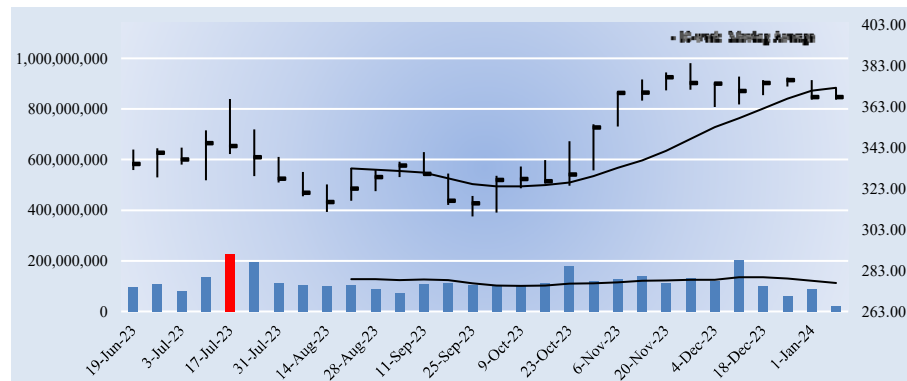


**Microsoft MSFT FAIRLY VALUED****Buying Index™****5****Value Rating**

Economic Castle	Estimated Fair Value	Fair Value Range	Investment Style	Sector	Industry
Attractive	\$400.00	\$320.00 - \$480.00	MEGA-CAP BLEND	Information Technology	Technology Giants

**Microsoft is an excellent enterprise. We love shares, and the firm has a tremendous opportunity in artificial intelligence [AI], of which it maintains a leading position.**

**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)	\$2,720,350
Avg Weekly Vol (30 wks)	116,967
30-week Range (USD)	309.45 - 384.3
Valuentum Sector	Information Technology
5-week Return	-0.2%
13-week Return	11.1%
30-week Return	8.4%
Dividend Yield %	0.8%
Dividends per Share	3.00
Forward Dividend Payout Ratio	26.4%
Est. Normal Diluted EPS	15.14
P/E on Est. Normal Diluted EPS	24.3
Est. Normal EBITDA	151,183
Forward EV/EBITDA	22.8
EV/Est. Normal EBITDA	17.6
Forward Revenue Growth (5-yr)	12.4%
Forward EPS Growth (5-yr)	14.7%

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

**Returns Summary**

3-year Historical Average

Return on Equity	44.4%
Return on Assets	19.6%
ROIC, with goodwill	37.8%
ROIC, without goodwill	54.3%

ROIC = Return on Invested Capital; NMF = Not Meaningful

**Leverage, Coverage, and Liquidity**

In Millions of USD

Total Debt	47,237
Net Debt	-64,019
Total Debt/EBITDA	0.5
Net Debt/EBITDA	NMF
EBITDA/Interest	51.1
Current Ratio	1.8
Quick Ratio	1.6

NMF = Not Meaningful

**Investment Highlights**

- Microsoft's products include operating systems, cloud services, server applications, desktop and server management tools, software development tools, video games, and online advertising. It also designs, manufactures and sells hardware, including PCs, tablets, gaming consoles, and other smart accessories that integrate with its cloud offerings. Artificial intelligence is its next big opportunity.
- Microsoft can't scoop up its own shares fast enough through its massive buyback program. The firm floats debt with the best credit quality (Aaa), and we can't think of another firm with a better financial profile. Financial discipline and strong execution remain hallmarks of its business.
- Microsoft is not a tech dinosaur, and momentum behind new devices and platforms continues to build. Its cloud-based product suite, Office 365 and Azure, continues to catch favor among consumers and enterprises at impressive rates. This momentum has allowed it to achieve goals in commercial cloud annual recurring revenue well ahead of schedule.

- Microsoft acquired LinkedIn for over \$26 billion in cash, and the deal has expanded its addressable market, while helping drive engagement across Office 365. The firm's impressive financial profile gives us confidence in it moving forward, and its tremendous free cash flow generating capacity has not wavered.

- Microsoft's Windows business has been the bread-and-butter of the company for such a long time, but investor focus has shifted to the company's other segments as its business model moves towards the cloud. Microsoft is helping drive the transition to cloud-based software products.

