

Private Equity Valuation: A Case Study

by  
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## Abstract

This thesis presents a case study of a financial valuation conducted on a large, privately owned corporation. Accurate valuations in the business world are one of the most integral aspects to the livelihood of any company. The concept of valuation seems simple: a single price that serves as the economic value of a company. With the current state of the business world approaching that of an efficient market, where all information is given to all players in real time, the most elementary valuation of a *public* company can be as easy as looking at that company's market capitalization. However, with the extreme lack of information that exists with *private* firms, the process of valuing these companies is quite difficult, including as much art as science. For that reason, this project was undertaken to study and learn the various intricacies of completing private equity valuations.

## Introduction

Valuations in the business world are of the utmost importance to stakeholders in a variety of positions. Valuations are discussed arbitrarily on a regular basis, but most never truly understand the methods valuation experts use to determine the dollar amounts of value for firms ranging from small businesses to large multi-national corporations. However, these values are the deciding factor in many of the most critical junctures in a firm's lifecycle. Some of the more important of these junctures include preparing for a transaction such as a sale or initial public offering, when one or more owners decides to exit the company, determining tax obligations, attracting external funding, etc. (Dellinger, 2010). While both private and public companies rely on valuations for a number of reasons, the methods behind each are theoretically similar, but vary greatly in application. Private companies are widely known to present a unique set of obstacles compared to that of their public counterparts (Morris, 2015). In fact, a paper published in the *Northwestern Journal of International Law and Business* lists some of these appropriate observations on the private equity valuation process:

First, it must be noted that valuing non-listed firms is highly complex and more of an art than a science, especially in an early-stage environment. Second, this does not explain observed reporting biases that systematically tend to be in the direction of overstating (e.g., due to a delay in appropriate write-downs) rather than understating values. Third, in the last decade or so we have seen a larger number of industry guidelines aimed at providing non-mandatory standards for the valuation and disclosure of PE investments (Cumming, Gill, & Walz, 2009).

For these reasons, we have concluded that a privately held corporation would be suitable case study material. We have conducted an actual valuation with the end result of obtaining a single dollar amount to serve as an economic value of the subject company.

At the crux of the difficulty in valuing a private company is the fact that a fully objective valuation is impossible to achieve (Dellinger, 2010). However, one of the few standards in valuation is that whether public or private, there are three widely utilized approaches for business valuation: the Market Approach, Income Approach, and Asset-Based Approach. Each method has its own individual strengths and weaknesses. As such, current *generally* accepted valuation standards<sup>1</sup> require application of more than one approach to be at least considered when valuing a privately held company. The concluded value is based on a weighted average of the values reached by each approach. These weights are based on the perceived effectiveness and overall appropriateness of each technique for valuing the subject company. Another factor in assigning the weights is that each is partially based on the subjective opinion of the valuation expert. While this is one of the most frustrating realities that both owners and potential investors must address, it is one of the key elements that make the valuation an interesting practice to analyze and dissect for purposes of this thesis.

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<sup>1</sup> The Internal Revenue Service determines these standards.

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## I: Background

The subject company used for this valuation is DEF construction, a Washington based road construction company incorporated as an S-corporation. There are currently 60,000 shares of common stock outstanding, with 6 shareholders each owning 16.67% (10,000 shares each) of the company. The concluded valuation is the value of a minority share of the corporation, as of December 31, 2013. This minority share valuation represents a situation where the owners would like to value their respective individual ownership in the company.

The company provides products and services to both public and private customers. Its construction service represents 70% of its sales, and product sales make up the remaining 30%. In the past, 60% of the Company's revenue was created from public projects, while the remaining 40% have come from private contracts. It is important to point out that public sector contracts always generate a lower profit margin than those from the private sector. This is caused by the lowest bid system that governments are required to use to award these contracts, whereas private projects are awarded based on other factors, such as client relationships and established reputations. This decreasing profit margin further complicates the risk level of the company and will affect the valuation provided by the income method. To summarize, 60,000 shares, split evenly among six owners, represent the company's equity position. Overall, the company provides a valuable laboratory for a case study in the valuation of a private firm.

