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Willamette Valley Vineyards: An Undervalued Company Found Under The Grapes

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Summary

- WVVI's Altman Z-Score of 4.166 is indicative of a company in a strong financial position with a low probability of bankruptcy.
- TTM Net Income gains of 77%, revenue gains of 22%, and a net margin of 14% (40% increase) showcase WVVI's outstanding performance.
- ROE, ROA and ROIC increased 59.83%, 63.85% and 60.25%, respectively, indicating an extreme uptrend in profitability.

Willamette Valley Vineyards (NASDAQ:[WVVI](#)) is a leading producer of an assortment of different wines located in Turner, Oregon. The brand's primary flagship seller is its Pinot Noir, averaging a selling price of \$22 to \$100 per bottle. Before we dig deep into the financial aspects of this company, let's take a look at the underlying risk assumptions characterized by the fundamental analysis tools Altman Z-Score and Pitroski F-Score to initially determine if this company is a suitable, safe investment.

Altman Z-Score:

As you know, the Altman Z-Score is an analytical tool that uses specific financial statistics to determine the analyzed company's likelihood of going bankrupt within 2 years of the analysis. In the initial test in 1968, the Z-Score proved to be 72% accurate in determining bankruptcy within 2 years, while in more recent years, it's proven to be 80-90% accurate. Whether or not these statistics are coincidental or not, it will not be the only tool we're using, so conducting this analysis will not provide useless as it'll give us a deeper understanding of the financial position of the company.

The formula: $Z\text{-Score} = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.99X_5$

Where:

$X_1 = \text{Working Capital/Total Assets}$

$X_2 = \text{Retained Earnings/Total Assets}$

$X_3 = \text{EBIT/Total Assets}$

$X_4 = \text{Market Value of Equity/Book Value of Total Liabilities}$

$X_5 = \text{Sales/Total Assets}$

For the Altman Z-Score, I want to use as up-to-date financials as possible, so I will be using TTM numbers.

$$X_1 = (11.554 - 1.715) / 30.299 = 0.3247$$

$$X_2 = 12.903 / 30.299 = 0.4259$$

$$X_3 = 2.861 / 30.299 = 0.0944$$

$$X_4 = 33.82 / 8.662 = 3.9044 \text{ (Biggest driver of Z-Score)}$$

$$X_5 = 16.097 / 30.299 = 0.5313$$

Finally, we have:

$$Z\text{-Score} = 1.2 * 0.3247 + 1.4 * 0.4259 + 3.3 * 0.0944 + 0.6 * 3.9044 + 0.99 * 0.5313 = \mathbf{4.166}$$

Z-Score < 1.81 is considered in the Distress Zone, and therefore highly likely for bankruptcy within the next two years, according to this analytical tool.

Z-Score in between 1.81 and 2.99 is considered in the Grey Zone, indicating that the stock's balance sheet and liquidity positions must be monitored carefully over the proceeding years.

Z-Score > 2.99 is considered in the Safe Zone, and, according to the Z-Score test, a strong investment in terms of a low probability of future bankruptcy.

So, in terms of the Altman Z-Score, WVVI is in a great financial position looking forward and should have no problems in terms of bankruptcy. To further evaluate the liquidity risk involved in the company, let's gauge the position of its balance sheet.

1Q15 current assets came in at 11.554M with current liabilities at 1.715M giving the company an outstanding current ratio of 6.74 compared to an industry median of 1.84. Also, let's take a look at the Company's debt-to-equity ratio to gauge if its growth is being driven primarily from increased leverage.

The current portion of long term debt (0.334) + LTD (5.087) / total equity (21.64) = 0.25, which over the past 5 years has been greatly consistent in this range. This is another indicator that the Company is in a good financial position looking forward, but just to be sure, we'll take one more look at another stock screener to determine if this is a suitable long-term investment.

Piotroski's F-Score:

The next analytical tool that I want to use on this company to determine its risk profile and fundamental growth is the Piotroski F-Score. Essentially, the F-Score attempts to identify the healthiest companies in a basket of value stocks by applying certain accounting-based criteria. One point is awarded for each test that the stock passes, and 9 is the highest score. Piotroski typically begins his value-stock search with specific criteria in mind, and one of those is that the company must have a low price-to-book value. So first, let's evaluate WVVI's P/B ratio to determine if we should go further with the F-Score.