**Structure of the Software Industry**

Firms that serve the mature software markets—or those consisting of basic business applications—have powerful distribution channels, large installed bases, and fortress balance sheets. These entrenched competitors benefit from significant customer switching costs, which make it nearly impossible for new entrants to gain a foothold. Participants generally benefit from high-margin license revenue and generate significant returns on investment. Still, the shift to cloud computing has created both opportunities and challenges, and the enterprise software landscape continues to evolve. We like the group.

**Investment Considerations**

DCF Valuation	FAIRLY VALUED
Relative Valuation	UNATTRACTIVE
ValueCreation™	EXCELLENT
ValueRisk™	LOW
ValueTrend™	NEGATIVE
Cash Flow Generation	STRONG
Financial Leverage	LOW
Growth	HIGH
Technical Evaluation	NEUTRAL
Relative Strength	NEUTRAL
Money Flow Index (MFI)	OVERBOUGHT
Upside/Downside Volume (U/D)	BULLISH
Near-term Technical Resistance, 10-wk MA	372.00

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
Apple	29.2	3.6	107.6%
Amazon.com	NMF	NMF	99.6%
Alphabet	24.6	1.8	93.9%
Meta Platforms	23.2	1.6	99.9%
Peer Median	24.6	1.8	99.7%
<b>Microsoft</b>	<b>32.4</b>	<b>2.6</b>	<b>91.9%</b>

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

**Financial Summary**

	Actual	Projected
Fiscal Year End:	Jun-22	Jun-23
Revenue	198,270	211,915
Revenue, YoY%	18.0%	6.9%
Non-GAAP Operating Income	83,383	88,523
Non-GAAP EBIT %	42.1%	41.8%
Non-GAAP Net Income	72,738	72,361
Non-GAAP NI Margin %	36.7%	34.1%
Non-GAAP Diluted EPS	9.65	9.68
Non-GAAP Dil EPS, YoY %	19.8%	0.4%
Non-GAAP FCF (CFO-capex)	65,149	59,475
Non-GAAP FCF Margin %	32.9%	28.1%

In Millions of USD (except for per share items)

**Microsoft MSFT FAIRLY VALUED****Buying Index™****5****Value Rating**

<b>Economic Castle</b>	<b>Estimated Fair Value</b>	<b>Fair Value Range</b>
Attractive	\$400.00	\$320.00 - \$480.00

<b>Investment Style</b>	<b>Sector</b>	<b>Industry</b>
MEGA-CAP BLEND	Information Technology	Technology Giants

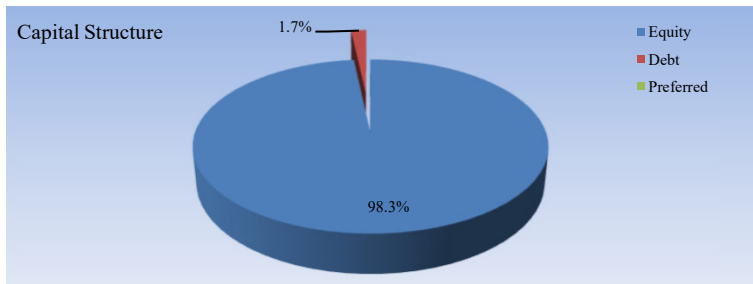
**Economic Profit Analysis****ValueCreation™****EXCELLENT**

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. Microsoft's 3-year historical return on invested capital (without goodwill) is 54.3%, which is above the estimate of its cost of capital of 8.1%. 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	46.2%
ROIC - WACC Spread, 5-year projected average	42.8%
These spreads equal the firm's annual average ROIC (excluding goodwill) less its WACC.	

**ValueTrend™****NEGATIVE**

Microsoft 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 46.4% last year from its trailing 3-year average of 54.3%. We expect ROIC (excluding goodwill) to be in the ballpark of about 55% by the end of our discrete forecast period, with downside risk to about 44% over that time period.