For the purpose of this valuation, the income and market approaches will be used. Upon completion, each approach will be weighted according to its individual perceived

value and reliability to the accuracy of the true valuation. The goal of this thesis is to evaluate the entirety of a private company and place a single economic value to represent both the current and future cash flows the business will create throughout its lifecycle.

The macroeconomic factors that affect firm valuations are similar to those that affect a variety of other business transactions. Some of these include national and state gross domestic product (GDP), Consumer Price Index (CPI), and the national unemployment rate. The annual U.S. GDP growth rate hovered around 2% over the 3 years prior to the valuation, while the Washington State GDP averaged about 2.3%. The CPI averaged about 3.0 in 2013, while national unemployment dropped to around 7%. Washington state issued 32,962 new building permits in 2013 as it saw its unemployment mirror the national rate at about 7%. For the years 2013 – 2015, Washington's state budget totals \$81.8 billion, of which \$8.9 billion is allocated to the transportation budget. It should also be noted that during the recession, firms had to decrease the dollar amount of their bids to stay competitive. This information is used as the basis of our risk calculation for the valuation.

One preliminary conclusion that was made is the importance of discounts for minority ownership and a lack of marketability. The minority discount refers to the fact that a valuation should be *discounted by a determined percentage* for the reality that any amount of shares purchased will not be enough to gain a controlling interest in the company. According to Aswath Damodaran, NYU Stern School of Business Professor and one of the leading experts in the valuation community:

There is clear evidence that practitioners apply control premiums in private company transactions, ranging from 15 to 20% for a majority stake; conversely, this translates into an equivalent discount for a minority stake. The origins of these premiums are mysterious and there have been relatively few attempts to back up these values because it is difficult to estimate the precise extent of the minority discount in private transactions since there is no market value to compare the transaction price to (Damodaran, 2005).

Furthermore, Damodaran goes on to state, “The minority discount should vary inversely with management quality: If the minority discount reflects the value of control (or lack thereof), it should be larger for firms that are poorly run and smaller for well-run firms” (Damodaran, 2005). We chose a discount of 15%, based on the fact that the company was successfully steered out of the recent recession by the same family management team that currently runs the company. We interpreted this as an impressive sign of positive controlling leadership, and since Damodaran suggests the discount should vary inversely with management quality, we assigned the lowest markdown available.

The next major discount we analyzed is the discount for lack of marketability. This term refers to the potential inability to market one’s ownership in a piece of private equity. In another one of Damodaran’s papers, *Marketability and Value: Measuring the Illiquidity Discount*, he references several different sources, including recent court decisions, which suggest a lack of marketability discount of up to 20%. We utilized an industry tool, the FMV Discount for Lack of Marketability Calculator, to arrive at a discount of 16.60%. This value falls right in line with the research papers of Damodaran

previously referenced. The process of selecting and researching these two discounts is extremely important because of the magnitude of change they can have on the valuation.

## II: Income Approach

The first valuation method we utilized was the Income Approach. The Income Approach is one of the more widely used and accepted methods, especially when dealing with private companies. Unlike the Market Approach, this method is not *largely* based on outside, i.e. market based, financial data. Instead, the income approaches aggregates a variety of company-specific future free cash flows and then discounts them to a present value (Arnold & North, 2011). This is the same method many investors use when considering the financial risk and return of publicly traded financial instruments such as stocks or bonds, and for real estate. However, when this method is used to find the value of an entire company, it is discernibly more complex especially due to the privately held company controls (lack of transparency) over financial data. The Income Approach is generally used in finding the value of an appraisal subject from the viewpoint of the investor. It uses the earnings power of the firm being appraised to find a single monetary value (Trugman, 2012).

