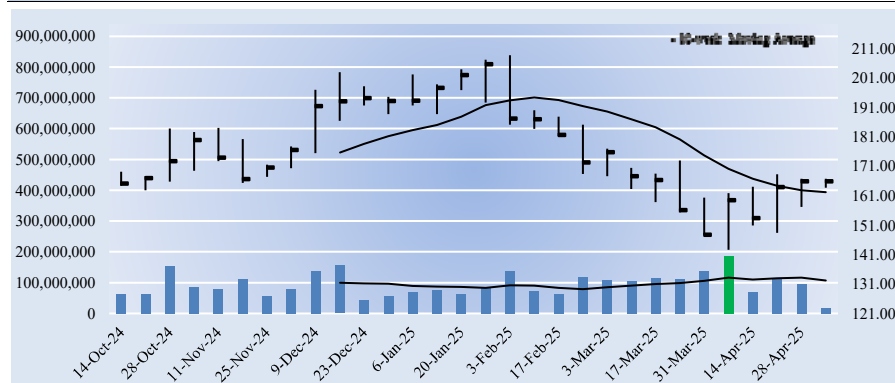


**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating**

<b>Economic Castle</b> Attractive	<b>Estimated Fair Value</b> \$220.00	<b>Fair Value Range</b> \$176.00 - \$264.00	<b>Investment Style</b> MEGA-CAP BLEND	<b>Sector</b> Information Technology	<b>Industry</b> Technology Giants
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**Alphabet's shares are attractive, in our view. Though artificial intelligence poses both risks and opportunities, we think the stock will be a winner in the long run.**

**Stock Chart (weekly)**

The week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar).

**Company Vitals**

Market Cap (USD)	\$2,022,560
Avg Weekly Vol (30 wks)	95,254
30-week Range (USD)	142.66 - 208.7
Valuentum Sector	Information Technology
5-week Return	15.6%
13-week Return	-12.3%
30-week Return	0.5%
Dividend Yield %	0.5%
Dividends per Share	0.84
Forward Dividend Payout Ratio	8.7%
Est. Normal Diluted EPS	12.27
P/E on Est. Normal Diluted EPS	13.5
Est. Normal EBITDA	184,877
Forward EV/EBITDA	12.8
EV/Est. Normal EBITDA	10.5
Forward Revenue Growth (5-yr)	10.2%
Forward EPS Growth (5-yr)	14.5%

NMF = Not Meaningful; Est. = Estimated; FY = Fiscal Year

**Returns Summary**

3-year Historical Average

Return on Equity	28.0%
Return on Assets	19.8%
ROIC, with goodwill	58.0%
ROIC, without goodwill	70.8%

ROIC = Return on Invested Capital; NMF = Not Meaningful

**Leverage, Coverage, and Liquidity**

In Millions of USD

Total Debt	11,882
Net Debt	-83,775
Total Debt/EBITDA	0.1
Net Debt/EBITDA	NMF
EBITDA/Interest	483.2
Current Ratio	1.8
Quick Ratio	1.7

NMF = Not Meaningful

**Investment Highlights**

• Alphabet is a tech company focused on a number of things: Android, ads, YouTube, Chrome, and research. We think the company will have some megahits in the years ahead, including in artificial intelligence (AI). It reports operating losses in its 'Other Bets' category frequently, suggesting core levels of profitability are higher than reported.

• Alphabet offers investors a compelling combination of attractive valuation, growth potential, cash-flow generation and competitive profile. Very few firms are more attractive on a fundamental basis, in our view, and its impressive free cash flow conversion rates (consistently above 100%) speak to this.

• Alphabet is pleased with momentum in its mobile division, particularly within strong mobile advertising revenue. The mobile Internet space will be key for the firm. YouTube and programmatic advertising offer upside potential, too, but we're watching spending levels, which have spiked due in part to higher AI investment.

• AI will pose opportunities and challenges, but Alphabet has a strong future in search. We continue to be in awe of the strength in this division. Its massive net cash position offers a substantial cushion to fall back on as it invests in high-return opportunities and new concepts such as smart home features, Glass, Fiber, or other innovative ideas.

• Alphabet has three different stock classes with two different tickers. GOOGL is Class A stock, and GOOG represents the non-voting Class C stock that was created by a stock split in 2014 in order for Google founders to maintain majority control.

**Investment Considerations**

DCF Valuation	UNDERVALUED
Relative Valuation	ATTRACTIVE
ValueCreation™	EXCELLENT
ValueRisk™	LOW
ValueTrend™	NEGATIVE
Cash Flow Generation	STRONG
Financial Leverage	LOW
Growth	HIGH
Technical Evaluation	BEARISH
Relative Strength	WEAK
Money Flow Index (MFI)	NEUTRAL
Upside/Downside Volume (U/D)	BEARISH
Near-term Technical Support, 10-week MA	162.00

DCF = Discounted Cash Flow; MFI, U/D = Please see glossary. MA = Moving Average

**Business Quality**

ValueCreation™

ValueRisk™	Very Poor	Poor	Good	Excellent
Low				
Medium				
High				
Very High				

Firms that generate economic profits with little operating variability score near the top right of the matrix.

**Relative Valuation**

Forward P/E PEG Price / FV

Amazon.com	NMF	NMF	96.7%
Apple	28.4	2.8	87.4%
Meta Platforms	25.7	1.7	98.1%
Microsoft	30.0	2.4	90.9%
Peer Median	28.4	2.4	93.8%
<b>Alphabet</b>	<b>17.2</b>	<b>1.4</b>	<b>75.4%</b>

Price / FV = Current Stock Price divided by Estimated Fair Value

**Financial Summary**

----- Actual ----- Projected

Fiscal Year End:	Dec-23	Dec-24	Dec-25
Revenue	307,394	350,018	387,435
Revenue, YoY%	8.7%	13.9%	10.7%
Operating Income	84,293	114,186	134,205
Operating Margin %	27.4%	32.6%	34.6%
Net Income	73,795	100,118	117,656
Net Income Margin %	24.0%	28.6%	30.4%
Diluted EPS	5.80	8.04	9.65
Diluted EPS, YoY %	27.3%	38.7%	19.9%
Free Cash Flow (CFO-capex)	69,495	72,764	90,200
Free Cash Flow Margin %	22.6%	20.8%	23.3%

In Millions of USD (except for per share items)

**Structure of the Internet Software & Services Industry****NEUTRAL**

The Internet software/services industry is composed of a variety of companies with rapidly-changing business models. Most focus on improving the ways people connect with information, either via Internet search or by social media platforms, and generate revenue primarily by delivering cost-effective online advertising. Constituents earn significant returns on invested capital due to their capital-light operations, though competition remains fierce. We expect most companies in this group to look substantially different 10 years from now than they do today. Overall, we're neutral on the structure.

**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$220.00**Fair Value Range**  
\$176.00 - \$264.00**Investment Style**  
MEGA-CAP BLEND**Sector**  
Information Technology**Industry**  
Technology Giants**Economic Profit Analysis****ValueCreation™****EXCELLENT**

The best measure of a firm's ability to create value for shareholders is expressed by comparing its return on invested capital (ROIC) with its weighted average cost of capital (WACC). The gap or difference between ROIC and WACC is called the firm's economic profit spread. Alphabet's 3-year historical return on invested capital (without goodwill) is 70.8%, which is above the estimate of its cost of capital of 9.8%. As such, we assign the firm a ValueCreation™ rating of EXCELLENT. In the chart to the right, we show the probable path of ROIC in the years ahead based on the estimated volatility of key drivers behind the measure. The solid grey line reflects the most likely outcome, in our opinion, and represents the scenario that results in our fair value estimate.

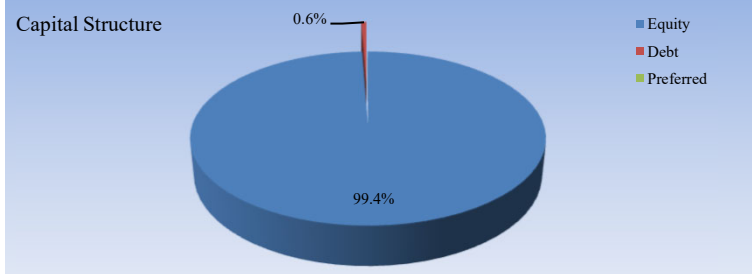
ROIC - WACC Spread, 3-year historical average 61.0%

ROIC - WACC Spread, 5-year projected average 42.9%

These spreads equal the firm's annual average ROIC (excluding goodwill) less its WACC.

**ValueTrend™****NEGATIVE**

Alphabet receives a ValueTrend™ rating of NEGATIVE, which is based on the company's trailing three-year performance. The firm's ROIC (excluding goodwill) fell to 66.4% last year from its trailing 3-year average of 70.8%. We expect ROIC (excluding goodwill) to be in the ballpark of about 50% by the end of our discrete forecast period, with downside risk to about 42% over that time period.