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

Risk Free Rate Assumption	4.3%
Fundamental Beta (ERP multiplier)	0.6
Estimated Equity Risk Premium	6.5%
<b>Cost of Equity Assumption</b>	<b>8.2%</b>

**After-tax Cost of Debt**

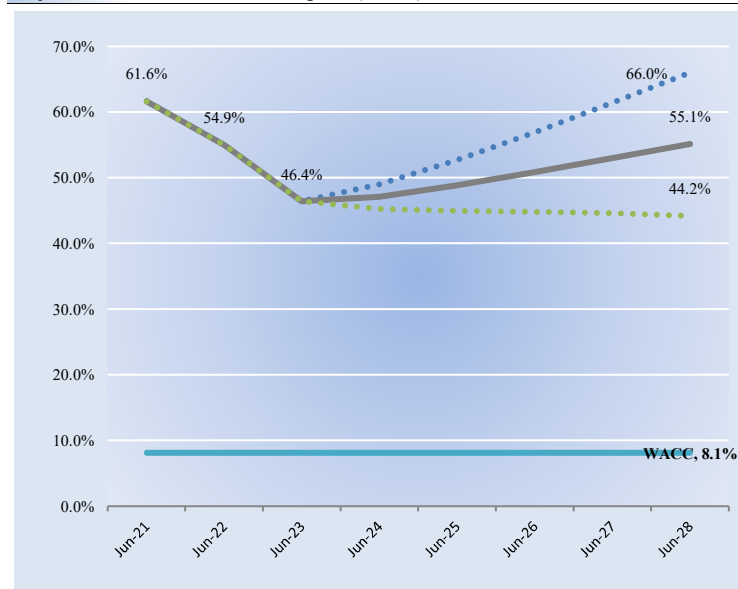
Risk Free Rate Assumption	4.3%
Synthetic Credit Spread	0.88%
Cost of Debt Assumption	5.2%
Cash Tax Rate Assumption	18.0%
<b>After-tax Cost of Debt Assumption</b>	<b>4.3%</b>

**Cost of Preferred Stock**

Preferred Dividends	0
Value of Preferred Stock	0
Cost of Preferred Assumption	NA

**Weighted Average Cost of Capital (WACC)****8.1%**

ERP = Equity Risk Premium

**Adjusted 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**

Microsoft has had one of the most attractive dividend growth profiles across our coverage universe. It boasts an impressive balance sheet with a strong net cash position, inclusive of short-term debt. The company's proposed deal for Activision may change the make-up of its balance sheet, however. Microsoft's purchase of LinkedIn has been positive, expanding its addressable market and the potential to drive engagement across Office 365. The firm is helping drive the transition to cloud-based software products, and we're expecting such endeavors to continue generating tremendous earnings expansion. It remains one of our favorite dividend growth ideas and has an enviable position in artificial intelligence via ChatGPT.

**Potential Weaknesses**

Right now, Microsoft may be one of the best future dividend growth stocks out there, but it is up to management to keep it as one. Though it has great financials, that doesn't mean the company should be foolish with its acquisition program. We're not sure we like the proposed Activision deal much. Dividend increases are expected to continue, and management continues to point to strong fundamental performance. Microsoft boasts a massive net cash position and strong free cash flow generation, and it remains a strong source of income for investors. When it comes to future expected dividend growth, Microsoft has one of the best profiles. It's hard to find much wrong with this dividend growth story.

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.

Microsoft MSFT FAIRLY VALUED

Economic Castle Attractive	Estimated Fair Value \$400.00	Fair Value Range \$320.00 - \$480.00	Investment Style MEGA-CAP BLEND	5	Value Rating	Industry Technology Giants
			Sector Information Technology			

Growth Analysis

Revenue Growth		HIGH		
		Last Fiscal Year Revenue	3-year Historical CAGR	5-year Projected CAGR
Microsoft	USD	211,915	14.0%	12.4%
Apple	USD	383,285	11.8%	5.4%
Amazon.com	USD	513,983	22.4%	9.5%
Alphabet	USD	282,836	20.4%	9.9%
Meta Platforms	USD	116,609	18.2%	12.1%
Peer Median			19.3%	9.7%
Industry Median			14.2%	6.2%


Microsoft's revenue expansion has trailed the median of both its peer group and its industry group during the past three years. We expect the firm's revenue expansion to outpace the median of its peer group and industry group during the next five years. Our growth assessment of each firm is based on the firm's 5-year forward revenue CAGR. Microsoft'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
Microsoft	USD	102,023	16.1%	13.0%
Apple	USD	125,820	17.6%	7.0%
Amazon.com	USD	54,169	14.2%	24.6%
Alphabet	USD	90,771	24.0%	12.8%
Meta Platforms	USD	42,241	6.7%	16.0%
Peer Median			15.9%	14.4%
Industry Median			14.5%	9.5%