This method includes the use of a forecasted future revenue stream. One of the key foundations of finance is that future cash flows are not worth as much today as they are when earned. That is, a discount should be applied to obtain a reasonable value in the present for cash flows that will be realized in the future. We used the Weighted Average Cost of Capital (WACC) for the discounting factor. The WACC is the cost of financing assets that are used to carry out the company's operations. For this reason, it is appropriate to use this rate to discount the company's future free cash flows. We used the following equation to determine the WACC:

$$WACC = [D/V * K_d * (1 - T)] + (E/V * K_e)$$

D = Debt      V = Total Value      K<sub>d</sub> = Cost of Debt      T = Tax Rate  
E = Equity      K<sub>e</sub> = Cost of Equity

The process to determine the appropriate WACC is quite complex due to the lack of market-driven information that usually supplements this calculation for publicly traded firms. We used the following steps to determine the subject company's WACC. First, we used the Capital Asset Pricing Model (CAPM) to calculate DEF's cost of equity (k<sub>e</sub>). We then used an iterative process to determine the capital structure of the company. We completed eight iterations, eventually arriving at a debt weight of 15.10% and an equity weight of 84.90%. After entering these values into the cost of capital formula, we calculated a final WACC of 12.03%. This rate was then reduced by the growth rate to arrive at the residual capitalization rate. The residual capitalization rate is the terminal growth rate applied to the company's future cash flows past the projection period (five years) into an indefinite amount of time. The growth rate for the company was predicted to be 4.30%. After reducing the WACC by this residual growth rate, the final residual capitalization rate was calculated as 7.73%

The future cash flow streams we factored into our calculations were unlevered, or calculated excluding the impact of debt. This was done to capture the effects of operations on value, not the effect of DEF's financing, i.e. debt. Specifically, we used free cash flows projected out five years (2014-2018). Since years 2015 – 2018 were projected to generate cash flows between \$5 – \$7 million, it is important to address the

large outlier found in 2014. The \$15 million represents a large backlog of projects the company maintained throughout the recession, that it scheduled it undertake in 2014. We conducted a discounted cash flow analysis to calculate both the present value of the next five years as well as the residual; this captures all cash flow beyond the year 2018. This analysis is presented in Figure 1 below.

Income Approach - Discounted Cash Flow Analysis - (\$000)

Forecast Year Ending December 31	Projected 2014	Projected 2015	Projected 2016	Projected 2017	Projected 2018	Residual
Free Cash Flow (Debt Free)	15,175.54	5,225.69	5,684.67	6,341.53	6,767.30	7,510.42
Residual Capitalization Rate						7.73%
Future Value of Free Cash Flows	15,175.54	5,225.69	5,684.67	6,341.53	6,767.30	97,187.16
Number of Periods Deferred	1	2	3	4	5	5
Present Value Factor	89.26%	79.68%	71.13%	63.49%	56.67%	56.67%
Present Value of Free Cash Flows	13,546.23	4,163.82	4,043.22	4,026.16	3,835.18	55,078.23

Figure 1: Discounted Cash Flow Analysis

The total present value of future cash flows 2014-2018 was calculated to be \$29.6 million. We added to this the present value of all residual cash flows, \$55.1 million, to arrive at a total enterprise value of \$84.6 million.

The next step was to adjust this value for a few different financial line items. We removed distributions payable, environmental liability, and interest-bearing debt, then added non-operating assets, to arrive a total equity value of \$77.4 million. These items were removed because they are not considered part of the *normal operating* nature of the business. However, non-operating assets are added in because they are owned by DEF and have value. The next step was to apply our minority discount and the non-marketability discount, to reach a total income approach value of \$54.9 million. These calculations are presented in Figure 2.

<b>Discounted Cash Flow Summary</b>		
Present Value of FY 2014-2018 Free Cash Flows		29,614.61
Present Value of Residual		55,078.23
Indicated Total Enterprise Value		<u>84,692.84</u>
Less: Distributions Payable		6,942.00
Less: Environmental Liability		2,000.00
Less: Interest Bearing Debt		10,645.00
Add: Non-Operating Assets (Majority Interest)		12,285.91
Indicated Total Equity Value		<u>77,391.75</u>
Minority Discount @	15.00%	85%
Indicated Total Equity Value (Minority Interest)		<u>65,782.99</u>
Non-Marketability Discount @	16.60%	83%
<b>Concluded Value - Income Approach Method</b>		<b><u>54,863.01</u></b>

Figure 2: Discounted Cash Flow Summary and Value Statement



### III: Market Approach

The next valuation method we utilized was the Market Approach. According to Shannon Pratt, there are two different forms of this approach. The first is the guideline publicly traded company method or Public Company Analysis Approach. This method uses various financial data from publicly traded companies in the same industry as the subject company to determine value (Dellinger 2010). These data include, but are not limited to, financial ratios, accounting statements, share price, prior valuations<sup>2</sup>, etc. for comparison and are then scaled to the subject company in order to arrive at a value.