**Weighted Average Cost of Capital (WACC)****Cost of Equity**

Risk Free Rate Assumption 4.3%

Fundamental Beta (ERP multiplier) 0.9

Estimated Equity Risk Premium 6.5%

**Cost of Equity Assumption 9.8%****After-tax Cost of Debt**

Risk Free Rate Assumption 4.3%

Synthetic Credit Spread 0.46%

Cost of Debt Assumption 4.8%

Cash Tax Rate Assumption 15.0%

**After-tax Cost of Debt Assumption 4.1%****Cost of Preferred Stock**

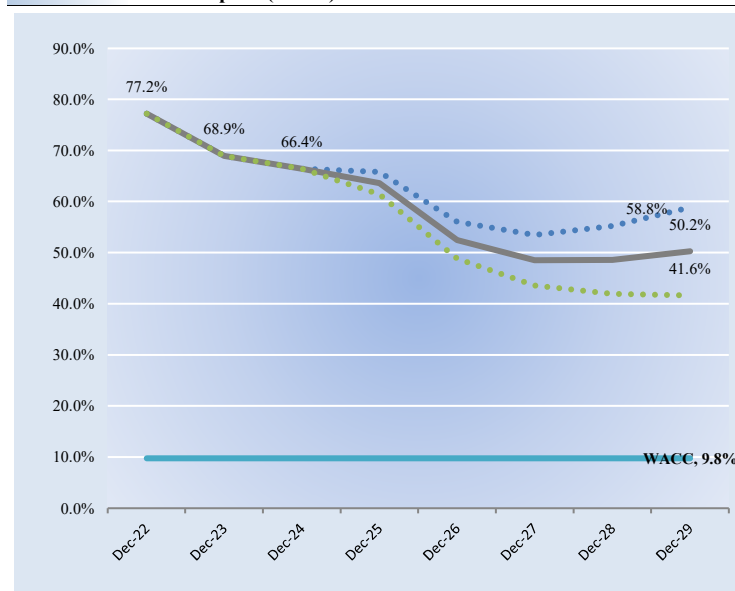
Preferred Dividends 0

Value of Preferred Stock 0

Cost of Preferred Assumption NA

**Weighted Average Cost of Capital (WACC)****9.8%**

ERP = Equity Risk Premium

**Return on Invested Capital (ROIC)**

The graph above shows the firm's ROIC (excluding goodwill) compared with historical averages and its WACC.

**Assessment of Company Dividend Strategy****Key Strengths**

In its first quarter 2024 press release, "Alphabet's Board of Directors...approved the initiation of a cash dividend program, and declared a cash dividend of \$0.20 per share...on each of the company's Class A, Class B, and Class C shares. The company intends to pay quarterly cash dividends in the future, subject to review and approval by the company's Board of Directors in its sole discretion." Alphabet now pays a quarterly cash dividend of \$0.21 per share.

**Potential Weaknesses**

It's difficult to find much fault with Alphabet's new dividend program. The company holds a strong net cash position and generates gobs of free cash flow. Share repurchases offer a competing source of capital return to shareholders, but we view Alphabet's new dividend in a positive light.

Note: Valuentum may provide an adjusted ROIC measure to better reflect the economic substance of a company's operations, as in the case of companies with negative invested capital.

# Alphabet GOOG UNDERVALUED 6.1%

VALUENTUM  
**Buying Index™**

6

VALUENTUM  
**Value Rating**



**Economic Castle**  
Attractive

**Estimated Fair Value**  
\$220.00

**Fair Value Range**  
\$176.00 - \$264.00

**Investment Style**  
MEGA-CAP BLEND

**Sector**  
Information Technology

**Industry**  
Technology Giants

## Growth Analysis

### Revenue Growth

HIGH

		Last Fiscal Year Revenue	3-year Historical CAGR	5-year Projected CAGR
<b>Alphabet</b>	USD	<b>350,018</b>	<b>10.8%</b>	<b>10.2%</b>
Amazon.com	USD	637,959	10.7%	10.3%
Apple	USD	391,035	2.2%	6.7%
Meta Platforms	USD	164,501	11.7%	12.9%
Microsoft	USD	245,122	13.4%	11.4%
Peer Median			11.2%	10.8%
Industry Median			9.1%	8.7%

Alphabet's revenue expansion has trailed the median of its peer group but has been greater than that of its industry group during the past three years. We expect the firm's revenue to trail its peer group but outpace that of its industry group during the next five years. Our growth assessment of each firm is based on the firm's 5-year forward revenue CAGR. Alphabet's future pace of revenue growth is HIGH, in our opinion.

### EBITDA Growth

		Last Fiscal Year EBITDA	3-year Historical CAGR	5-year Projected CAGR
<b>Alphabet</b>	USD	<b>129,497</b>	<b>13.3%</b>	<b>12.2%</b>
Amazon.com	USD	120,468	26.6%	14.8%
Apple	USD	134,661	3.8%	8.4%
Meta Platforms	USD	83,717	15.2%	14.4%
Microsoft	USD	129,433	17.0%	11.8%
Peer Median			16.1%	13.1%
Industry Median			8.1%	12.4%

Alphabet's EBITDA expansion has trailed that of its peer group but has been greater than that of its industry group during the past three years. We expect the firm's pace of EBITDA growth to fall below that of both its peer group and industry group during the next five years. Amazon.com sports the highest expected EBITDA growth rate among peers.

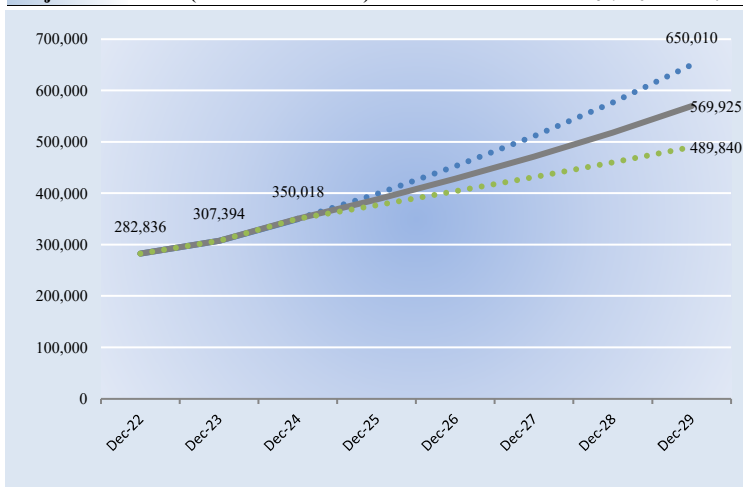
### Net Income Growth

		Last Fiscal Year Net Income	3-year Historical CAGR	5-year Projected CAGR
<b>Alphabet</b>	USD	<b>100,118</b>	<b>9.6%</b>	<b>12.2%</b>
Amazon.com	USD	59,248	21.1%	17.9%
Apple	USD	93,736	-0.3%	11.0%
Meta Platforms	USD	62,360	16.6%	13.0%
Microsoft	USD	88,136	12.9%	12.7%
Peer Median			14.7%	12.8%
Industry Median			4.4%	12.5%

Alphabet's net income expansion has trailed that of its peer group but has been greater than that of its industry group during the past three years. We expect the firm's pace of net income growth to fall below that of both its peer group and industry group during the next five years. Amazon.com sports the highest expected net income growth rate among peers.

### Projected Revenue (in millions of USD)

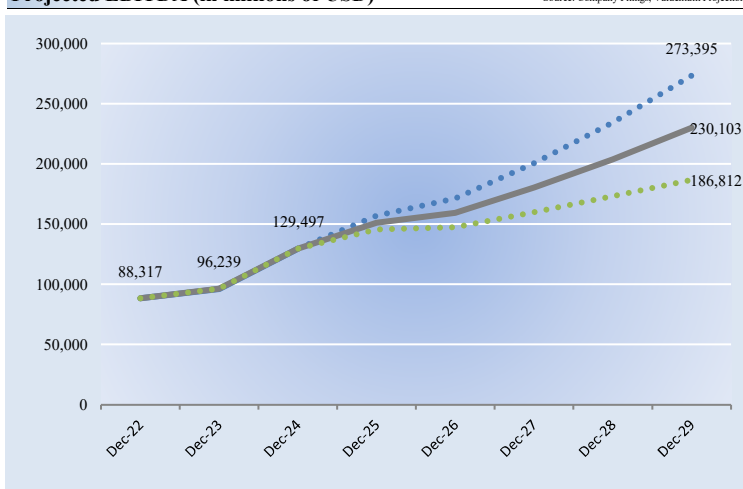
Source: Company Filings, Valuentum Projections



In the chart above, we show our baseline forecast for revenue as well as potential upside and downside cases.

### Projected EBITDA (in millions of USD)

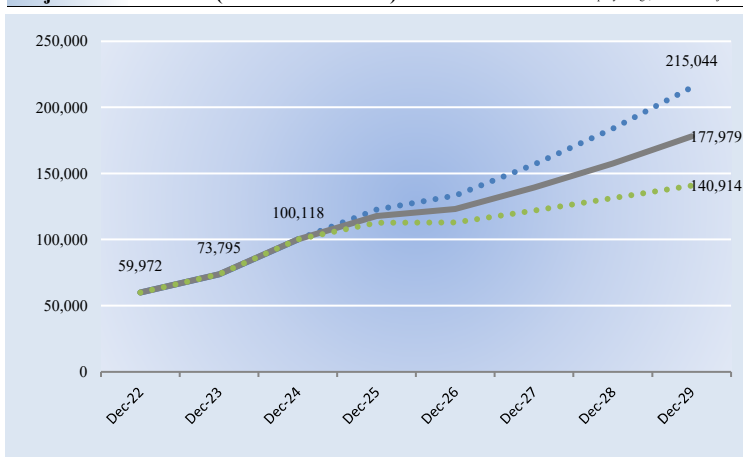
Source: Company Filings, Valuentum Projections



In the chart above, we show our baseline forecast for EBITDA as well as potential upside and downside cases.

### Projected Net Income (in millions of USD)

Source: Company Filings, Valuentum Projections



In the chart above, we show our baseline forecast for net income as well as potential upside and downside cases.