The P/B ratio is typically used to unearth growth companies selling at low-growth prices compared to its industry median. It's a gauge of the market's perception of the stock. The calculation is as follows:

$P/B = \text{Share price} / \text{Book value per share (SE/Shares Outstanding)}$.

Except, I do this a little differently. Instead of using the book value per share, I am going to use the tangible book value per share as it takes intangible assets out of the equation and helps us get closer to the baseline value of the company. Also, I will be using total diluted shares outstanding because by using dilution, I am snapshotting what the company's stock would look like if it had to immediately issue every share it had in stock options or convertible bonds.

Net tangible assets (30.299) (discovered that the company has no intangibles) / Diluted shares outstanding (4.957) = TVPS of 6.112

Current share price (6.95)/TVPS (6.112) = 1.137

So, we have a P/B ratio of 1.14 against an industry median of 2.01, which signifies that there is a potential for undervaluation from the market in this stock. The P/B is best when being analyzed for a company that is very asset intensive. Using the P/B ratio for a software giant, such as Microsoft, whose bulk asset value is derived from intellectual property isn't as efficient as opposed to a company with a lot of physical property such as WVVI. WVVI is extremely asset involved with property and equipment and inventory accounting for 24.992M (82%) of the 30.299M in total assets. That makes the P/B ratio reliable and useful in this case because the underlying numbers verify its authenticity.

Now that we've discovered a potentially undervalued company based on its P/B ratio, let's determine if it passes the Piotroski's F-Score test.

The first four criteria of the F-Score that we will look at account for the profitability of the company. We will evaluate the leverage, liquidity and source of funds of the company. As a side note, everything is evaluated in relation to last year's figures (except #4). Again, to get as accurate an analysis as possible, I will be using TTM numbers.

1) Positive net income: 2014-03 = 1.302 - 2015-03 = 2.301(1 Point)

2) Positive OCF: 2014-03 = 1.337 - 2015-03 = 3.683 (1 Point)

3) Higher ROA: 2014-03 = 4.73% - 2015-03 = 7.75% (1 Point)

4)CFO>NI: CFO = 3.683 - NI = 2.301 = (1 Point)

So far, WVVI has scored a 4/4 in terms of profitability. A great sign. Let's move on to points 5-7 that will look at the overall health of the balance sheet in terms of debt, and also discover the total change in number of shares outstanding.

5) Lower ratio of LTD-to-assets: 2014-03 = 0.1970 - 2015-03 = 0.1713 (1 Point)

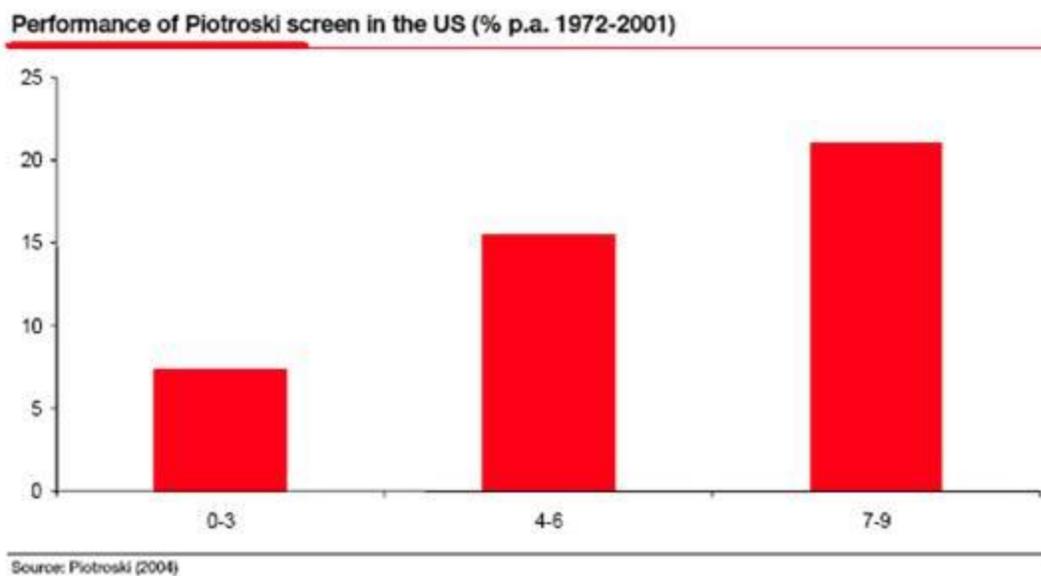
6)Higher current ratio: 2014-03 = 4.537 - 2015-03 = 6.74 (1 Point)

