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WHITE PAPER

Using Industry Benchmarks to Establish Secure Negotiating Positions for Merger and Acquisition Purposes

INTRODUCTION

On the surface, merger and acquisition activity seems to be driven by simple math. However, below the surface lies a myriad of crosscurrents that make navigating these waters more difficult than it may otherwise appear. When negotiating business value, the two parties often have drastically different ideas about what a business is worth. Further, both positions may be predicated on valuation multiples derived from the marketplace. Contributing to disparate opinions of value is the fact that multiples from the marketplace often vary dramatically, causing difficulty in selecting an appropriate multiple for the subject company.

As a result, the parties in many potential transactions remain at odds, with one party believing that a lower multiple is warranted and the other side insisting that a higher multiple is justified. People may feel frustrated and lose trust in the other party. Many deals ultimately fall apart because the two parties can't reach agreement on the appropriate multiple from the available data.

THE SOLUTION?

A solution to this dilemma is to select a multiple based on how the subject company compares to industry benchmarks. If the subject company outperforms the industry benchmarks, it often warrants a higher multiple. Conversely, a lower multiple is typically necessary if the subject company performs poorly relative to industry benchmarks.

A rigorous benchmarking analysis establishes a defensible, data-driven multiple that clarifies value and reduces confusion. This information establishes a secure negotiating position, increasing the likelihood that transactions can be completed favorably and efficiently.

Industry benchmarks can be created directly from the guideline companies used to derive multiples or selected from industry benchmark databases. To establish a credible multiple, analysts perform a comprehensive comparison of the subject company and the selected benchmarks through a trend analysis, common size analysis, and ratio analysis.

CHAPTER 1
Business Valuation Overview

WHY THE CHANGE?

To provide context for benchmarking best practices, the following is an overview of how analysts value businesses and select multiples.

There are three business valuation approaches:

1. The income approach
2. The market approach
3. The asset-based approach

Within each valuation approach, there are multiple valuation methods. Valuation analysts often apply more than one method from more than one approach to value a business.

The market approach is the most commonly applied valuation approach for merger and acquisition purposes. Although one can use industry benchmarks to estimate discount rates in the income approach, this discussion focuses on the market approach because of the frequency of its application for merger and acquisition purposes.

The market approach makes a direct comparison of the subject entity to market transactions of similar companies. The two primary types of market approach methods are (1) the guideline completed transaction method (using prices of recently sold similar companies) and (2) the guideline public company method (using prices of similar publicly traded companies).

Both of these methods derive multiples (e.g., the multiple of value to revenue, operating income, EBITDA, or other value drivers) from transactions of interests in companies engaged in the same (or similar) lines of business. After considering the subject company's financial performance to industry benchmarks, one selects a multiple(s) and applies it to the subject company's financial metrics to arrive at an indication of value.

CHAPTER 2
Selecting Industry Benchmarks

Valuation analysts have several options when collecting benchmark data. Comparisons to selected public companies in the same (or similar) industry are easily made, given the plethora of financial data available to public companies. While it would be ideal to get detailed financial information from guideline completed transactions, this information is not always available. When this data is not available, valuation analysts often look to databases of financial performance by industry from industry trade groups, subscription services, or other sources.

CREATING INDUSTRY BENCHMARKS

When the data is available, analysts often create industry benchmarks directly from the guideline companies used to derive multiples.

Financial data to build benchmarks can be found through SEC forms 10-K, 10-Q, and/or 8-K for guideline public companies and the acquiring/acquired companies of completed transactions. Many subscription-based databases such as Capital IQ and Pitchbook mine these sources and compile data. Financial data from guideline completed transactions can also be found in databases such as DealStats and Bizcomps, which rely on information received directly from the parties involved in a completed transaction.

When sufficient data is available, analysts consider benchmarks related to the following:

- Size (e.g., revenue, profit, or total assets)
- Growth (e.g., growth in revenue, profit, or total assets)
- Liquidity (e.g., current ratio and quick ratio)
- Performance (e.g., return on equity and return on assets)
- Profitability (e.g., EBITDA margin, operating income margin, or net income margin)
- Leverage (e.g., debt-to-equity ratio)
- Turnover (e.g., total asset turnover and working capital turnover)

From these benchmarks, analysts then select relevant benchmarks based on the (1) drivers of business value within the subject company's industry and (2) availability of data. Outperforming the industry benchmarks typically merits a higher multiple. Conversely, if the subject company performs poorly relative to industry benchmarks, a lower multiple can be considered.