# Alphabet GOOG UNDERVALUED 6.1%

VALUENTUM  
**Buying Index™**

6

VALUENTUM  
**Value Rating**



**Economic Castle**  
Attractive

**Estimated Fair Value**  
\$220.00

**Fair Value Range**  
\$176.00 - \$264.00

**Investment Style**  
MEGA-CAP BLEND

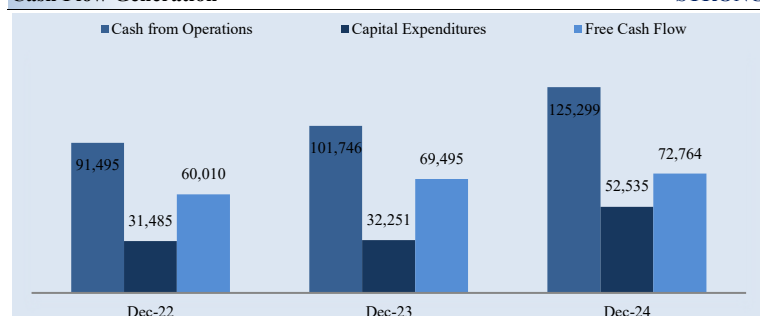
**Sector**  
Information Technology

**Industry**  
Technology Giants

## Cash Flow and Financial Leverage Analysis

### Cash Flow Generation

STRONG



The bars above show the firms operating cash flow, capital expenditures, and free cash flow, respectively.

Firms that generate a free cash flow margin (free cash flow divided by total revenue) above 5% are usually considered cash cows. Alphabet's free cash flow margin has averaged about 21.5% during the past 3 years. As such, we think the firm's cash flow generation is relatively **STRONG**. The free cash flow measure shown above is derived by taking cash flow from operations less capital expenditures and differs from enterprise free cash flow (FCFF), which we use in deriving our fair value estimate for the company. For more information on the differences between these two measures, please visit our website at Valuentum.com. At Alphabet, cash flow from operations increased about 37% from levels registered two years ago, while capital expenditures expanded about 67% over the same time period.

### Cash Flow from Operations

		Last Fiscal Year CFO	3-year Historical CAGR	5-year Projected CAGR
<b>Alphabet</b>	USD	<b>125,299</b>	<b>11.0%</b>	<b>10.6%</b>
Amazon.com	USD	115,877	35.7%	14.6%
Apple	USD	118,254	4.4%	10.9%
Meta Platforms	USD	91,328	16.6%	10.9%
Microsoft	USD	118,548	15.6%	11.4%
Peer Median			16.1%	11.2%
Industry Median			9.2%	11.0%

Alphabet's cash flow from operations expansion has trailed that of its peer group but has been greater than that of its industry group during the past three years. We expect the firm's pace of cash flow from operations growth to fall below that of both its peer group and industry group during the next five years. Amazon.com sports the highest expected cash flow from operations growth rate among peers.

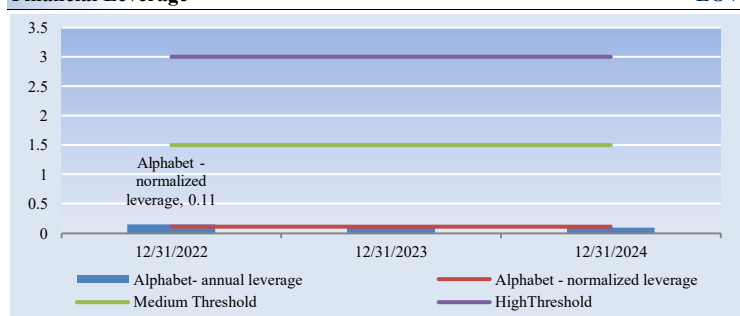
### Free Cash Flow (CFO-capital expenditures)

		Last Fiscal Year FCF	3-year Historical CAGR	5-year Projected CAGR
<b>Alphabet</b>	USD	<b>72,764</b>	<b>2.8%</b>	<b>16.6%</b>
Amazon.com	USD	32,878	-230.7%	34.7%
Apple	USD	108,807	5.4%	10.9%
Meta Platforms	USD	54,072	11.5%	9.1%
Microsoft	USD	74,071	9.7%	15.4%
Peer Median			7.5%	13.2%
Industry Median			8.8%	11.1%

Alphabet's free cash flow expansion has trailed both that of its peer group and its industry group during the past three years. We expect the firm's free cash flow expansion to outpace its peer group and industry group during the next five years. Amazon.com sports the highest expected free cash flow growth rate among peers.

### Financial Leverage

LOW

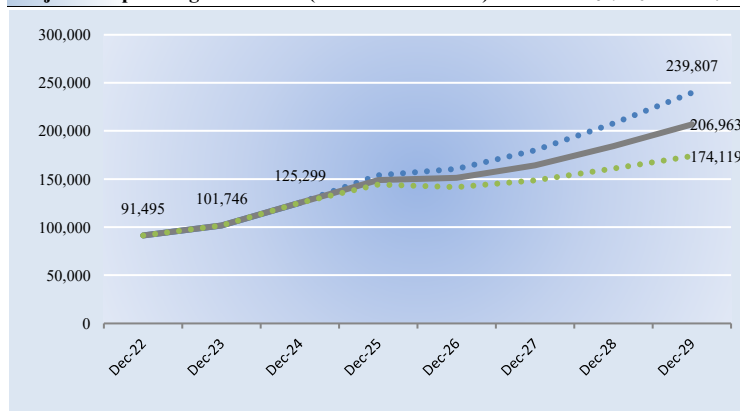


The bars above show the firm's annual debt-to-EBITDA. The red line shows the firm's normalized measure.

Firms that exhibit high leverage tend to be more risky than firms with relatively low debt loads, all else equal. We measure financial leverage by taking a firm's current total debt load and dividing it by the firm's trailing average 3-year annual EBITDA. Firms that are over 3 for this metric, we rate as having high leverage. Companies that have less than 1.5 turns of leverage (or a measure below 1.5), we rate as having low leverage. Alphabet's normalized debt-to-EBITDA measure of about 0.11 puts it in the **LOW** camp.

### Projected Operating Cash Flow (in millions of USD)

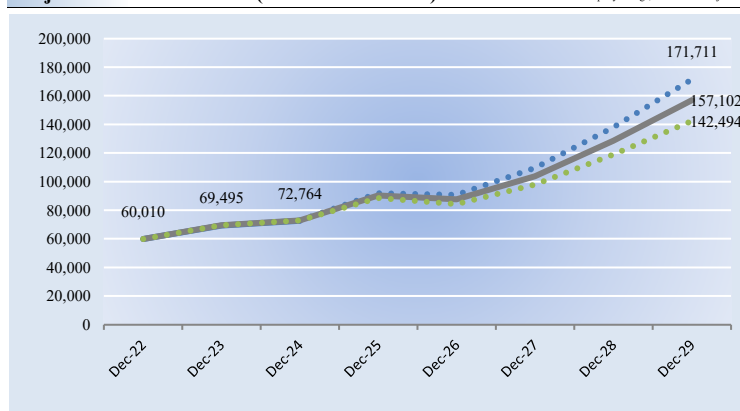
Source: Company Filings, Valuentum Projections



In the chart above, we show our baseline forecast for CFO as well as potential upside and downside cases.

### Projected Free Cash Flow (in millions of USD)

Source: Company Filings, Valuentum Projections



In the chart above, we show our baseline forecast for free cash flow as well as potential upside and downside cases.

**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating**

<b>Economic Castle</b> Attractive	<b>Estimated Fair Value</b> \$220.00	<b>Fair Value Range</b> \$176.00 - \$264.00	<b>Investment Style</b> MEGA-CAP BLEND	<b>Sector</b> Information Technology	<b>Industry</b> Technology Giants
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**Valuation Analysis****Valuation Assumptions**

In Millions of USD (except for per share items)

	<u>5-year Projections</u>
Revenue CAGR %	10.2%
Avg. EBIT Margin %	34.5%
Avg. Cash Tax Rate %	15.0%
Earnings Before Interest CAGR %	10.9%
Earnings Per Share CAGR %	14.5%
Free Cash Flow to the Firm CAGR %	17.6%

Earnings before interest = Net operating profits less adjusted taxes

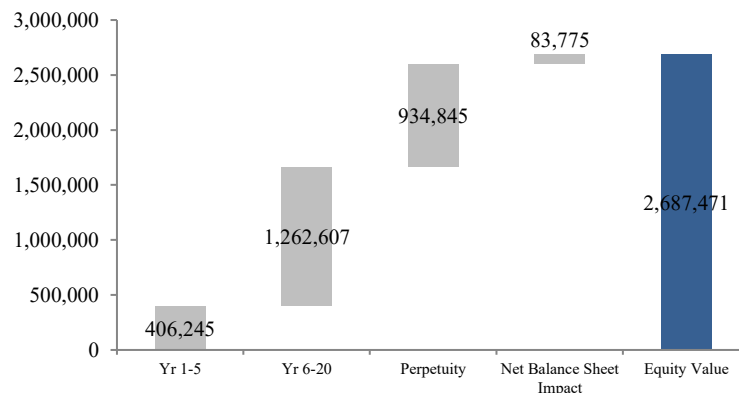
	<u>Long-term Projections</u>
Phase II --> III FCFF CAGR %	6.6% (II) 3% (III)
Cost of Equity %	9.8%
After-tax Cost of Debt %	4.1%
Discount Rate (WACC) %	9.8%

Synthetic credit spread = 0.46%

	<u>Results</u>
Phase I Present Value	406,245
Phase II Present Value	1,262,607
Phase III Present Value	934,845
Total Firm Value	2,603,696
Net Balance Sheet Impact	83,775
Total Equity Value	2,687,471
Diluted Shares Outstanding	12,198.1
Fair Value per Share	\$220.00

**Valuation Breakdown**

In the chart below, we show the build up to our estimate of total enterprise value for Alphabet and the break down to the firm's total equity value, which we estimate to be about 2687.47USD billion. The present value of the enterprise free cash flows generated during each phase of our model and the net balance sheet impact is displayed. We divide total equity value by diluted shares outstanding to arrive at our \$220 per share fair value estimate.



