**Question 2**

Price to Book ratio as a measure for future stock performance has several drawbacks when compared to Price/Earning ration. For instance, a company with high levels of debt and low equity value may have a high P/B ratio hence measure will present a misleading interpretation of the cost of debt is not considered. Similarly, the book value of assets used in the measure is not truly reflective of the current market values. P/E earnings ratio on the other hand is a better measure when taking into account the future growth aspects of a business. More specifically, when earning growth expectations increase stock trades at a higher P/E ratio. Lastly, the P/S ratio used by S&P has a disadvantage that it does not take into account future growth aspects. Hence the approach used by S&P is more superior as it combines the advantages associated with all three measures when identifying value and growth stocks. (Kieso, 2019)

**Question 3**

| **Type** | **Signal** | **How is it Calculated** | **Direction** | **Reason for Forecasting** |
| --- | --- | --- | --- | --- |
| Value | Price | Calculated by taking into account what an investor pays and what they get in return. | Low valuation ratios mean relatively cheaper stocks. | Value signals can give useful information e.g. P/E ratio may allow investors to determine growth potential. |
| Quality | Gross Profit | Revenue - Cost of Sales / Revenue | Higher gross profits linked with higher returns. | Allow investors to appreciate the power associated with competitive advantage. |
| Risk | Beta | Beta calculated by comparing stock returns to those of the market. | High betas are associated with lower returns. | Investors holding stocks with high betas will generate lower returns. |
| Price Trends | Short - term reversal | Using returns over a short period of time e.g. past 4 weeks. | Stocks with high returns relative to their industry and lower overall returns. | Over the short term stock returns within an industry should be similar given they are driven by same underlying economic factors |
| Information | Short- interest | No of shares Shorted / No of Shares floating | Lower short interest indicate higher returns | Short position takes usually are expected to have better information as compared to stock buyers. |

(Kratter, 2019)

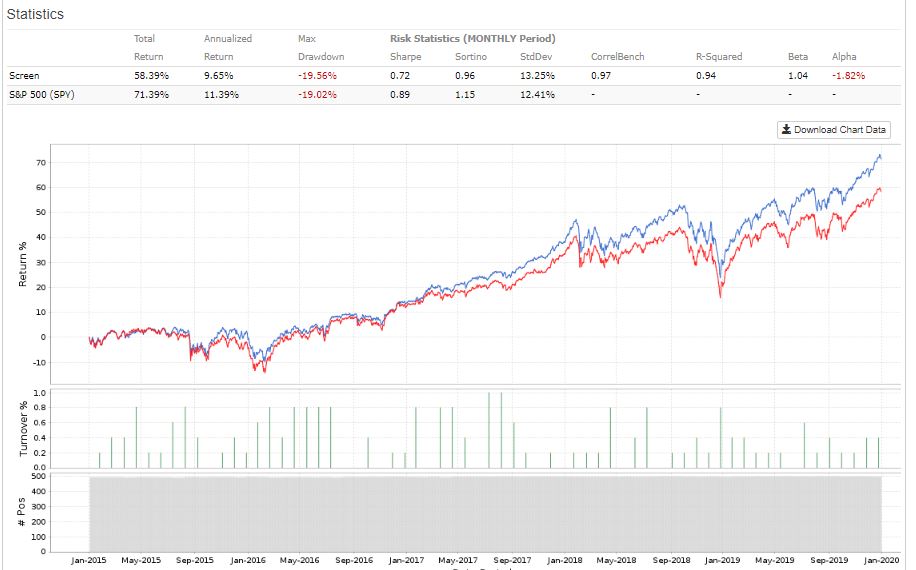
**Question 4**

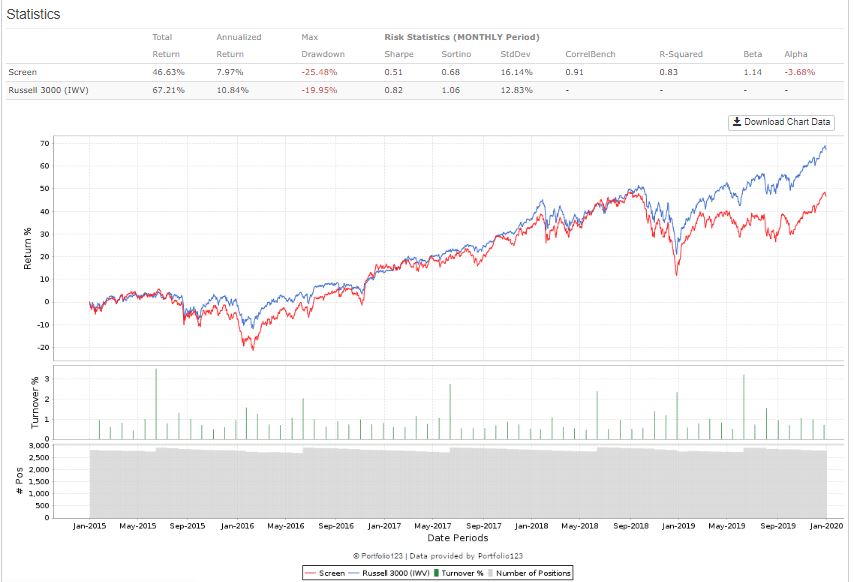
Sell-side analyst recommendations are known commonly as blanket recommendations i.e. they are not directed at any one particular individual and hence may not be suitable for particular investment strategies therefore the analyst recommendations alone should not be the only driving factor when making the investment decision. Specifically, the fund investment strategy should be taken into account when selecting between ABC and XYZ as potential investments. In the given situation the recommendations for ABC indicate that analysts expect the stock to outperform the market whereas hold recommendation for XYZ is an indication of the stock performing broadly in line with the market or comparable stocks.

Analyst recommendations can be evaluated using the Portfolio123 resources as it allows potential investors to set up a rule-based screen and identify stocks that meet the rules defined by the investors as part of their investment strategy. In this instance, the Portfolio 123 rules may be set up to identify stocks expected to outperform the market in the short term using different fundamental or technical factors. (Kratter, 2019)

**Question 5**

1. Screens showing annualized returns for each universe are shown below;





b) Portifolio123 used different factors such as annual, rolling returns standard deviation and risk characteristics as inputs to the back testing tool which allow the tool to construct the graphs in the portfolio.

c) The ranking system works better for the S&P 500 universe as indicated by the greater smoothness across buckets.

d) The difference in the application of UM super Combo approach between S&P 500 and Russell 3000 can be traced to the underlying stock selection criteria of the two indexes. Specifically, S&P selection is done by a committee whereas as Russell 3000 follows a rule based approach. Further whereas the Russell Index allows for name overlapping i.e. a particular company may fall within both growth and value style S&P does not allow such overlapping. (Kratter, 2019)

**References**

Kieso, D. (2019). *Intermediate Accounting, 17th Edition*. New York: Wiley.

Kratter, M. (2019). *A beginner's guide to the stock market*.