

VALUATION SUMMARY

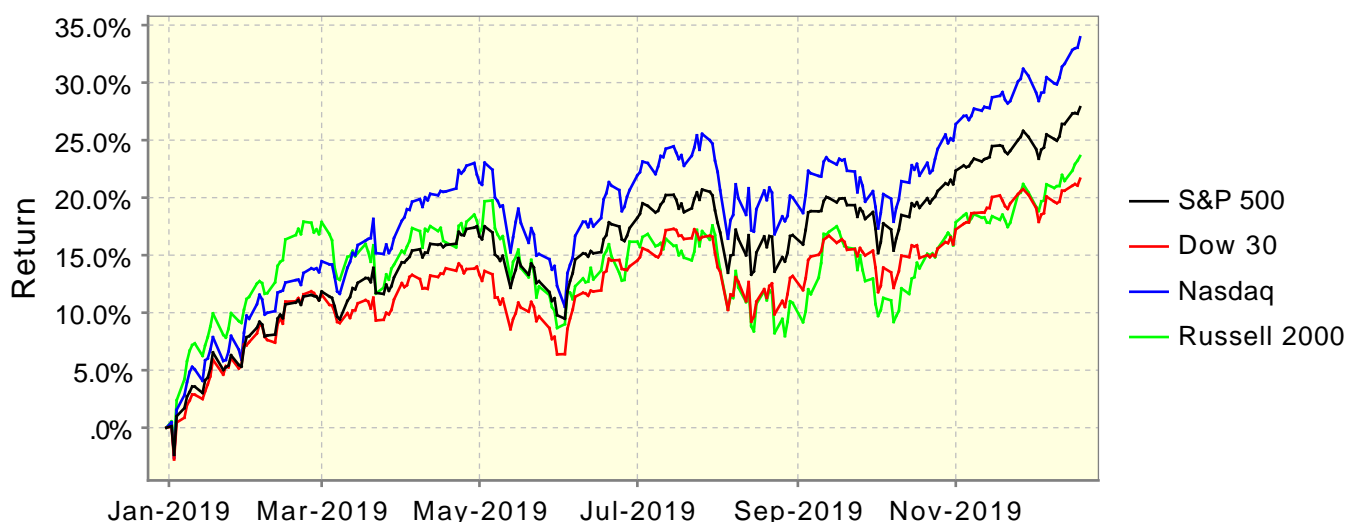
Stocks Undervalued	54.40%	Stocks Overvalued	45.60%
Stocks Undervalued by 20%	25.10%	Stocks Overvalued by 20%	14.82%

ValuEngine currently finds the markets attractive with the majority of stocks covered undervalued according to the research.

INDEX OVERVIEW

Index	Date	Last Close	MTD	QTD	YTD
S&P 500	12/19/2019	3,205.37	2.05%	1.64%	27.86%
Dow 30	12/19/2019	28,376.96	1.16%	0.76%	21.65%
Nasdaq	12/19/2019	8,887.22	2.56%	2.09%	33.94%
Russell 2000	12/19/2019	1,667.09	2.62%	2.02%	23.62%

PERFORMANCE HISTORY



SECTOR AVERAGE COMPARISON

Sector Name	Valuation	Momentum	P/E Ratio	Sharpe Ratio
Oils-Energy	29.13% undervalued	-3.37%	19.79	-0.4661
Basic Materials	6.75% undervalued	15.96%	22.59	-0.1037
Consumer Discretionary	6.27% undervalued	11.25%	24.61	-0.0521
Consumer Staples	5.18% undervalued	12.51%	24.26	0.0709
Business Services	2.69% undervalued	21.90%	25.57	-0.0440
Retail-Wholesale	2.08% undervalued	14.23%	22.86	-0.1190
Multi-Sector Conglomerates	1.27% undervalued	14.38%	15.12	-0.0255
Aerospace	0.74% undervalued	30.22%	24.77	0.2207
Finance	0.61% undervalued	15.06%	16.34	0.1662
Transportation	2.66% overvalued	19.89%	18.65	-0.1264
Medical	2.88% overvalued	22.11%	29.83	-0.2189
Industrial Products	3.03% overvalued	23.30%	20.90	0.0520
Construction	3.63% overvalued	28.98%	21.35	0.0814
Utilities	4.62% overvalued	13.59%	23.52	0.1905
Computer and Technology	9.11% overvalued	26.39%	33.67	0.0684
Auto-Tires-Trucks	11.70% overvalued	17.68%	15.82	-0.0763