In Millions of USD

**DCF Valuation Summary**

We think Alphabet is worth \$220 per share with a fair value range of \$176.00 - \$264.00. The margin of safety around our fair value estimate is driven by the firm's LOW ValueRisk™ rating, which is derived from an evaluation of the historical volatility of key valuation drivers and a future assessment of them. Our near-term operating forecasts, including revenue and earnings, do not differ much from consensus estimates or management guidance. Our model reflects a compound annual revenue growth rate of 10.2% during the next five years, a pace that is lower than the firm's 3-year historical compound annual growth rate of 10.8%. Our model reflects a 5-year projected average operating margin of 34.5%, which is above Alphabet's trailing 3-year average. Beyond year 5, we assume free cash flow will grow at an annual rate of 6.6% for the next 15 years and 3% in perpetuity. For Alphabet, we use a 9.8% weighted average cost of capital to discount future free cash flows.

Source: Company Filings, Valuentum Projections

**Enterprise Free Cash Flow**

	Fiscal Year End:	12/31/2022	12/31/2023	12/31/2024
Earnings before Interest		81,664	87,654	106,928
+ Depreciation		13,475	11,946	15,311
- Capital Expenditures		31,485	32,251	52,535
- Change in Working Capital		-3,138	942	-1,517
- Acquisitions		6,969	495	2,931
<b>Enterprise Free Cash Flow (FCFF)</b>		<b>59,823</b>	<b>65,912</b>	<b>68,290</b>

In Millions of USD

Our future forecasts for key valuation drivers result in a future free enterprise cash flow stream. Above, we show how we calculate enterprise free cash flow and the historical performance of the metric for Alphabet. Over the next five years, we expect the firm's enterprise free cash flow to expand at about a 18% compound annual growth rate. During years 6 through 20, we expect the measure to grow at a 6.6% rate. Beyond year 20 (in perpetuity), we grow the firm's free cash flow at inflation (3%).

**Company Metrics versus Peer and Industry Medians**

Company Name	Valuentum Buying Index™	Forward Price-to-Earnings	P/E on Est. Normal Diluted EPS	Price/Earnings-to-Growth (PEG), 5-year	Forward EV/EBITDA	EV/Est. Normal EBITDA	5-year Forward Earnings per Share CAGR	3-year Hist Avg ROIC, without goodwill	Dividend Yield %	Stock Price / Fair Value Estimate
<b>Alphabet</b>	<b>6</b>	<b>17.2</b>	<b>13.5</b>	<b>1.4</b>	<b>12.8</b>	<b>10.5</b>	<b>14.5%</b>	<b>70.8%</b>	<b>0.5%</b>	<b>75.4%</b>
Amazon.com	3	NMF	23.4	NMF	16.9	12.4	17.9%	13.8%	0.0%	96.7%
Apple	3	28.4	23.0	2.8	21.7	18.0	12.2%	89.5%	0.5%	87.4%
Meta Platforms	7	25.7	17.9	1.7	17.2	12.6	16.1%	63.9%	0.3%	98.1%
Microsoft	3	30.0	22.4	2.4	20.6	15.9	13.9%	49.8%	0.8%	90.9%
Peer Median	3.0	28.4	22.7	2.4	18.9	14.3	15.0%	56.8%	0.4%	93.8%
Industry Median	4.0	23.4	18.4	2.1	15.7	12.7	14.4%	56.6%	0.8%	96.0%

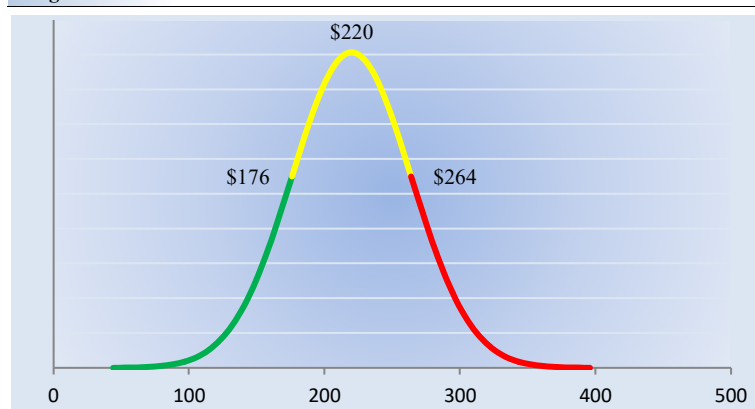
View back of report for a full list of industry constituents covered by Valuentum. VBI: Valuentum's ranking for the attractiveness of this investment at the date of the report.



**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating**

<b>Economic Castle</b> Attractive	<b>Estimated Fair Value</b> \$220.00	<b>Fair Value Range</b> \$176.00 - \$264.00
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<b>Investment Style</b> MEGA-CAP BLEND	<b>Sector</b> Information Technology	<b>Industry</b> Technology Giants
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**Margin of Safety Analysis****Range of Potential Outcomes**

Our discounted cash flow process values each firm on the basis of the present value of all future free cash flows. Although we estimate the firm's fair value at about \$220 per share, every company has a range of probable fair values that's created by the uncertainty of key valuation drivers (like future revenue or earnings, for example). After all, if the future were known with certainty, we wouldn't see much volatility in the markets as stocks would trade precisely at their known fair values. Our ValueRisk™ rating sets the margin of safety or the fair value range we assign to each stock. In the graph above, we show this probable range of fair values for Alphabet. We think the firm is attractive below \$176 per share (the green line), but quite expensive above \$264 per share (the red line). The prices that fall along the yellow line, which includes our fair value estimate, represent a reasonable valuation for the firm, in our opinion.

**ValueRisk™****LOW**

Alphabet receives a ValueRisk™ rating of LOW based on the historical volatility of key drivers of economic value creation. The fair value range sets the margin of safety around our fair value estimate of the firm's shares.

Revenue Volatility	11.2%
Gross Margin Volatility	12.3%
Earnings (EBI) Volatility	13.7%
Cash Flow (FCFF) Volatility	8.6%
<b>Fair Value Range</b>	<b>20.0%</b>

The Fair Value Range sets the premium or discount on our estimate of the firm's fair value.

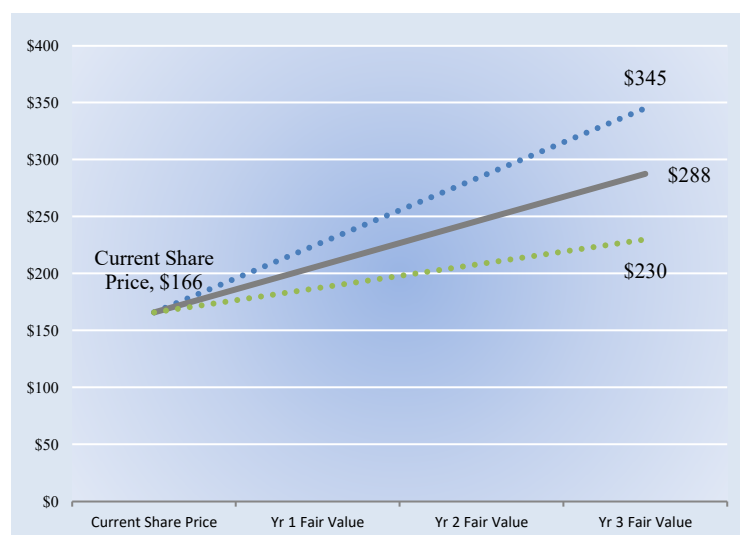
**Upside and Downside Probabilities**

Probability (fair value < \$0)	Less than 0.1%
Probability (fair value > 2x current share price)	0.56%

We strive to answer a few questions that investors often ask: 1) What are the chances of a total loss of investment in this company? and 2) What is the chance that the company is really worth twice what I paid for it? The probability (fair value < 0) strives to answer the first question. It indicates the chance that the firm may encounter insolvency based on the characteristics of its cash flow stream, capital structure, and risk profile. The probability (fair value > 2x current share price) strives to answer the second question. It is our best estimate of whether investors are participating in a half-off sale by buying the company's shares at current prices.

**Future Path of Fair Value**

We estimate Alphabet's fair value at this point in time to be about \$220 per share. As time passes, however, companies generate cash flow and pay out cash to shareholders in the form of dividends. The chart to the right compares the firm's current share price with the path of Alphabet's expected equity value per share over the next three years, assuming our long-term projections prove accurate. The range between the resulting downside fair value and upside fair value in Year 3 represents our best estimate of the value of the firm's shares three years hence. This range of potential outcomes is also subject to change over time, should our views on the firm's future cash flow potential change. The expected fair value of \$288 per share in Year 3 represents our existing fair value per share of \$220 increased at an annual rate of the firm's cost of equity less its dividend yield. The upside and downside ranges are derived in the same way, but from the upper and lower bounds of our fair value estimate range.



The graph above shows the expected future fair value of the firm's shares relative to its current stock price.