The public company approach is rooted in the theory of economic competition and market equilibrium. That is, investors will pay the same or close to the same for comparable items assuming that capital markets are efficient. The difficulty with this approach lies in the amount of comparable data that can be ascertained to compare to the subject company. This data must be gathered from a list of matched publicly traded companies that closely resemble the subject company. Ideally, one would like to attain this comparable data from a list of similar privately held companies because the comparison would be stronger. However, the market for privately held firms is not as efficient, with respect to publicly available information, and the data needed to conduct an accurate valuation does not exist for privately held companies. Overall, analyzing publicly traded companies creates a challenge during the valuation process because these companies are distinctively different from their private counterparts (Sharma, 2012). However, the technique is used often due to the lack of a superior alternative.

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<sup>2</sup> It is important to note that company valuations change across different time periods due to both changes to the company and across capital markets.

The second form of the market approach is the mergers and acquisitions (M&A) method, or M&A Transactions Analysis Approach. The M&A method uses indicated values, in the form of financial and market ratios, determined by the selling prices of a list comparable companies established by recent M&A transactions. The ratios are applied to the subject company's financial base ratios to arrive at monetary values that are then weighted according to their perceived value. The resulting number is the indicated equity value of the company.

### III.I: Public Company Analysis

For the Public Company Analysis form of the Market Approach, we used SIC code 1611 to establish a list of publically traded companies similar to DEF Construction. We used an SGPTL (size, growth, profit, turnover, leverage) Analysis to develop adjusted trading multiples. The pricing multiple we used was the Price to Earnings ratio (P/E), which is the company stock price over earnings per share. We used two total enterprise value multiples, TEV/EBITDA and TEV/EBIT. The resulting ratio analysis is seen below in Figure 3.

<b>Market Approach - Public Company Analysis (\$000)</b>	<b>Adjusted Average Valuation Ratio</b>	<b>Number of Ratios</b>	<b>Subject Company Financial Basis</b>	<b>Indicated Value</b>	<b>Subtract Debt</b>	<b>Indicated Equity Value</b>	<b>Weight</b>
<b>Valuation Ratios</b>							
<b>Total Equity Multiples</b>							
Price to Earnings (LTM)	9.2x	5	5,452	49,938	NA	49,938	1/3
<b>TEV Multiples</b>							
TEV/EBITDA (LTM)	9.1x	5	14,589	133,102	10,179	122,923	1/3
TEV/EBIT LTM)	16.3x	5	8,534	139,363	10,179	129,184	1/3

Figure 3: Public Company Ratio Analysis and Value Statement

All three of these ratios were weighted equally, to arrive at an Indicated Equity Value of \$100.6 million. Similar to the Income Approach, we removed and added back several line items as seen in the figure below to arrive at an Indicated Total Equity Value of \$129.5 million. Our selected Minority and Non-Marketability Discount were then applied to arrive at a Public Company Analysis Concluded Value of \$91.8 million.

<b>Indicated Equity Value (\$000)</b>			100,682
Add: Cash			+ 25,475
Less: Distributions Payable			- 6,942
Less: Environmental Liability			- 2,000
Add: Non-Operating Assets			+ 12,286
Indicated Total Equity Value			<u>129,501</u>
Minority Discount	15%		x <u>85%</u>
Indicated Total Equity Value			+ 110,076
Non-Marketability Discount	16.6%		x <u>83.40%</u>
<b>Concluded Value - Public Company Analysis</b>			<u><u>91,803</u></u>

Figure 4: Public Company Analysis Value Statement

### III.II: Mergers & Acquisitions Method

For the Mergers and Acquisitions form of the Market Approach, we again utilized SIC code 1611, but this time to compile a list of comparable firms identified from past merger and acquisition transactions. We identified seven recent acquisitions within five years of the valuation date, 2013. Because some of these transactions included private companies, we could not compile all three ratios, as used in the Public Company Approach, for all seven companies. To supplement the missing ratios for some companies, we added another ratio, TEV/Total Revenue (see Appendix C). Median values for each of the four ratios were used, and each was weighted equally (25%). Using this approach, we arrived at an Indicated Equity Value of \$32.3 million. As before, the financial line items as seen in the following exhibit were added back, to arrive at an indicated total equity value of \$61.1 million. After applying our chosen Minority and Non-Marketability discounts, we found a Concluded M&A Approach value of \$43.3 million.