TOP INDUSTRIES

Industry Name	Valuation	Momentum	P/E Ratio	Sharpe Ratio	Market Cap (bil)
Technology Services	11.75%	17.68%	30.99	-0.3327	3.7010
Elec Power	36.40%	101.99%	20.53	0.5821	6.3243
Internet Software	9.71%	25.51%	47.89	-0.0141	4.7735
Transportation-Ship	-8.06%	21.94%	20.79	-0.4193	1.4047
Retail-Apparel/Shoe	-12.19%	15.24%	20.60	-0.3923	7.5122
Oil & Gas-U S Explo & Prod	-39.74%	-14.67%	13.72	-0.5497	2.5273
Oil & Gas-Cdn Exp & Prod	-52.08%	-8.19%	22.59	-0.5742	1.9251
Movie/Tv Production/Distrib	-29.12%	-11.73%	26.79	-0.3057	4.4387
Elec Measrng Instruments	23.51%	44.17%	22.62	0.2701	0.9784
Computer-Software	16.79%	34.70%	42.65	0.3216	15.6286

STOCK OF THE WEEK - BLUE

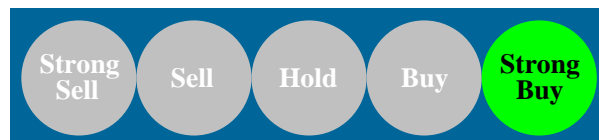
Comapny Name: Bluebird Bio

Sector: Medical

Industry: Medical-Biomed/Genetics

ValuEngine Recommendation

ValuEngine recommendation covers more than 5000 companies. The recommendations are based on the proprietary ValuEngine one-year forecast return model output for each individual equity. ValuEngine's Five-Engine rating stocks have an averaged annual return of 11.96% since 2002.



Data Summary

Trade Date: Dec 19, 2019	Last Close: \$92.39	Avg Volume: 1185498
1-Yr Forecast: 19.24%	Valuation: 187.60%	1-Yr Momentum: -8.64%
Market Cap (bil): \$5.11	EPS Growth: -9.05%	Beta: 2.41
5-Yr Avg Return: 13.49%	Volatility: 73.12%	Sharpe Ratio: 0.18
P/S Ratio: 94.81	M/B Ratio: 3.54	Alpha: -0.73
52-Wk High: \$163.43	52-Wk Low: \$71.42	Shares Outs(mil): 55.33

Forecast Analysis

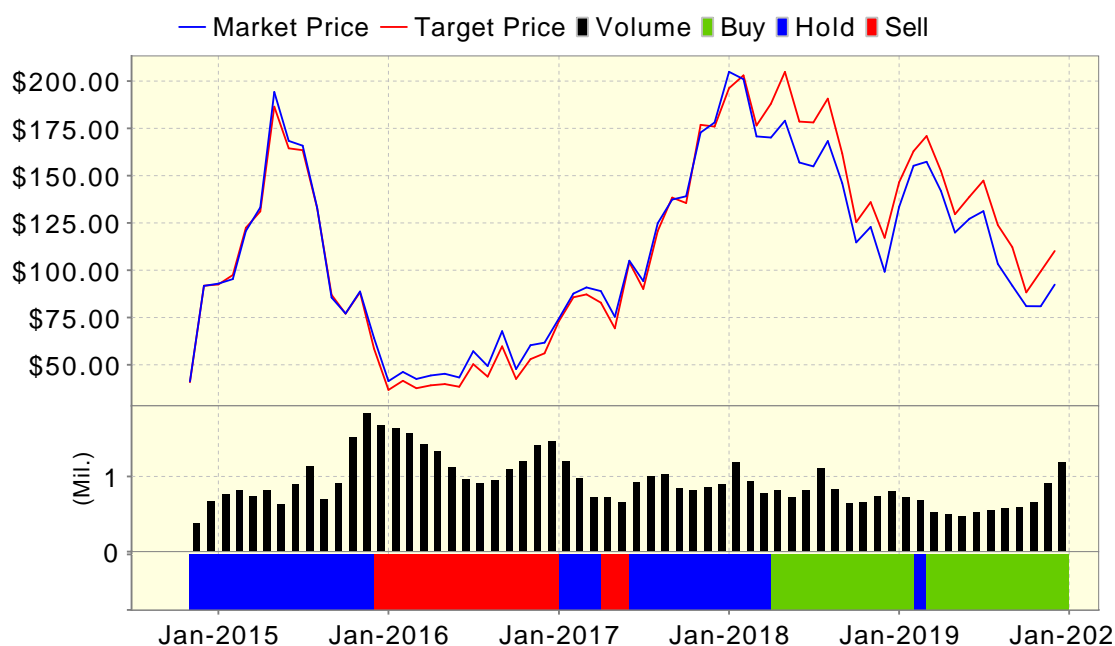
The predictive variables used in Valuengine's forecast model include both proprietary and well-established variables derived from credible financial studies and publications. We use a distinct forecasting model for each time horizon and apply the most advanced statistical/econometric techniques to ensure that our stock return forecasts are as reliable as possible.