# Alphabet GOOG UNDERVALUED 6.1%

**Economic Castle**  
Attractive

**Estimated Fair Value**  
\$220.00

**Fair Value Range**  
\$176.00 - \$264.00

**Buying Index™** 6

**Value Rating** ✓

**Investment Style**  
MEGA-CAP BLEND

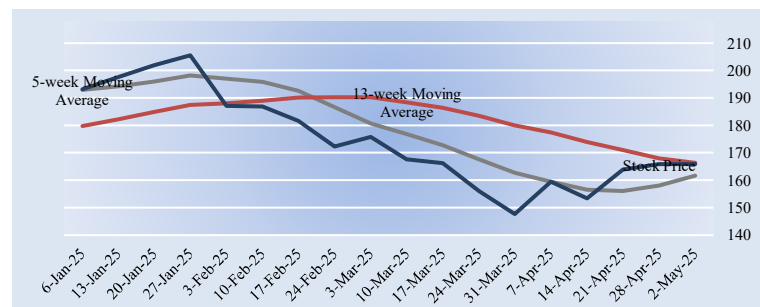
**Sector**  
Information Technology

**Industry**  
Technology Giants

## Technical Analysis

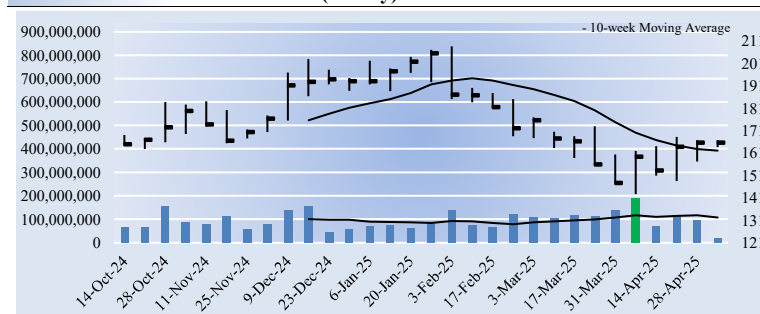
### Technical Evaluation

**BEARISH**



The firm's near-term moving average (5-week, grey line) and medium-term moving average (13-week, red line) are shown in the chart above. Typically, when a shorter-term moving average crosses a medium- or longer-term moving average from below, it represents a bullish signal. If the short-term moving average crosses from above, traders often view this as bearish. Alphabet's 5-week moving average is below its 13-week measure, indicating a BEARISH trend. This activity further confirms the company's 30-week downtrend.

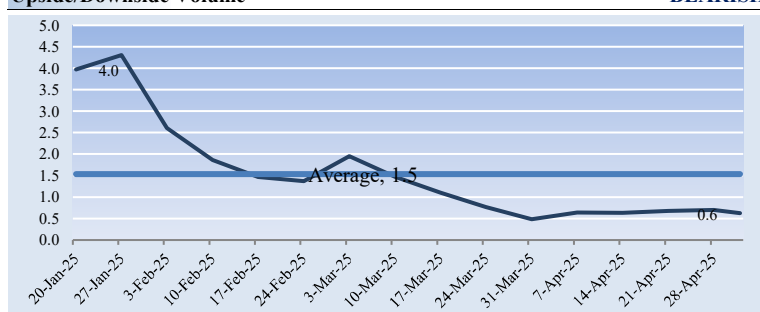
### 30-week Price and Volume Chart (weekly)



In the chart above, we pinpoint the heaviest accumulation or distribution week of the firm, determined by the week with the highest trading volume during the past 30 weeks. A heavy accumulation (buying) or distribution (selling) week often determines the future near-term direction of the firm's share price, as money managers continue to move in or out of the stock in the days and weeks ahead driving the stock up or down, respectively. For Alphabet, the week with the highest trading volume out of the last 30 weeks was a week of heavy buying, or accumulation (green bar). Such market activity could indicate a reversal of a downtrend or further confirmation of the firm's uptrend.

### Upside/Downside Volume

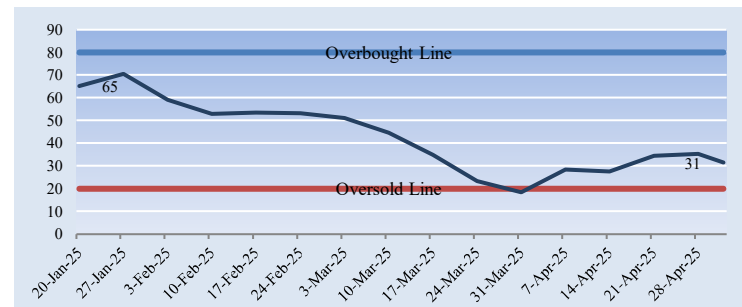
**BEARISH**



The level and trend of the Upside/Downside (U/D) volume ratio reveals whether institutional participation has been bullish or bearish as of late. Alphabet's U/D volume ratio of 0.6 is not only less than 1 but also is lower than its trailing average, indicating BEARISH institutional interest during the past several weeks.

### Money Flow Index (MFI)

**NEUTRAL**



The Money Flow Index (MFI) is an oscillator that uses price and volume to measure buying and selling pressure. Chartists often look for overbought (above 80) and oversold (below 20) levels to warn of unsustainable near-term price extremes. Alphabet's MFI of 31 (green line) is neutral, suggesting the firm's stock is neither overbought nor oversold at this time. However, a score below 50 tends to favor bears. The MFI can also be used to gauge the strength or weakness of a firm's price trend. In Alphabet's case, its stock price and money flow neither reveals a bullish nor bearish divergence, further supporting our neutral view on its money flow action.

### Relative Price Strength

**WEAK**

A firm's relative price strength can be assessed over any number of time horizons. We show the firm's performance over the past 5 weeks, 13 weeks, and 30 weeks below. In arriving at our relative strength rating for each company, we assess the past 13 weeks, which includes the market's reaction to the firm's most recently reported quarter, where applicable, and other more recent economic events. During the past 13 weeks, Alphabet's shares returned -12.3%, while the market benchmark returned -4.1%. We think Alphabet's 13-week relative price performance is WEAK.

5-week Company Performance	15.6%
5-week Market Benchmark Performance	-7.2%
5-week Relative Performance vs. Market Benchmark	22.9%
13-week Company Performance	-12.3%
13-week Market Benchmark Performance	-4.1%
<b>13-week Relative Performance vs. Market Benchmark</b>	<b>-8.2%</b>
30-week Company Performance	0.5%
30-week Market Benchmark Performance	0.6%
30-week Relative Performance vs. Market Benchmark	-0.1%

### Timeliness Matrix™

Equity Valuation

Relative Strength	Overvalued	Fairly Valued	Undervalued
Strong			
Neutral			
Weak			

Firms that are undervalued and currently showing near-term pricing strength score near the top right of the matrix.

Companies that are undervalued and showing near-term relative price strength could represent timely buys, as the stock may be attractive to both value and momentum investors. A cross section of the firm's equity valuation and its relative share price strength is shown in the matrix above. We tend to prefer undervalued stocks that have strong pricing momentum, also called Valuentum stocks.

**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$220.00**Fair Value Range**  
\$176.00 - \$264.00**Investment Style**  
MEGA-CAP BLEND**Sector**  
Information Technology**Industry**  
Technology Giants**Pro Forma Income Statement**

	----- Historical -----			----- Projected -----	
	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
In Millions of USD (except for per share items)					
Total Revenue	282,836	307,394	350,018	387,435	428,193
Cost of Goods Sold	126,203	133,332	146,306	157,099	178,463
Selling, General and Administrative Expenses	42,291	44,342	41,996	45,094	51,226
Other Operating Expenses	39,500	45,427	47,530	51,036	57,977
<b>Operating Income</b>	<b>74,842</b>	<b>84,293</b>	<b>114,186</b>	<b>134,205</b>	<b>140,528</b>
Unusual items	0	0	0	0	0
Operating Income, including unusual items	74,842	84,293	114,186	134,205	140,528
Interest Expense	(357)	(308)	(268)	(268)	(268)
Other Non-operating Income	(3,157)	1,732	5,897	4,482	4,482
<b>Pre-tax Income</b>	<b>71,328</b>	<b>85,717</b>	<b>119,815</b>	<b>138,419</b>	<b>144,742</b>
Income Taxes	11,356	11,922	19,697	20,763	21,711
<b>Income after tax</b>	<b>59,972</b>	<b>73,795</b>	<b>100,118</b>	<b>117,656</b>	<b>123,030</b>
Minority Interest and Equity Income	0	0	0	0	0
Net Income, excluding extra items	59,972	73,795	100,118	117,656	123,030
<b>Income Available to Common, excluding extra items</b>	<b>59,972</b>	<b>73,795</b>	<b>100,118</b>	<b>117,656</b>	<b>123,030</b>
<b>Diluted Earnings per Share, excluding extra items</b>	<b>4.56</b>	<b>5.80</b>	<b>8.04</b>	<b>9.65</b>	<b>10.29</b>
Diluted Weighted Shares Outstanding	13,159.0	12,722.0	12,447.0	12,198.1	11,954.1

Source: Company Filings, Xignite, Valuentum Projections

Note: Pro forma data in discounted cash-flow valuation may reflect significant adjustments from GAAP accounting data, including cash (not effective) tax rates and other analytical adjustments on a backward-looking and forward-looking basis. No individual data, by itself, found in this report should be used to make any investment decision.



**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$220.00**Fair Value Range**  
\$176.00 - \$264.00**Investment Style**  
MEGA-CAP BLEND**Sector**  
Information Technology**Industry**  
Technology Giants**Pro Forma Balance Sheet**

	----- Historical -----			----- Projected -----	
	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
<b>Assets</b>					
Total Cash (including marketable securities)	113,762	110,916	95,657	134,334	170,736
Inventory	0	0	0	41	94
Accounts Receivable	40,258	47,964	52,340	57,958	64,080
Other Current Assets	10,775	12,650	15,714	15,714	15,714
<b>Total Current Assets</b>	<b>164,795</b>	<b>171,530</b>	<b>163,711</b>	<b>208,047</b>	<b>250,624</b>
Gross Fixed Assets	186,091	215,894	264,014	322,853	386,400
(Accumulated Depreciation)	(59,042)	(67,458)	(79,390)	(96,338)	(115,068)
Net Property, Plant, and Equipment	127,049	148,436	184,624	226,515	271,331
Goodwill, Net	28,960	29,198	31,885	31,885	31,885
Intangibles, Net	0	0	0	0	0
Other Long-term Assets	44,460	53,228	70,036	70,036	70,036
<b>Total Assets</b>	<b>365,264</b>	<b>402,392</b>	<b>450,256</b>	<b>536,483</b>	<b>623,876</b>
<b>Liabilities</b>					
Accounts Payable	5,128	7,493	7,987	8,529	9,634
Other Current Liabilities	64,172	73,321	80,136	84,688	89,111
Current Portion of Long-term Debt	0	1,000	999	999	999
<b>Total Current Liabilities</b>	<b>69,300</b>	<b>81,814</b>	<b>89,122</b>	<b>94,216</b>	<b>99,744</b>
Long-term Debt	12,857	11,870	10,883	10,883	10,883
Other Long-term Liabilities	26,963	25,329	25,167	25,167	25,167
<b>Total Liabilities</b>	<b>109,120</b>	<b>119,013</b>	<b>125,172</b>	<b>130,266</b>	<b>135,794</b>
Preferred Stock	0	0	0	0	0
<b>Shareholders' Equity</b>					
Common Stock and Additional Paid in Capital	68,184	76,534	84,800	84,800	84,800
Retained Earnings	195,563	211,247	245,084	352,494	464,810
Other Equity	(7,603)	(4,402)	(4,800)	(31,077)	(61,528)
<b>Total Shareholders' Equity</b>	<b>256,144</b>	<b>283,379</b>	<b>325,084</b>	<b>406,217</b>	<b>488,082</b>
<b>Total Liabilities and Shareholders' Equity</b>	<b>365,264</b>	<b>402,392</b>	<b>450,256</b>	<b>536,483</b>	<b>623,876</b>