<b>Market Approach - M&amp;A Transactions Analysis (\$000)</b>	<b>Adjusted Average Valuation Ratio</b>	<b>Subject Company Financial Basis</b>	<b>Indicated Value</b>	<b>Subtract Debt</b>	<b>Indicated Equity Value</b>	<b>Weight</b>
<b>Total Equity Multiples</b>						
Equity Value to Net Income (LTM)	2.64	5,569	14,701	N/A	14,701	25%
<b>Total Enterprise Value Multiples</b>						
TEV / Total Revenue (LTM)	0.381	167,844	63,949	10,645	53,304	25%
TEV / EBITDA (LTM)	3.215	14,589	46,902	10,645	36,257	25%
TEV / EBIT (LTM)	4.15	8,534	35,418	10,645	24,773	25%
<b>Indicated Equity Value</b>					32,259	
Add: Cash				+	25,475	
Less: Distributions Payable				-	6,942	
Less: Environmental Liability				-	2,000	
Add: Non-Operating Assets				+	<u>12,286</u>	
Indicated Total Equity Value					61,078	
Minority Discount @	15%			x	<u>85%</u>	
Indicated Total Equity Value				+	51,916	
Non-Marketability Discount @	16.6%			x	<u>83.40%</u>	
<b>Concluded Value - M&amp;A Transactions Analysis</b>					<u><u>43,298</u></u>	

Figure 5: M&A Ratio Summary and Value Statement

#### IV: Asset-Based Approach

Finally, the asset-based approach is the least commonly used method of valuation. The general equation for this approach is simply the fair-value *cost* of all assets, minus liabilities and liquidation/selling expenses. This approach estimates a value by calculating the price of the company if it were to be completely liquidated. Therefore, this method is almost exclusively used when the subject company is to be liquidated (Modca, 2006). Overall, this method fails to capture the value of firms because it largely ignores the future cash flow generating potential of the firm. For this reason, coupled with the complete absence of current fair market values of the company's assets, their depreciation amounts, etc., we determined this approach should be excluded from our valuation of DEF Road Construction.

## V: Conclusions

Our final valuation is made up of the weighting of three separate valuations: the Income Approach and the two different forms of the Market Approach (Public Company Analysis and M&A Transactions Analysis). Throughout this case study into private company valuation, we discovered a multitude of obstacles and complications stemming from the fact that the company being valued was not publicly traded. Much of the research we utilized throughout this project supports the notion asserted at the beginning of this report that private company valuation is just as much an art form as it is a scientific process.

Private company valuation is a unique field in that there are no hard-and-fast rules. In fact, it is widely accepted that the process is extremely subjective in nature. For this reason, a multitude of firms exist and thrive on their respective abilities to operate and produce valuations as least subjective as possible. With this objectivity in mind, we weighted the various valuation approaches based on a few different factors. The Income Approach received an 80% weight based on the availability of accurate cash flow projections and expected growth rates provided by the CPA firm supplying the case. These cash flow projections gave us the ability to conduct a discounted cash flow analysis that dealt directly with DEF Road Construction, the specimen.

