changes and whether they are temporary or permanent. That is where real differences can occur in investment performance.

A Pragmatic Point about Companies Outside the Market

It is easy, when analyzing an industry or a sector, to be very focused on the companies and not beyond that universe. This tendency can lead to weak analysis. Look at closely aligned businesses that could pose a threat or an opportunity. For example, analysts focusing solely on data storage companies may not see software makers and Internet retailers that are moving into the cloud storage market and disrupting the data storage industry.

In most cases, companies in the leveraged debt markets are not the market leaders in their industry. They are often more in the middle of the pack or even at the small end within their markets. Analysts that only examine these companies in leveraged debt markets may miss potential big changes in the industry that could materially impact the companies they are supposed to be monitoring. To avoid this, be sure to pick out some of the industry leaders in any industry that is being examined. They may be public companies with no debt, or investment-grade companies. Look at the trends these companies' operations are going through. Read which strategies they are pursuing or listen to their management teams to glean insights into potential changes in the industry.

Closing Comment

A credit analyst needs to analyze the debt issuer's ability to service the debt, but part of that job is being able to analyze a company's operations. In analyzing the operations of a debt issuer, an analyst wants to get a sense of the consistency and resiliency of the business, as well as the likelihood of future growth or decline in the business. These trends will end up impacting cash flow and debt service. A company that has more volatility in its ability to generate cash flow will worry debt investors more than one that is consistent, so understanding the company's history as well as its outlook is critical to good credit analysis. Understanding business trends and the competitive landscape for a credit can lead to insights about likely event risks as well.