Source: Company Filings, Xignite, Valuentum Projections

Note: Pro forma data in discounted cash-flow valuation may reflect significant adjustments from GAAP accounting data, including cash (not effective) tax rates and other analytical adjustments on a backward-looking and forward-looking basis. No individual data, by itself, found in this report should be used to make any investment decision.

**Alphabet GOOG UNDERVALUED 6.1%****Buying Index™****6****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$220.00**Fair Value Range**  
\$176.00 - \$264.00**Investment Style**  
MEGA-CAP BLEND**Sector**  
Information Technology**Industry**  
Technology Giants**Pro Forma Cash Flow Statement**

	----- Historical -----			----- Projected -----	
In Millions of USD (except for per share items)	Dec-22	Dec-23	Dec-24	Dec-25	Dec-26
<b>Cash from Operations</b>					
Net Income	59,972	73,795	100,118	117,656	123,030
Depreciation and Amortization	13,475	11,946	15,311	16,948	18,731
Deferred Income Taxes	0	0	0	0	0
Operating Gains Or Losses	18,048	16,005	9,870	15,000	10,000
Changes in Working Capital	0	0	0	(565)	(647)
<b>Cash Flow from Operations</b>	<b>91,495</b>	<b>101,746</b>	<b>125,299</b>	<b>149,039</b>	<b>151,114</b>
<b>Cash from Investing</b>					
Purchase of Property, Plant, Equipment	(31,485)	(32,251)	(52,535)	(58,839)	(63,546)
Other Investing Cash Flows	11,187	5,188	6,999	0	0
<b>Cash Flow from Investing</b>	<b>(20,298)</b>	<b>(27,063)</b>	<b>(45,536)</b>	<b>(58,839)</b>	<b>(63,546)</b>
<b>Cash from Financing</b>					
Issuance (Retirement) of Stock	(59,296)	(61,504)	(62,222)	(41,277)	(40,451)
Issuance (Retirement) of Debt	(1,196)	(760)	888	0	0
Dividends Paid	0	0	0	(10,246)	(10,714)
Other Financing Cash Flows	(9,265)	(9,829)	(11,036)	0	0
<b>Cash Flow from Financing</b>	<b>(69,757)</b>	<b>(72,093)</b>	<b>(72,370)</b>	<b>(51,523)</b>	<b>(51,166)</b>
Foreign Exchange	(506)	(421)	(612)	0	0
<b>Net Change in Cash</b>	<b>934</b>	<b>2,169</b>	<b>6,781</b>	<b>38,677</b>	<b>36,402</b>

Source: Company Filings, Xignite, Valuentum Projections

Note: Pro forma data in discounted cash-flow valuation may reflect significant adjustments from GAAP accounting data, including cash (not effective) tax rates and other analytical adjustments on a backward-looking and forward-looking basis. No individual data, by itself, found in this report should be used to make any investment decision.

# Alphabet GOOG UNDERVALUED 6.1%

VALUENTUM  
**Buying Index™**

6

VALUENTUM  
**Value Rating**



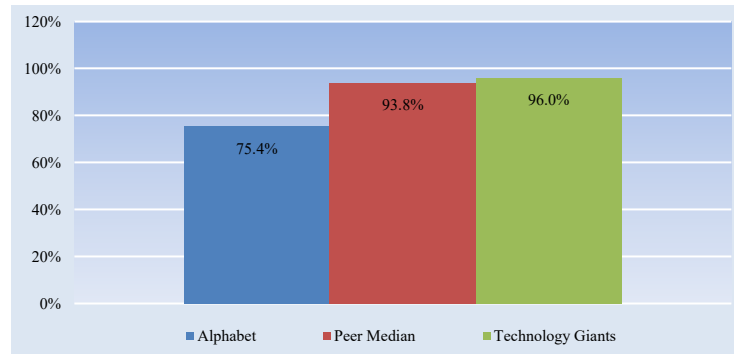
<b>Economic Castle</b> Attractive	<b>Estimated Fair Value</b> \$220.00	<b>Fair Value Range</b> \$176.00 - \$264.00	<b>Investment Style</b> MEGA-CAP BLEND	<b>Sector</b> Information Technology	<b>Industry</b> Technology Giants
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## Technology Giants

### Technology Giants

### FAIRLY VALUED

We think the Technology Giants industry is fairly valued at this time. The industry's market cap is trading between 80% and 120% of our estimate of its fair value based on our DCF process. Although we use a firm-specific ValueRisk™ measure to determine whether a firm is undervalued or overvalued based on our DCF process, we consider an industry to be undervalued if it is trading below 80% of our estimate of its fair value and overvalued if it is trading at over 120% of our estimate of its fair value. We think these fair value ranges are appropriate given the diversification benefits of holding a basket of stocks. Although there may be individual opportunities within the Technology Giants industry, we don't find the industry as a whole attractive based solely on valuation.



The above bar chart reveals the price/fair value of the company, its peers, and the industry as a whole.

Shaded blue denotes that the firm has earned the highest rating for that respective category.

Company Name	Ticker	Market Cap (USD-mil)	Investment Style	DCF Valuation	Relative Valuation	ValueCreation™	ValueRisk™	ValueTrend™	Technicals	Relative Strength
Adobe Systems	ADBE	168,574	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BEARISH	WEAK
Advanced Micro Devices	AMD	187,922	LARGE-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	POOR	MEDIUM	NEGATIVE	BEARISH	WEAK
Alibaba	BABA	255,066	MEGA-CAP VALUE	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	POSITIVE	BULLISH	STRONG
Alphabet	GOOG	2,022,560	MEGA-CAP BLEND	UNDERVALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	WEAK
Amazon.com	AMZN	2,321,954	MEGA-CAP BLEND	FAIRLY VALUED	UNATTRACTIVE	GOOD	MEDIUM	POSITIVE	BEARISH	NEUTRAL
Analog Devices	ADI	97,611	LARGE-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	NEUTRAL
Ansys	ANSS	28,951	LARGE-CAP GROWTH	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	NEGATIVE	BEARISH	WEAK
Apple	AAPL	3,132,413	MEGA-CAP VALUE	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	WEAK
Applied Materials	AMAT	141,523	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	POSITIVE	VERY BEARISH	WEAK
Automatic Data Processing	ADP	121,972	LARGE-CAP CORE	FAIRLY VALUED	NEUTRAL	EXCELLENT	LOW	POSITIVE	BEARISH	NEUTRAL
Baidu	BIDU	32,425	LARGE-CAP VALUE	FAIRLY VALUED	NEUTRAL	GOOD	MEDIUM	POSITIVE	BULLISH	NEUTRAL
Booking Holdings	BKNG	166,777	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	VERY BULLISH	WEAK
Broadcom	AVGO	916,850	MEGA-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	NEGATIVE	BEARISH	WEAK
Cisco	CSCO	242,209	MEGA-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	VERY BEARISH	STRONG
eBay	EBAY	33,509	LARGE-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	STRONG
Enphase Energy	ENPH	9,079	MID-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	WEAK
IBM	IBM	229,208	MEGA-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	VERY BEARISH	STRONG
Intel	INTC	103,833	LARGE-CAP CORE	FAIRLY VALUED	UNATTRACTIVE	POOR	VERY HIGH	POSITIVE	BULLISH	STRONG
KLA Corp	KLAC	100,046	LARGE-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BULLISH	STRONG
Korn/Ferry	KFY	3,389	MID-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	STRONG
Lam Research	LRCX	98,107	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	STRONG
Manpower	MAN	2,708	MID-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BEARISH	WEAK
Mastercard	MA	512,826	MEGA-CAP GROWTH	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	NEUTRAL
Meta Platforms	META	1,611,331	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	NEUTRAL
Micron Technology	MU	95,411	LARGE-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	POOR	MEDIUM	NEGATIVE	BEARISH	WEAK
Microsoft	MSFT	2,944,636	MEGA-CAP BLEND	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	WEAK
Nvidia	NVDA	3,161,519	MEGA-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	POSITIVE	BEARISH	WEAK
Oracle	ORCL	431,289	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	WEAK
PayPal	PYPL	76,316	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	GOOD	LOW	POSITIVE	BEARISH	WEAK
QUALCOMM	QCOM	168,431	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BEARISH	NEUTRAL
Salesforce.com	CRM	273,475	MEGA-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	NEUTRAL	WEAK
Taiwan Semiconductor	TSM	1,028,073	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BEARISH	NEUTRAL
Texas Instruments	TXN	167,960	LARGE-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	NEGATIVE	BEARISH	WEAK
Visa	V	814,480	MEGA-CAP GROWTH	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	VERY BEARISH	NEUTRAL

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## Valuentum's Full Page Stock Report

## A DCF Valuation

Shows whether the firm is undervalued, fairly valued, or overvalued based on our DCF process and by how much.