To assist in the selection of an appropriate multiple, a valuation analyst often compiles benchmark data into charts or tables. The following is a hypothetical example of a benchmarking analysis.

A valuation analyst is valuing hypothetical construction company JEK Construction, the target of a proposed acquisition. As part of the valuation, the analyst applies the guideline public company method of the market approach. From the selected guideline public companies, the analyst estimates EBITDA multiples ranging from 6.6x to 18.2x, with a median and mean of 10.4x and 12.4x, respectively. In order to select an appropriate EBITDA multiple from this range, the analyst prepares a benchmarking analysis using guideline public company data from SEC forms 10-K and 10-Q.

Several of the industry benchmarks that the analyst considered are presented below.

Comparison of Guideline Public Companies and Subject Company Financial Fundamentals

Guideline Public Company Data from PitchBook Data, Inc.

Size (Total Assets)	
Company	Assets ($000)
Lennar (NYS: LEN)	28,289,395
Jacobs Engineering Group (NYS: JEC)	12,551,812
PulteGroup (NYS: PHM)	10,055,080
Toll Brothers (NYS: TOL)	9,949,220
Tutor Perini (NYS: TPC)	4,357,765
Stantec (TSE: STN)	3,148,571
JEK Construction	2,000,000
Century Communities (NYS: CCS)	1,985,673

Profitability (EBITDA Margin)	
Company	Margin
PulteGroup (NYS: PHM)	14.8%
Toll Brothers (NYS: TOL)	12.8%
Lennar (NYS: LEN)	9.9%
Century Communities (NYS: CCS)	7.0%
Stantec (TSE: STN)	7.0%
JEK Construction	6.0%
Jacobs Engineering Group (NYS: JEC)	5.2%
Tutor Perini (NYS: TPC)	4.6%

Historical Growth (EBITDA Growth)	
Company	Growth Rate
Jacobs Engineering Group (NYS: JEC)	60.4%
Century Communities (NYS: CCS)	55.7%
PulteGroup (NYS: PHM)	48.1%
Lennar (NYS: LEN)	41.9%
Toll Brothers (NYS: TOL)	22.4%
JEK Construction	10.0%
Stantec (TSE: STN)	-15.1%
Tutor Perini (NYS: TPC)	-29.7%

Performance (Return on Equity)	
Company	Margin
PulteGroup (NYS: PHM)	19.0%
Toll Brothers (NYS: TOL)	13.9%
Century Communities (NYS: CCS)	12.1%
Lennar (NYS: LEN)	11.3%
Tutor Perini (NYS: TPC)	7.5%
Stantec (TSE: STN)	7.1%
JEK Construction	6.8%
Jacobs Engineering Group (NYS: JEC)	5.8%

WHAT DOES THIS MEAN?

The analyst compares the financial performance of JEK Construction to the financial performance of the selected guideline public companies. The analyst then realizes, both visually and analytically, that JEK Construction is below the median in each of the selected categories. Based on this analysis, the analyst selects an EBITDA multiple that is below the median of 10.4x EBITDA.

In the event that there is insufficient data to adequately develop benchmarks from guideline transactions, analysts often rely on alternative data sources. The remainder of this discussion focuses on the development and application of industry benchmarks from sources other than guideline transaction data.

CHAPTER 3
Compiled Industry Benchmarks

OVERVIEW

Many organizations compile and disseminate financial metrics and data on an industry-by-industry basis. These organizations can be an excellent source of benchmark data.

Commonly used benchmark data sources include the following:

- The Risk Management Association (RMA) is a not-for-profit, member-driven professional association that compiles financial data both online and in print. Through its Annual Statement Studies®, RMA publishes comparative industry benchmark data sourced from the financial statements of the clients of its member institutions. Provided data includes balance sheet and income statement line items and 19 different ratios. This database covers over 700 industries, sorted by North American Industrial Classification System (NAICS) code.
- Bizminer is an economic development consulting database that prepares financial data organized through an expanded version of the NAICS system and by location. Bizminer provides financial data and ratios from more than 18 million business operations.
- Duff & Phelps issues an annual valuation handbook of financial data and benchmarks. The most recent version is titled *2018 Valuation Handbook – U.S. Industry Cost of Capital*. This resource contains benchmark data, including financial and profitability ratios, equity returns, and growth rates from approximately 170 industries. Industries are organized by Standard Industrial Classification (SIC) code.
- Industry and Trade Associations exist for many different industries. These organizations often collect financial and operational data from their members each year and are able to provide benchmark data.