The Public Company Analysis received a 0% weight for a few different reasons. One, throughout this project we became even more aware of the huge disconnect in the process of valuing public companies as opposed to private. While the Public Company Analysis is a generally accepted method to private equity valuation, we concluded its reliability in this case to be extremely low, as we were unable to identify a strong set of



guideline companies. The final value from the Public Company Analysis was nearly double that of the Income Approach. With our assumption of the reliability of the Income Approach in mind, we immediately detected that this method may not be completely accurate. Before arriving at a conclusion, we compared the other Market Approach, the M&A Transactions Analysis. We found a final value of \$43.3 million, and while this amount was over ten million dollars less than our Income Approach number, it immediately was clear this was the more reliable Market Approach method. For this reason, we applied a 20% weight to the M&A Approach. As evidenced below in Figure 6, our final concluded value of DEF Road Construction was \$52,549,979. This equates to a price of \$875.83 per share the 60,000 shares outstanding.

<b>DEF Value Summary</b>	<u>Indicated Value</u>	<u>Weight</u>
<b>Concluded Income Approach Value</b>	<b>\$54,863,011</b>	<b>80%</b>
<b>Concluded Market Approach Value - Public Company</b>	<b>\$91,803,009</b>	<b>0%</b>
<b>Concluded Market Approach Value - M&amp;A Transactions</b>	<b>\$43,297,852</b>	<b>20%</b>
<b>Concluded Value</b>	<b>\$52,549,979</b>	<b>100%</b>
Divided by Number of Common Shares	÷ <u>60,000</u>	
<b>Value Per Common Share</b>	<b>\$875.83</b>	

Figure 6: Final Value Summary

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## Appendix A

### Discount & Capitalization Rate Analysis

#### Weighted Average Cost of Capital (WACC)

Where:

$$WACC = ( D/V * K_d * (1-T) ) + ( E/V * K_e )$$

WACC = weighted average cost of capital

D/V = ratio of interest bearing debt capital to total invest capital

E/V = ratio of equity capital to total invested capital (= 1 - D/V)

K<sub>d</sub> = cost of interest bearing debt capital

K<sub>e</sub> = levered cost of equity capital (see CAPM equation)

T = marginal tax rate

#### Capital Asset Pricing Model (CAPM)

$$K_e = R_f + ( B_l * R_e ) + R_s + R_c \quad B_l = B_u * ( 1.00 + ( (1-T) * D/E ) )$$

K<sub>e</sub> = levered cost of capital

B<sub>l</sub> = levered beta

R<sub>f</sub> = risk free rate

B<sub>u</sub> = unlevered beta

R<sub>e</sub> = equity risk premium

R<sub>s</sub> = small stock risk premium (Size Premium)

R<sub>c</sub> = subject company risk premium

D/E = ratio of interest bearing debt capital to equity capital

#### Capitalization Rate

$$C = ( WACC - G )$$

WACC 12.03%

G 4.30%

Where:

C = capitalization rate

WACC = weighted average cost of capital

G = growth rate into

perpetuity

$$C = ( 12.03\% - 4.30\% ) = \underline{\underline{7.73\%}}$$

## Appendix B

### Public Company Analysis

#### Trading Multiples:

	<b>Ticker</b>	<b>Name</b>	<b>Price to Earnings 2013</b>	<b>TEV/EBITDA 2013</b>	<b>TEV/EBIT 2013</b>
1	MLM	Martin Marietta Materials	42.0	16.5x	34.0x
2	USCR	U.S. Concrete	-10.8	10.7x	21.7x
3	TPC	Tutor Perini	12.2	7.4x	9.4x
5	ASTE	Astec Industries	19.9	10.5x	14.8x
6	STRL	Sterling Construction	-10.1	-38.7x	-9.8x

<b>Count</b>	5	5	5
<b>Max</b>	42.0	16.5	34.0
<b>Min</b>	-10.8	-38.7	-9.8
<b>Median</b>	12.2	10.5	14.8
<b>Mean</b>	10.6	1.3	14.0

#### Adjusted Trading Multiples

	<b>Ticker</b>	<b>Name</b>	<b>Price to Earnings 2013</b>	<b>TEV/EBITDA 2013</b>	<b>TEV/EBIT 2013</b>
1	MLM	Martin Marietta Materials	37.80	14.8x	30.6x
2	USCR	U.S. Concrete	-8.64	9.12	18.40
3	TPC	Tutor Perini	9.16	5.5x	7.1x
5	ASTE	Astec Industries	21.88	11.5x	16.3x
6	STRL	Sterling Construction	-7.08	-27.08	-6.84