**B Valuentum Buying Index (VBI)**

Provides insight into the timeliness of an investment opportunity. We rank firms from 1 to 10 based on rigorous financial, valuation, and technical analysis. A 10 represents one of our top picks.

### C Valuentum Value Rating (VVR)

Indicates whether we think a firm is undervalued, fairly valued, or overvalued on the basis of our DCF process.



## D Investment Considerations

Evaluates firms on 12 different measures, from the firm's growth and cash flow generation to the stock's money flow index and upside/downside volume. We reveal technical support and resistance levels.

### E 30-week Price and Volume Action

**Volume Action**  
Displays the last accumulation or distribution week of the stock and historical price and volume action.



## Company Vitals

Shows sector, industry and other relevant company information.

### Normalized EPS and EBITDA

Estimation of the firm's normalized earnings measures and the corresponding valuation multiples.

## Returns Summary

3-year averages of the firm's key return measures, including return on invested capital, with and without goodwill.

## M Leverage, Coverage, and Liquidity

A snapshot of the company's financial health.

## Financial Summary

A summary of the proforma financial statements found in the extended report.

## About Valuentum

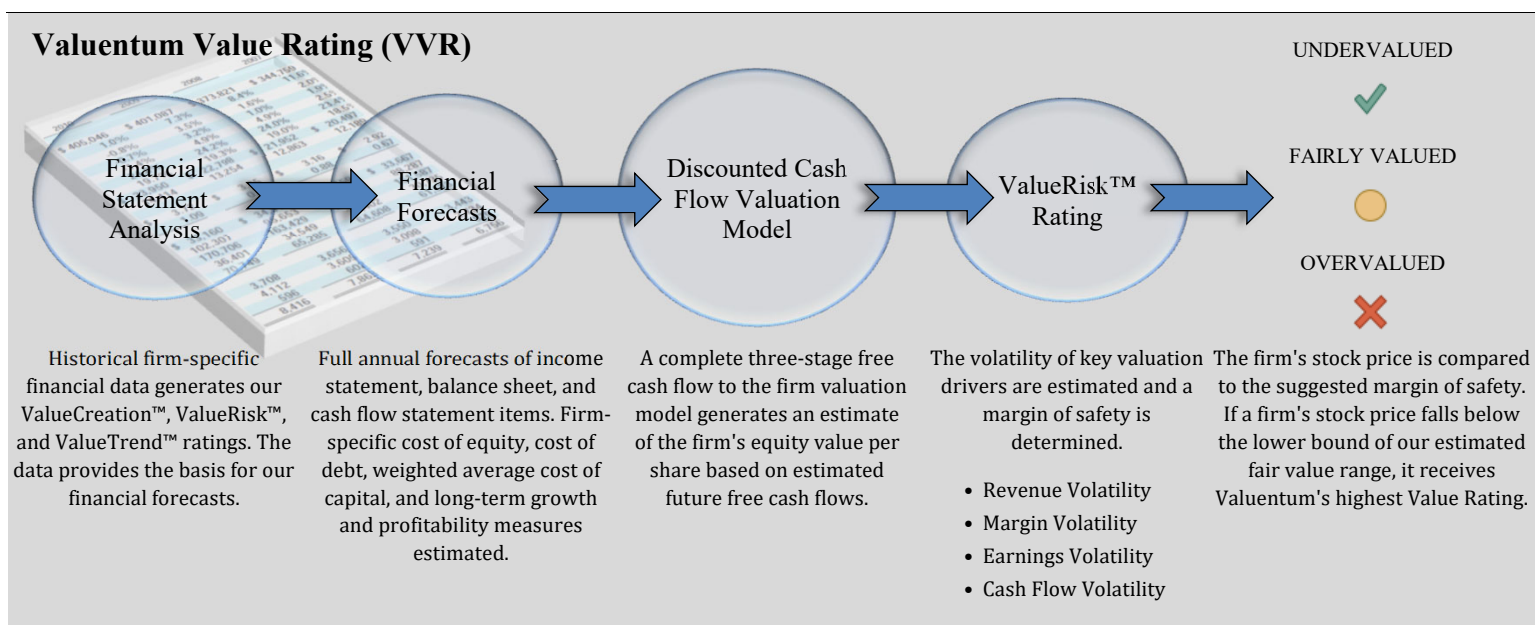
@Valuentum, we strive to stand out from the crowd. Most investment research publishers fall into a few camps, whether it be value, growth, income, momentum, chartist or some variant of the aforementioned. We think each in its own right holds merit, but we think the combination of these approaches can be even more powerful. After all, stock price movements aren't just driven by investors of the value or growth variety, but by all market participants. Therefore, we look at stocks from a variety of investment perspectives in order to better understand and identify ideas. We want to provide relevant information.

The core of our process is grounded in rigorous discounted cash flow analysis and incorporates the concept of a margin of safety. We offer a fair value estimate for each company and provide a relative valuation assessment in the context of a company's industry and closest peers. A cross section of our ValueCreation™ and ValueRisk™ ratings provides a financial assessment of a company's business quality, while our ValueTrend™ rating offers insight into the trajectory of a firm's economic profit creation. The Economic Castle rating measures the magnitude of future economic value generation, and the Dividend Cushion ratio assesses the financial capacity of a company to keep raising its dividend.

Our analysis doesn't stop there. We also offer a technical evaluation of the stock as well as other momentum indicators. We not only want to reveal to readers which firms may be undervalued, in our view, but we also want to provide readers with information to help them assess entry and exit points. Most research publishers focus on arriving at a target price or fair value estimate, but may fall short of providing a technical assessment to bolster buy and sell disciplines. We strive to go the distance and provide readers with answers--not half the story.

An explanation of our approach would not be complete if we didn't describe our ideal stock idea. We're looking for companies that are undervalued--both on a DCF basis and versus peers--have strong growth potential, have a solid track record of creating economic profits for shareholders with reasonable risk, are strong cash flow generators, have manageable financial leverage, and are currently showing bullish technical and momentum indicators. For dividend growth ideas, we look for companies that have both the capacity and willingness to keep raising the dividend.

Can such stock ideas exist? Subscribe to Valuentum to receive our best investment ideas and analysis on hundreds of stocks, dividends, ETFs and more.





# Methodology for Picking Stocks - Valuentum Buying Index™ (VBI)

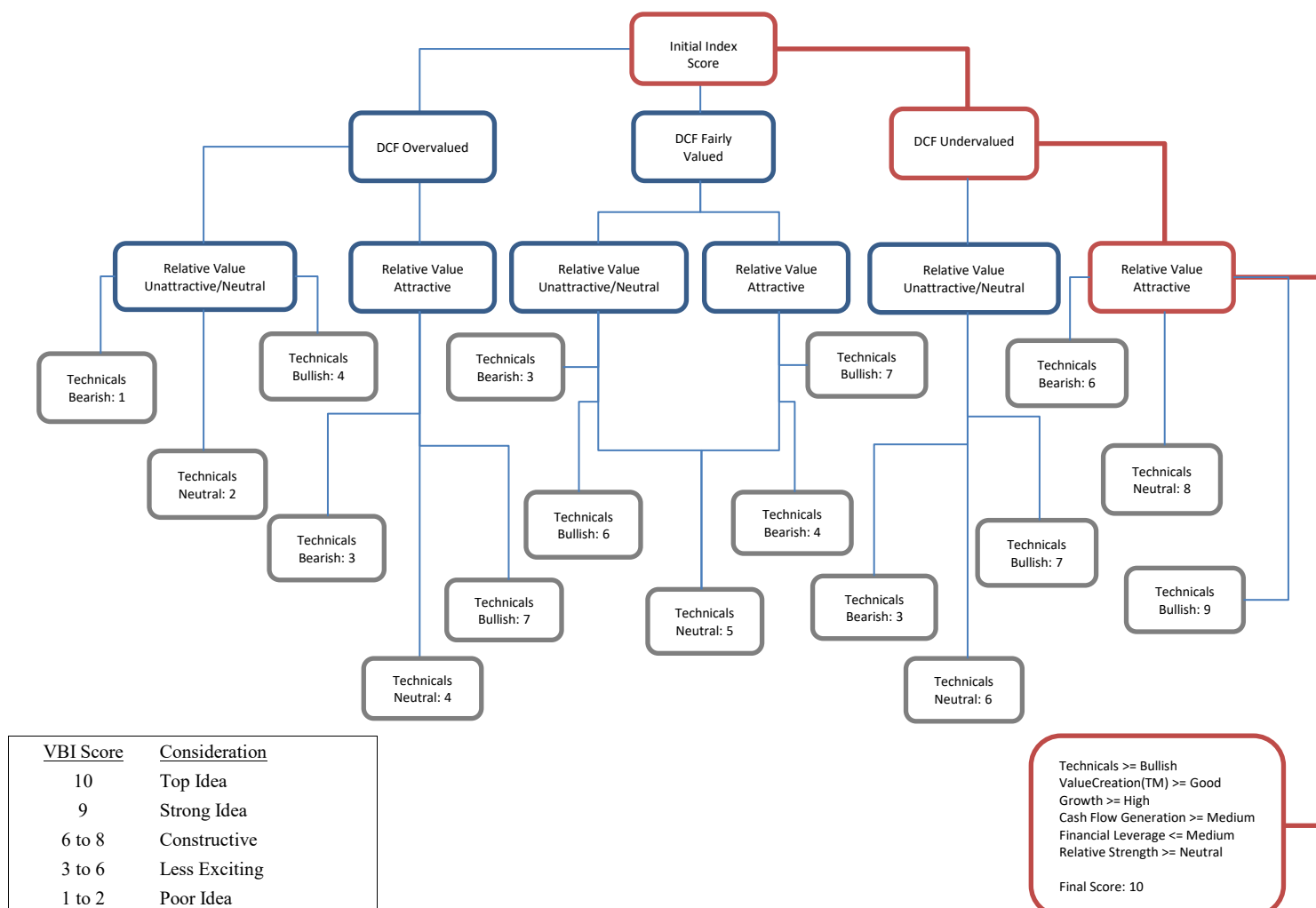
@Valuentum, we like to look at companies from a number of different perspectives. The Valuentum Buying Index (VBI) combines rigorous financial and valuation analysis with an evaluation of a stock's technicals to derive a rating between 1 and 10 for each company. The VBI places considerable emphasis on a company's discounted cash-flow (DCF) valuation, its relative valuation versus peers (both forward PE and PEG ratios), and its technicals in order to help readers assess entry and exit points on the most interesting ideas.