7) No new shares issued: 2014-03 = 4.840 - 2015-03 = 4.900 (0 Points) Since then, the company has increased its outstanding shares to 4.904.

8) Higher gross margin: 2014-03 = 57.94% - 2015-03 = 59.63% (1 Point)

9) Higher asset turnover ratio: 2014-03 = 0.5267 - 2015-03 = 0.5567 (1 Point)

All together, WVVI scores an outstanding 8 out of 9 on the Piotroski F-Score. The only area where this company score 0 points was in outstanding shares issued, and if you take a look at the actual amount of shares that were added to the total, it is an insignificant amount in terms of dilution.



The [chart above](#) is Piotroski's examination of the correlation between his F-Score and the percentage increase on an annual basis on US stocks over the period of 1972-2001. As shown, F-Scores in between 0-3 returned approximately 7.3% p.a. or -5.5% market adjusted; 4-6 returned approximately 15.5% p.a. or 3% market adjusted; and 7-9 returned approximately 21% p.a. or 7.8% market adjusted. This indicates that the F-Score has valid potential to be a valuable stock screener.

Evaluation using the Pitroski F-Score sheds light on many areas of the company's financial position. Let's take a look at the profitability of the company over a period of

time.



*Figures are TTM

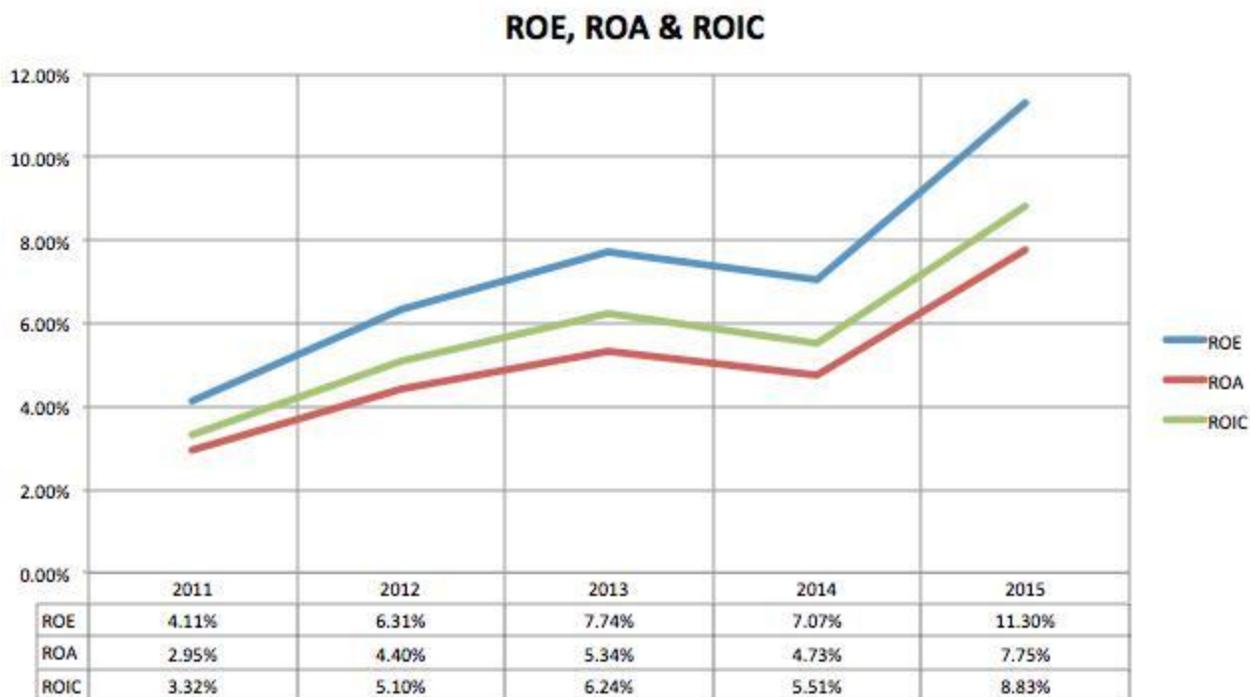
As you can initially see, there was a huge drop in revenue in 2012 due to a weak economy spurring weak wine demand. Even still, the company shrewdly managed its expenses during that time and actually posted a higher net income than in the prior year by 4%. This is a testament to the prudence of the management team, some of which have been with the company since inception. Since then, the company has rebounded beautifully in terms of revenue, steadily increasing its top line year in and out. So far, 2015 has been a great year for WVVI, posting TTM revenue growth of 22%, net income growth of 77%, and a total net profit margin of 14%. Currently, shareholders have generated share price increases of 12% over the last month, 17% YTD and 19% over the course of the fiscal year. I have much more reason to believe that this stock will surge much higher in the near future.