NOW WHAT?

The first step in gathering industry benchmark data is to identify the subject company's industry. This process is not as straightforward as it seems. Many older classification systems do not adequately classify newer companies, particularly in the technology and communication sectors. For some databases, the list of companies comprising each industry is available, providing assistance to the analyst in identifying the appropriate industry.

Analysts can review these lists to ascertain similarity to the subject company. Additionally, when deciding which of two or more industries is most appropriate, they can compare the ratios from the two industries to see if they are significantly different. If they are not, data from either of the industries is sufficient. The valuation analyst should compare benchmark data from different industry classifications to understand the commonality (or disparity) before selecting a specific industry for analysis.

An additional challenge arises when a company operates in multiple industries. In this case, it is most appropriate to analyze the financial statements for each segment separately. If this is not possible, an analyst can either (1) present multiple benchmarks, or (2) decide which set of benchmarks is most relevant (on the basis of subject company segment size, for example).

Most databases are also organized by company size (typically either by revenue or assets). It is important to select the appropriate company size, as financial ratios are often substantially different for smaller companies than for larger companies. Some databases also allow analysts to filter by location, an important consideration if location affects business operations.

CHAPTER 4
Application of Industry Benchmarks in Financial Statement Analysis

OVERVIEW

A rigorous financial statement analysis typically contains:

1. A trend analysis
2. A common size analysis
3. A ratio analysis

The subject company can be compared to industry benchmarks in each of these analyses to estimate an appropriate multiple.

TREND ANALYSIS

A trend analysis, sometimes referred to as a horizontal analysis, studies the performance of the subject company over time. A trend analysis typically includes a review of the subject company financial statements over the last five years or the most applicable time period based on the business cycle and operating environment of the subject company. As part of a trend analysis, valuation analysts also often prepare a percentage change analysis indicating how much balance sheet and income statement line items changed each period.

The goals of a trend analysis include (1) spotting any anomalies in historical growth patterns, and (2) predicting future results. Both of these factors affect the selected multiple.

Anomalies in growth patterns (i.e., sharp increases or declines) affect the multiple—buyers value stability. Stable historical results increase multiples. However, if historical financial results indicate sudden changes in past periods, a lower multiple may be warranted.

WHAT'S NEXT?

Predicting future results affects the selected multiple because companies with projected growth typically command higher multiples. To predict future results, analysts consider historical growth rates to extrapolate into the future. They also review the subject company's cost structure, noting which costs are fixed and which costs are variable. Fixed costs do not fluctuate with sales volume in the short term (e.g., rent, certain staff salaries, and marketing expenses). Variable costs, however, fluctuate with sales volume (e.g., raw materials, seasonal employee expenses, and packaging). A company's cost structure has a direct result on projected future profitability. The higher the percentage of fixed costs, the more sensitive profitability is to revenue fluctuations.

Comparing subject company results to industry benchmarks allows the analyst to ascertain whether trend analysis patterns are specific to the subject company or are present industry-wide. If the identified patterns are industry-wide, then their impact on value is already reflected in the indicated multiples. Therefore, the analyst does not need to further adjust the selected multiple. However, if the identified patterns are specific to the company, then an adjustments are often necessary. Consider the following hypothetical example.

An analyst is valuing a real estate brokerage firm as of December 31, 2011. While performing a trend analysis, the analyst notes a sudden decrease in revenue and profits in 2008 and 2009, followed by a period of recovery. Because volatility increases risk, the analyst considers adjusting the multiples developed in the market approach. However, after comparing the subject company performance to industry benchmark growth rates, the analyst notes the sudden decrease in revenue and profits was industry-wide, the result of the decline in real estate values and activity during the economic recession. Accordingly, the risk associated with this occurrence is already reflected in the multiples developed in the market approach. If the analyst makes another adjustment to the multiples, it would incorrectly double-count the reduction in value. Therefore, the analyst should not adjust the multiple because the subject company's performance aligns with industry benchmarks.

The concept in the above example is equally applicable to the impact of projected growth on the selected multiple. If the trend analysis indicates a trajectory of growth for the subject company, an adjustment to the multiple is warranted if this growth exceeds (or is exceeded by) industry benchmarks.

CHAPTER 5
Common Size Analysis

WHAT IS IT?