Microsoft's EBITDA expansion has been greater than that of both its peer group and industry group during the past three years. We expect the firm's EBITDA to trail its peer group but outpace that of its 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
Microsoft	USD	72,361	17.8%	13.5%
Apple	USD	96,995	19.1%	7.6%
Amazon.com	USD	-2,722	-161.7%	-297.3%
Alphabet	USD	59,972	20.4%	14.8%
Meta Platforms	USD	23,200	7.9%	21.5%
Peer Median			13.5%	11.2%
Industry Median			13.8%	12.2%

Microsoft's net income expansion has been greater than that of both its peer group and industry group during the past three years. We expect the firm's net income expansion to outpace its peer group and industry group during the next five years. Meta Platforms sports the highest net income growth rate among peers.

  
**Buying Index™**

**5**

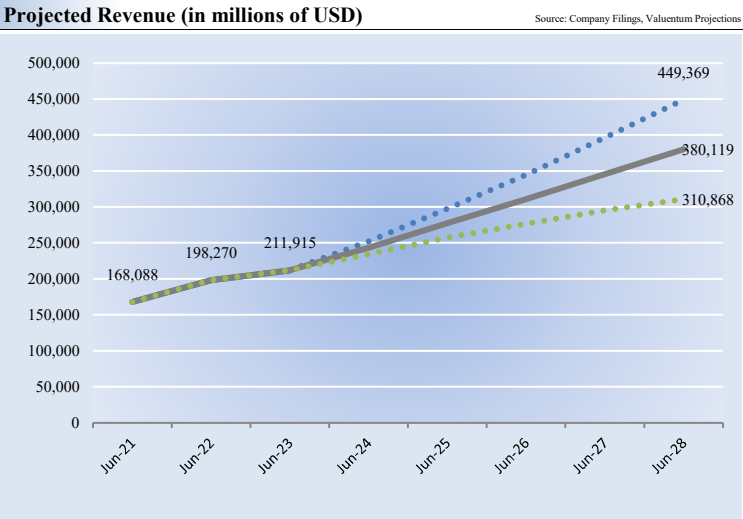
  
**Value Rating**



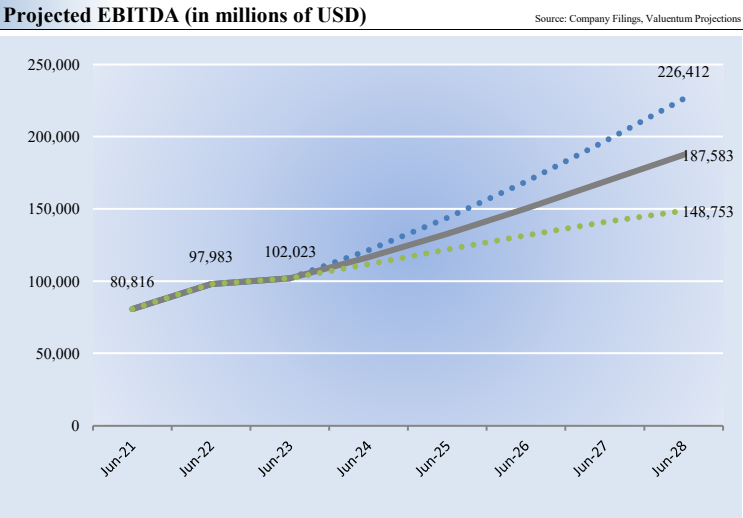
Investment Style  
MEGA-CAP BLEND

Sector  
Information Technology

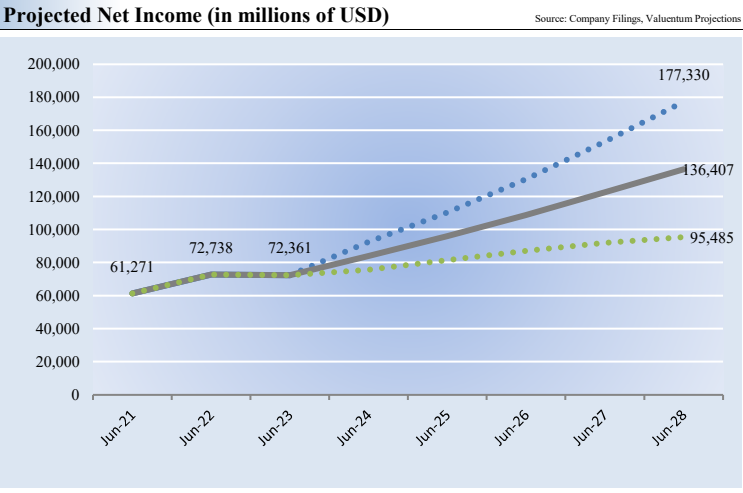
Industry  
Technology Giants



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



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



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

# Microsoft MSFT FAIRLY VALUED

**Economic Castle**  
Attractive

**Estimated Fair Value**  
\$400.00

**Fair Value Range**  
\$320.00 - \$480.00

**Buying Index™** 5

**Value Rating**

**Investment Style**  
MEGA-CAP BLEND

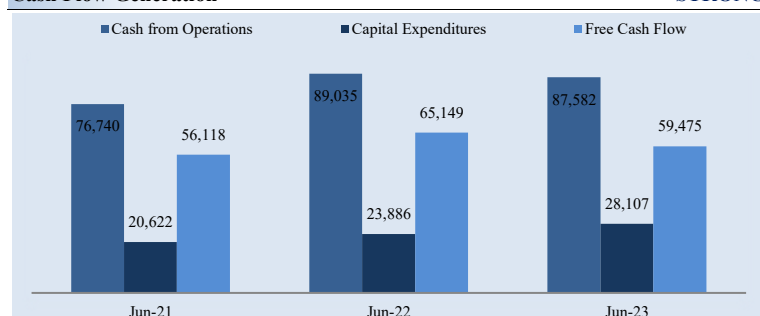
**Sector**  
Information Technology