WVVI's P/E ratio is currently trading at 14.91, which is well below its 5-year average of 25.16. Since the beginning of the year, this ratio has slowly been rising to a more appropriate valuation for this stock. Now, I want to get a holistic view of the value of this company, so let's evaluate the PEG ratio, and see what it's telling us about this company.

The PEG ratio is used to give a more complete picture of a stock's valuation as opposed to just the P/E ratio. This is because through this ratio analysis, I will be using forward-looking earning projections to determine the stock's current valuation. The equation for the PEG ratio is as follows:

$$\text{PEG} = \text{P/E ratio} / \text{Annual EPS Growth}$$

I have calculated the P/E ratio as Share price (6.95)/EPS TTM (0.466) = 14.91. I have calculated and averaged the last 5 EPS earnings to generate a projected annual EPS growth rate of 40.46%. Given this, we can calculate the PEG ratio as $14.91 / 40.46 = 0.37$. Basically, according to Peter Lynch, WVVI's PEG ratio of 0.37 (<1) tells us that the Company's stock is undervalued and is trading below the line of its estimated growth rate. Considering the PEG ratio is so low, this also indicates the high probability of the stock price increasing more in line with its intrinsic valuation. According to market theory, a PEG ratio of one suggest theoretical equilibrium between the market value assigned to a given stock and the anticipated earnings growth. So, as we can see, trading at a historically, comparatively low P/E ratio and at an extremely low PEG ratio clearly indicates that WVVI is undervalued from a valuation standpoint.



*Data from YCharts

Considering we're all equity investors (I'm assuming), let's take a quick look at the Company's annual ROE. ROE looks at how efficiently WVVI is using its shareholders' equity at a certain point in time and represents the owners' interest in the business. With ROE, you want to see an

uptrend in this measurement to gauge the effectiveness of management's ability to use shareholders' money properly. Over a period of 5 years, shareholders' equity has increased from 15.57M to 21.19 at Dec 31, 14. Current SE is measured at 21.637, even higher than previously. In addition to the increase in SE, WVVI has seen consistent and sustainable increases in its ROE percentages over time and most notably the impressive 60% increase so far in 2015. At 11.30%, WVVI is 4.82% higher than the industry's average of 6.48%. Also, the majority of the ROE growth comes from a profitability standpoint as opposed to leverage (as shown above). Considering this company is asset-intensive, a suitable gauge of how its using those assets to generate value for its shareholders is its ROA. As indicated by the chart, ROA is also increasing at a steady and consistent pace. At 7.75%, WVVI's ROA is 4.56% higher than the industry's average of 3.19%. Over the past 5 years, WVVI has increased its total asset base over 42% and has still been able to increase its ROA concurrently with it. This is mainly due to the company's ability to manage expenses and post positive earnings consistently over this period of time. And finally, the company's ROIC. This is a perfect metric for assessing companies that must invest a large amount of capital such as WVVI. As we know, ROIC is best utilized when compared to the company's weighted-average cost of capital, WACC. If the ROIC is greater than the company's WACC, then the company is creating value for its shareholders. Below is my calculation for WVVI's WACC.

$$\text{WACC} = E/V * Re + D/V * Rd * (1-TC)$$

Where:

Re= Cost of equity

Rd= Cost of debt

E= MV of equity

D= MV of debt

V= E+D

E/V= % of equity financing

D/V=% of debt financing

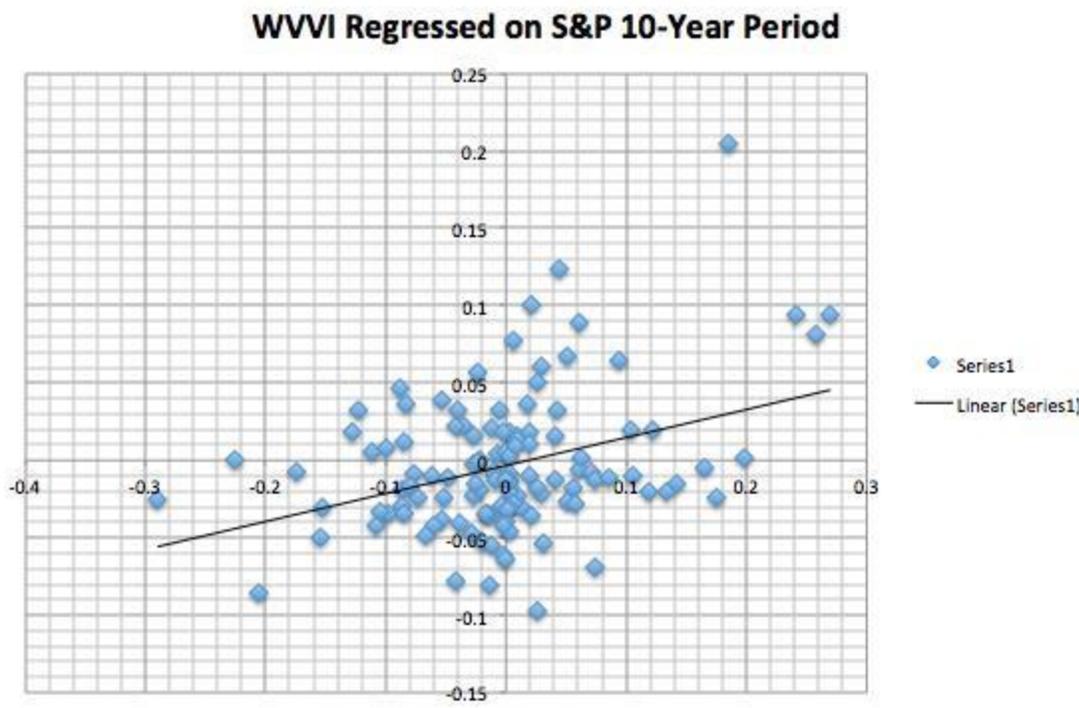
Tc= Corporate tax rate

To start with the equation, we'll begin with E, the market value of equity, which is share price*OS =33.947M.

Next is V, which is E+D, and D= MV of all debt, which I've calculated as the sum of TTM LTD+STD over two years/2, which =5.793M.

So, we have E/(E+D) at $33.947/(33.947+5.793) = 0.8542$, or a % of equity financing of 85.42%. This automatically gives us a % of debt financing of 14.58%.

Next is R_e , the company's cost of equity. To calculate WVVI's cost of equity, I will be using the Capital Asset Pricing Model that you can read more about [here](#). Essentially, my calculation is as follows: Risk-free rate + Beta * (Expected market return - Risk-free rate). For my risk-free rate, I will be using the 10-Year Constant Maturity Rate of [2.34%](#).



As shown above, I have calculated the beta based on a regression analysis of WVVI's monthly returns since June 18, 2005 compared to the same time period and frequency of the S&P 500. I calculated a covariance of 0.0013981 and variance of 0.00193424, divided covar/var to arrive at a beta of 0.723. Finally, I'll be using a market premium (EMR-RfR) of 7.5%. This gives me a calculation of $.0234+(.723*.075)$, which gives me a cost of equity of 7.76%.

As for Rd, the cost of debt, this is simply the required return on the debt that has been issued to WVVI by its creditors, which as of March 31, 2015 averages [5.725%](#). And finally, the company's average tax rate over a period of two years is 32.645%.