Let's follow the red line on the flow chart below to see how a company can score a 10, the best mark on the index. First, the company would need to be 'undervalued' on a DCF basis and 'attractive' on a relative

value basis. The stock would also have to be exhibiting 'bullish' technicals. The firm would need a ValueCreation™ rating of 'good' or 'excellent', exhibit 'high' or 'aggressive' growth prospects, and generate at least a 'medium' or 'neutral' assessment for cash flow generation, financial leverage, and relative price strength.

This is a tall order for any company. Stocks that don't make the cut for a 10 are ranked accordingly, with the least attractive stocks, in our opinion, garnering a rating of 1. Most of our coverage universe registers ratings between 3 and 7, but at any given time there could be large number of companies garnering either very high or very low scores, especially at market lows or tops, respectively.

The Best Ideas Newsletter portfolio puts the VBI into practice.



# Glossary

**Estimated Fair Value.** This measure is our opinion of the fair equity value per share of the company. If our forecasts prove accurate, which may not always be the case, we may expect a firm's stock price to converge to this value within the next 3 years.

**Fair Value Range.** The fair value range represents an upper bound and lower bound, between which we would consider the firm to be fairly valued. The range considers our estimate of the firm's fair value and the margin of safety suggested by the volatility of key valuation drivers, including revenue, gross margin, earnings before interest, and enterprise free cash flow (the determinants behind our ValueRisk™ rating).

**DCF Valuation.** We opine on the firm's valuation based on our DCF process. Firms that are trading with an appropriate discount to our fair value estimate receive an UNDERVALUED rating. Firms that are trading within our fair value range receive a FAIRLY VALUED rating, while firms that are trading above the upper bound of our fair value range receive an OVERVALUED rating.

**Relative Value.** We compare the firm's forward price-to earnings (PE) ratio and its price/earnings-to-growth (PEG) ratio to that of its peers. If both measures fall below the peer median, the firm receives an ATTRACTIVE rating. If both are above the peer median, the firm receives an UNATTRACTIVE rating. Any other combination results in a NEUTRAL rating.

**ValueCreation™.** This is a proprietary Valuentum measure. ValueCreation™ indicates the firm's historical track record in creating economic value for shareholders, taking the average difference between ROIC (without goodwill) and the firm's estimated WACC during the past three years. The firm's performance is measured along the scale of EXCELLENT, GOOD, POOR, and VERY POOR. Those firms with EXCELLENT ratings have a demonstrated track record of creating economic value, while those that register a VERY POOR mark have been destroying economic value.

**ValueRisk™.** This is a proprietary Valuentum measure. ValueRisk™ indicates the historical volatility of key valuation drivers, including revenue, gross margin, earnings before interest, and enterprise free cash flow. The standard deviation of each measure is calculated and scaled against last year's measure to arrive at a percentage deviation for each item. These percentage deviations are weighted equally to arrive at the corresponding fair value range for each stock, measured in percentage terms. The firm's performance is measured along the scale of LOW, MEDIUM, HIGH, and VERY HIGH. The ValueRisk™ rating for each firm also determines the fundamental beta of each firm along the following scale: LOW (0.85), MEDIUM (1), HIGH (1.15), VERY HIGH (1.3).

**ValueTrend™.** This is a proprietary Valuentum measure. ValueTrend™ indicates the trajectory of the firm's return on invested capital (ROIC). Firms that earned an ROIC last year that was greater than the 3-year average of the measure earn a POSITIVE rating. Firms that earned an ROIC last year that was less than the 3-year average of the measure earn a NEGATIVE rating.

**Cash Flow Generation.** Firms' cash flow generation capacity are measured along the scale of STRONG, MEDIUM, and WEAK. A firm with a 3-year historical free cash flow margin (free cash flow divided by sales) greater than 5% receives a STRONG rating, while firms earning less than 1% of sales as free cash flow receive a WEAK rating.

**Financial Leverage.** Based on the firm's normalized debt-to-EBITDA metric, we rank firms on the following scale: LOW, MEDIUM, and HIGH. Companies with a normalized debt-to-EBITDA ratio below 1.5 receive a LOW score, while those with a measure above 3 receive a HIGH score.

**Upside/Downside Volume.** Heavy volume on up days and lower volume on down days suggests that institutions are heavily participating in a stock's upward advance. We use the trailing 14-week average of upside and downside volume to calculate an informative ratio. We rank each firm's U/D volume ratio along the following scale: BULLISH, IMPROVING, DETERIORATING, and BEARISH.

**Investment Style.** Valuentum uses its own proprietary stock-classification system. Nano-cap: Less than \$50 million; Micro-cap: Between \$50 million and \$200 million; Small-cap: Between \$200 million and \$2 billion; Mid-cap: Between \$2 billion and \$10 billion; Large-cap: Between \$10 billion and \$200 billion; Mega-cap: Over \$200 billion. Blend: Firm's that we think are undervalued and exhibit high growth prospects (growth in excess of three times the rate of assumed inflation). Value: Firm's that we believe are undervalued, but do not exhibit high growth prospects. Growth: Firms that are not undervalued, in our opinion, but exhibit high growth prospects. Core: Firms that are neither undervalued nor exhibit high growth prospects.

**Company Vitals.** In this section, we list key financial information and the sector and industry that Valuentum assigns to the stock. The P/E-Growth (5-yr), or PEG ratio, divides the current share price by last year's earnings (EPS) and then divides that quotient by our estimate of the firm's 5-year EPS growth rate. The estimated normalized diluted EPS and estimated normalized EBITDA represent the five-year forward average of these measures used in our discounted cash flow model. The P/E on estimated normalized EPS divides the current share price by estimated normalized diluted EPS. The EV/estimated normalized EBITDA considers the current enterprise value of the company and divides it by estimated normalized EBITDA. EV is defined as the firm's market capitalization plus total debt, minority interest, preferred stock less cash and cash equivalents.

**Business Quality Matrix.** We compare the firm's ValueCreation™ and ValueRisk™ ratings. The box is an easy way for investors to quickly assess the business quality of a company. Firms that generate economic profits with little operating variability score near the top right of the matrix.

**Timeliness Matrix.** We compare the company's recent stock performance relative to the market benchmark with our assessment of its valuation. Firms that are experiencing near-term stock price outperformance and are undervalued by our estimate may represent timely buys.

**Range of Potential Outcomes.** The firm's margin of safety is shown in the graphic of a normal distribution. We consider a firm to be undervalued if its stock price falls along the green line and overvalued if the stock price falls along the red line. We consider the firm to be fairly valued if its stock price falls along the yellow line.

**Return on Invested Capital.** At Valuentum, we place considerable emphasis on return on invested capital (both with and without goodwill). The measure focuses on the return (earnings) the company is generating on its operating assets and is superior to return on equity and return on assets, which can be skewed by a firm's leverage or excess cash balance, respectively.

**Technical Evaluation.** We evaluate a firm's near-term and medium-term moving averages and money flow index (MFI) to assign each firm a rating along the following scale: VERY BULLISH, BULLISH, NEUTRAL, BEARISH, and VERY BEARISH.

**Stock Price Relative Strength.** We assess the performance of the company's stock during the past quarter, 13 weeks, relative to an ETF that mirrors the aggregate performance of constituents of the stock market. Firms are measured along the scale of STRONG, NEUTRAL, and WEAK. Companies that have outperformed the market index by more than 2.5% during this 13-week period receive a STRONG rating, while firms that trailed the market index by more than 2.5% during this 13-week period receive a WEAK rating.

**Money Flow Index (MFI).** The MFI is a technical indicator that measures buying and selling pressure based on both price and volume. Traders typically use this measure to identify potential reversals with overbought and oversold levels. We use a 14-week measure to rank firms along the following scale: EXTREMELY OVERBOUGHT (>90), OVERBOUGHT (80-90), NEUTRAL (20-80), OVERSOLD (10-20), EXTREMELY OVERSOLD (0-10).

## Disclosures, Disclaimers & Additional Sources

To send us feedback or if you have any questions, please contact us at [valuentum@valuentum.com](mailto:valuentum@valuentum.com). We're always looking for ways to better serve your investment needs and improve our research.

GOOG Rating History	Price	Fair Value	VBI
2-May-25	\$165.81	\$220.00	6
28-Jan-25	\$196.72	\$205.00	7
11-Nov-24	\$181.16	\$193.00	7
21-Aug-24	\$167.90	\$188.00	4
4-Jun-24	\$174.17	\$178.00	5
15-Mar-24	\$142.17	\$164.00	4
22-Dec-23	\$142.72	\$152.00	7
25-Oct-23	\$127.77	\$133.00	4
7-Jul-23	\$120.14	\$127.00	6
17-Apr-23	\$105.90	\$118.00	7
24-Dec-22	\$88.73	\$128.00	6
22-Sep-22	\$100.40	\$140.00	3
26-Aug-22	\$111.30	\$157.00	3
17-Jun-22	\$2,157.31	\$3,146.00	3

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