	Target Price	Exp. Return
1-Month	\$93.86	1.59%
3-Month	\$97.00	4.99%
6-Month	\$98.51	6.62%
1-Year	\$110.17	19.24%
2-Year	\$93.00	0.66%
3-Year	\$79.14	-14.34%

[Click for more information on ValuEngine's models.](#)

STOCK OF THE WEEK - BLUE

Price And Recommendation History



ValuEngine Evaluation & Rankings

	Value	Ranking
1-Yr Forecast	19.24%	100
Valuation	187.60%	2
1-Yr Momentum	-8.64%	22
P/E Ratio		16
Market Cap(bil)	5.1119	80
EPS Growth	-9.05%	15
5-Yr Avg Return	13.49%	87
Volatility	73.12%	21
Sharpe Ratio	0.1845	67
P/S Ratio	94.81	4
M/B Ratio	3.54	37
Surprise	-6.43%	29

Just as important as the percentages shown for our predictive variables for each stock is the way they are ranked against @7000 stocks in our database. This is sometimes confusing to newcomers to ValuEngine. Each of these quantitative measurements is ranked on a scale of 1 to 100. Generally the higher the ranking, the more positive the influence each measurement has on the overall attractiveness of the stock. In other words a high rank is always better. For example:

- * Forecast rank 100: 0% of stocks have higher forecast returns.
- * Valuation rank 2: 98% of stocks are more undervalued.
- * Momentum rank 22: 78% of stocks have higher momentum.
- * P/E rank 16: 84% of stocks have lower P/E ratios.
- * Size rank 80: 20% of stocks have higher market capitalization.
- * Volatility rank 21: 79% of stocks have less volatility.

Business Summary

Bluebird Bio, Inc. is a biotechnology company. It focuses on the development, manufacture and marketing of therapies for severe genetic disorders such as childhood cerebral adrenoleukodystrophy, neurodegenerative disorders and beta-thalassemia. The company operates in the U.S. and Europe. Bluebird Bio, Inc. is headquartered in Cambridge, Massachusetts.

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VALUENGINE'S METHODOLOGY

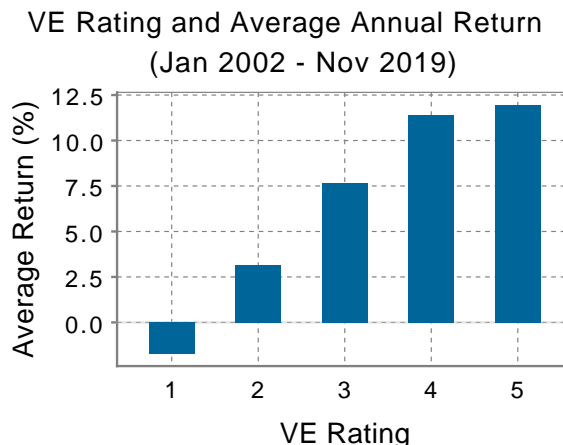
ValuEngine's research combines the most advanced academic concepts with real world Wall Street practice. The result is state-of-the-art fair market valuation and price forecasting technologies.

ValuEngine's stock valuation employs a sophisticated, three-factor approach. Fundamental variables, such as a company's trailing 12-month Earnings-Per-Share (EPS), the analyst consensus estimate of the company's future 12-month EPS, and the 30-year Treasury yield, are all used to create a more accurate reflection of a company's fair value. Together with eleven additional variables, ValuEngine paints a detailed picture of a company's fair value, represented by the model price.

ValuEngine's stock forecasts capture several important tendencies that stock prices consistently exhibit over six time horizons to ensure forecasts are established relative to a stock's proper peer groups. Advanced statistical/econometric techniques are used to run thousands of simulations estimating the probability of a double in stock price, as well as the probability of meeting and exceeding any given portfolio or stock investment target.

VE Engine Rating is an assessment of a stock's overall attractiveness. It is based on the one year forecast target price, which is the final evolution of VE's equity modeling. On average, only 2 percent of ValuEngine's 5,500 stocks under coverage achieve a 5 rating. 5 and 4 rated stocks are expected to outperform the overall markets, 3 rated to roughly match market performance, and 2 and 1 rated are expected to underperform.

For additional information about ValuEngine's financial research and financial modeling, please click www.valuengine.com



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STOCK RATINGS: The terms below are used to rate a stock's 12-month performance:

- 1. Buy: Expected to outperform the SP500 producing above average returns.
- 2. Hold: Expected to perform in line with the SP500 with average returns.
- 3. Sell: Expected to underperform the SP500 producing below-average returns.

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