Thus, the final calculation is as follows:

$WACC = 0.8542 * 0.0776 + 0.1458 * 0.05725 * (1 - 0.32645)$ or 7.191%.

What this invariably tells us about the company having an ROIC of 8.83% is that WVVI is generating higher returns on investment than it's actually costing the company to raise that capital needed for investment. Essentially, it is earning excess returns on top of its hurdle rate. And one of the reasons I believe this company is fundamentally undervalued is based on the company's ability to increase its ROIC and ROE by 60% in one year, and its ROA by 64% in one year. And while all of this is happening underneath Wall Street's nose, the company is posting ttm net income and revenue gains of 77% and 22%, respectively.

The Wine Industry:

No matter how great a company's financials are historically, the underlying business is only as great as the outlook of the industry that it belongs to, and the wine industry looks great moving forward. The U.S. wine industry has seen explosive growth in the number of wineries that are established throughout the country in the past decade. From 1995-2014, [wineries](#) grew from 1,817 to 7,762, or a 327% growth with an average annual growth rate between 10-15%. Also, U.S. wine sales have been growing at a rate of 2-3% per year for the past 21 years.

Now, I understand that this can be seen as a risk in terms of barriers of entry for WVVI, but the reality is that when it comes to wine, serious wine consumers typically establish relationships with these businesses and remain loyal to them because finding a good wine can be like finding a good barber. Being around since 1988, this company has indubitably developed those relationships. In fact, management states the cause of increased direct sales is due to increased wine club, tasting room and kitchen sales in addition to bulk wine sales.

For the Oregon wine industry specifically, there are approximately 605 commercial wineries licensed producing a crop with a total value of \$128 million. Wine is a huge deal in Oregon, making grapes the number one fruit crop in the entire state. The most recent data available states that the sum of all economic activity in Oregon related to wine sales is now more than \$3.3B annually, which is up from \$2.7B in 2010 representing a 22% increase in 5 years. And what's so great about the Oregon wine industry is that it's still in its expansionary stage. In comparison to

California and other big wine states, the Oregon wine industry is relatively small, only accounting for approximately 7% of the total U.S. wineries, giving companies like WVVI tremendous room for growth in the future.

It deserves noting that WVVI is no ordinary wine vineyard, as it has received much recognition over the past few months. The following are awards that its products have won [recently](#):

- The Company's 2013 Pinot Gris and 2013 Riesling both received Gold Medals at The San Francisco Chronicle Win Competition in January 2015.
- The Company's 2012 Estate Pinot Noir received a Gold Medal at the Seattle Wine & Food Experience Wine Competition in February 2015.
- In March 2015, the Company's 2012 Bernau Block Pinot Noir received a Double Gold Medal at the Savor NW Wine Awards.
- In March 2015, the Company's 2013 Riesling was awarded a Gold Medal at the Houston Rodeo Uncorked International Wine Competition.
- In February 2015, Eric Degerman (famous wine judge) reviewed the Company's following Pinot Noirs: 2012 Estate Pinot Noir, 2012 O'Brien Pinot Noir, and 2012 Elton Pinot Noir with ratings of Outstanding, Outstanding and Excellent, respectively.

Fundamentally speaking, from a value-investors perspective, it doesn't get any more clear cut than this. We've established numerous positions that justify the stock is in fact undervalued from an intrinsic value standpoint. The Company is trading at a low P/E and P/S ratio compared to its industry and is outperforming the majority of all major players within it. The Company also has a PEG ratio of .37, which according to Peter Lynch, is a significant indicator of undervaluation. From a risk point-of-view, WVVI maintains a strong Z-Score of 4.166 and F-Score of 8 indicating great financial strength and sequential growth. Also, with a calculated WACC of 7.2% and an ROIC of 8.83%, we've determined that the company is generating returns higher than its actual cost of capital. Finally, with explosive growth rates in net income, revenues, net margins, ROE, ROA, ROIC and in the specific industry that it operates in itself, I conclude that at \$6.95 per share, WVVI is a greatly undervalued company, and I would recommend a strong buy.

Editor's Note: This article covers one or more stocks trading at less than \$1 per share and/or with less than a \$100 million market cap. Please be aware of the risks associated with these stocks.