The second component of a rigorous financial statement analysis is a common size analysis (also called a vertical analysis). In a common size analysis, the analyst:

1. divides each income statement line item by total revenue to indicate a percentage of revenue

2. divides each balance sheet line item by total assets to indicate a percentage of total assets

A common size analysis allows analysts to compare (1) financial statement line items from year to year while normalizing company growth/decline, and (2) the subject company to other companies that are larger or smaller.

Industry benchmarks provide a useful frame of reference in a common size analysis. In the balance sheet, analysts use industry benchmarks to identify unusual levels of cash, debt, and other items. In the income statement, analysts can compare subject company profitability and expense items to industry benchmarks.

A benchmarked common size analysis allows analysts to answer questions such as the following:

- Is the subject company overleveraged?
- Is the company spending more on advertising than its competitors?
- Is the subject company's workforce really getting more expensive and cutting into the bottom line, or is it just expanding as revenue increases?

Each of these factors, and many others, can affect the selected multiple.

CHAPTER 6
Ratio Analysis

In a ratio analysis—the third component of a financial statement analysis—analysts use the relationships between different financial statement line items to gauge the financial health and stability of a company. For example, analysts compare current assets to current liabilities (the current ratio) to gauge a company's ability to pay liabilities as they come due. Analysts then analyze fluctuations in the current ratio over time and compare this ratio to industry benchmarks. If the subject company outperforms or underperforms industry benchmark ratios, an adjustment to the multiple may be necessary.

Analysts primarily look at ratios in four areas:

1. Liquidity, or the short-term ability of a company to meet its maturing obligations
2. Coverage/leverage, or the degree of protection for long-term creditors and investors and the margin by which certain obligations of a company can be met
3. Profitability, or the company's ability to convert sales dollars into income.
4. Operating ratios, which measure the efficiency and productivity of a company

To ensure an accurate comparison, analysts should calculate ratios in the same manner as industry benchmarks. A simplified ratio analysis is presented below.

Ratio Analysis

	Subject Company 2018	Industry Benchmark 2018
Liquidity/Solvency		
Quick Ratio	1.25	1.06
Current Ratio	2.00	1.75
Coverage/Leverage		
Interest Coverage Ratio (EBITDA/Interest Expense)	25.70	29.60
Long-Term Debt to Total Assets	0.25	0.18
Profitability		
Gross Margin	12.0%	14.7%
Operating Margin	4.5%	5.6%
Operating Efficiency		
Sales to Total Assets	2.87	2.23
Sales to Fixed Assets	21.65	18.17

An efficient way to compare subject company performance to an industry benchmark is through the use of an index. In a ratio comparison index, the analyst divides the subject company ratio by the industry benchmark. A value greater than one indicates that the subject company ratio exceeds the industry benchmark; a value less than one indicates that the subject company ratio is less than the industry benchmark. Below is an example of a ratio comparison index.

Index of Company Ratios to Industry Benchmarks	
	2018
Liquidity/Solvency	
Quick Ratio	1.18
Current Ratio	1.14
Coverage/Leverage Ratios	
Interest Coverage Ratio (EBITDA/Interest Expense)	0.87
Long-Term Debt to Total Assets	1.38
Profitability	
Gross Margin	0.82
Operating Margin	0.81
Operating Efficiency	
Sales to Total Assets	1.29
Sales to Fixed Assets	1.19

The comparison of ratios presented here could be used to gauge the subject company's health relative to the industry. If the subject company's performance is different from the industry, an adjustment to the multiple may be necessary.

In summary, comparing the subject company to industry benchmarks in the three parts of a financial statement analysis (trend analysis, common size analysis, and ratio analysis) arms analysts with the data necessary to estimate an accurate, fair multiple.

Conclusion

Multiples used to value businesses for merger and acquisition purposes vary considerably. The parties involved in a transaction often have opposing views on where, within a range, to select a multiple to value the subject company. Selection of a multiple is often the largest hurdle in their ability to reach agreement and complete the transaction. By comparing subject company performance to industry benchmarks, an analyst can identify and justify a credible valuation multiple. A well-supported multiple establishes a secure negotiating position, increasing the likelihood of a successful transaction.

Industry benchmarks are often derived directly from guideline public companies and guideline completed transactions, or from databases of industry benchmarks. A rigorous financial statement analysis compares the subject company financial performance to industry benchmarks through trend analyses, common size analyses, and ratio analyses. The methods outlined in this discussion establish defensible, data-driven multiples for merger and acquisition purposes.

LEARN MORE FROM OUR EXPERT

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