<b>Count</b>	5	5	5
<b>Max</b>	37.8	14.8	30.6
<b>Min</b>	-8.6	-27.1	-6.8
<b>Median</b>	9.2	9.1	16.3
<b>Mean</b>	10.6	2.8	13.1

## Appendix C

### M&A Transactions Ratio Summary

Acquirer	Target	TEV	Total Equity to Net Income	TEV to Revenue	TEV to EBITDA	TEV to EBIT
<b><u>Pratt's Stats Public Company Database</u></b>						
Insight Equity	Meadow Valley Corporation	56.50	NA	0.3x	NA	10.1x
<b><u>Pratt's Stats Private Company Database</u></b>						
Private - unlisted	James Construction Group, LLC		1.8x	0.3x	4.2x	4.2x
<b><u>Capital IQ M&amp;A Database</u></b>						
Sterling Construction Co. Inc. (NasdaqGS:STRL)	Ralph L. Wadsworth Construction Company, Inc.	54.92	2.6x	0.4x	1.8x	2.0x
Primoris Services Corporation (NasdaqGS:PRIM)	James Construction Group, LLC	83.79	4.2x	0.2x	2.3x	2.8x
Dragados Construction USA, Inc.	Pulice Construction, Inc.	113.90	NA	0.5x	NA	6.1x
Alexander & Baldwin, Inc. (NYSE:ALEX)	Grace Pacific Corporation	277.00	NA	1.3x	7.9x	NA
J. Banicki Construction, Inc.	Ralph L. Wadsworth Construction Company, Inc.			0.8x		
		Count	3	5	3	5
		Max	4.2x	0.5x	4.2x	10.1x
		Min	1.8x	0.2x	1.8x	2.0x
		<b>Median</b>	<b>2.6x</b>	<b>0.4x</b>	<b>3.2x</b>	<b>4.2x</b>
		Mean	2.9x	0.3x	2.7x	5.0x

## Appendix D: Definition of Terms

**Capitalization rate** – Expected discount rate to apply to a company’s future income stream, calculated as:  $WACC - \text{growth rate}$

**Capital Asset Pricing Model (CAPM)** – A model for describing the relationship between risk and expected return, can be used to calculate return on equity

**Common stock outstanding** – The amount of shares currently held by all shareholders

**Consumer Price Index (CPI)** – A measure of the average change in prices over a certain time for a basket of consumer goods

**Controlling interest** – An ownership interest in a company that equates to over 50%, enough to control company decisions

**Distributions payable** – Similar to dividends; excess profit that is set to be paid to shareholders

**Gross Domestic product (GDP)** – The total dollar value of all the goods and services generated in particular country over a certain period of time, recognized as the indication of the size of an economy

**EBIT** – Earnings Before Interest and Taxes, an indication of profitability

**EBITDA** – Earnings Before Interest, Taxes, Depreciation, and Amortization, where depreciation is the reduction in value of an asset over time and amortization is the payments of intangible assets over a period of time

**Efficient Market Hypothesis** – An investment theory that states all stock prices reflect true and fair market value all the time

**Environmental liability** – Various environmental fees that may be incurred upon the purchase of particular assets

**Interest-bearing debt** – Liabilities requiring the payments of interest

**Lack of marketability** – The potential inability to sell the stock of a firm

**Market capitalization** – The total market value of a public company, equal to the total number of outstanding shares times current share price

**Market equilibrium** – The effect of supply equaling demand

**Non-operating assets** – Assets not used in the day-to-day operations of a company

**Price to Earnings ratio** – The current stock price over earnings per share of a company

**S-corporation** – A special type of corporation that avoids the downsides of double taxation by not paying corporate tax

**SIC code** – Standard Industrial Classification, a system for classifying industries by various four-digit codes

**TEV** – Total Enterprise Value, calculated as:  $\text{Market Capitalization} + \text{Total Debt} + \text{Total Preferred Equity} + \text{Minority Interest} - \text{Cash and Short-Term Investment}$

**Valuation** – The process of determining a company's worth

**WACC** - Weighted Average Cost of Capital, the average rate a firm expects to pay to finance its assets