**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. Microsoft's free cash flow margin has averaged about 31.4% 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 Microsoft, cash flow from operations increased about 14% from levels registered two years ago, while capital expenditures expanded about 36% over the same time period.

### Cash Flow from Operations

		Last Fiscal Year CFO	3-year Historical CAGR	5-year Projected CAGR
<b>Microsoft</b>	USD	<b>87,582</b>	<b>13.0%</b>	<b>12.9%</b>
Apple	USD	110,543	11.1%	9.9%
Amazon.com	USD	46,752	6.7%	27.1%
Alphabet	USD	91,495	18.8%	10.1%
Meta Platforms	USD	50,475	11.6%	11.5%
Peer Median			11.3%	10.8%
Industry Median			11.3%	9.9%

Microsoft's cash flow from operations expansion has been greater than that of both its peer group and industry group during the past three years. We expect the firm's cash flow from operations expansion to outpace 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.

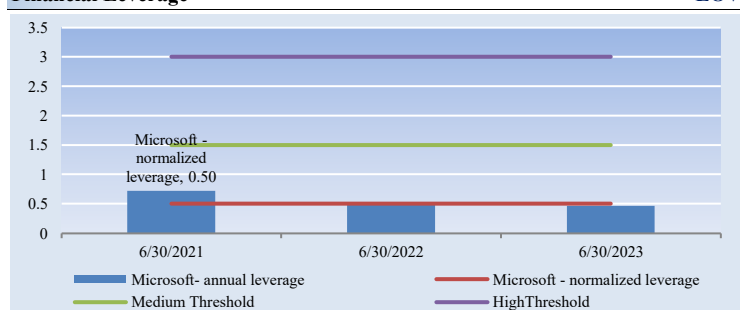
### Free Cash Flow (CFO-capital expenditures)

		Last Fiscal Year FCF	3-year Historical CAGR	5-year Projected CAGR
<b>Microsoft</b>	USD	<b>59,475</b>	<b>9.6%</b>	<b>16.3%</b>
Apple	USD	99,584	10.7%	10.3%
Amazon.com	USD	-16,893	-192.1%	-239.8%
Alphabet	USD	60,010	24.7%	13.2%
Meta Platforms	USD	19,044	-3.5%	21.0%
Peer Median			3.6%	11.7%
Industry Median			11.0%	10.3%

Microsoft's free cash flow expansion has been greater than that of its peer group but has trailed that of 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. Meta Platforms sports the highest expected free cash flow growth rate among peers.

### Financial Leverage

**LOW**

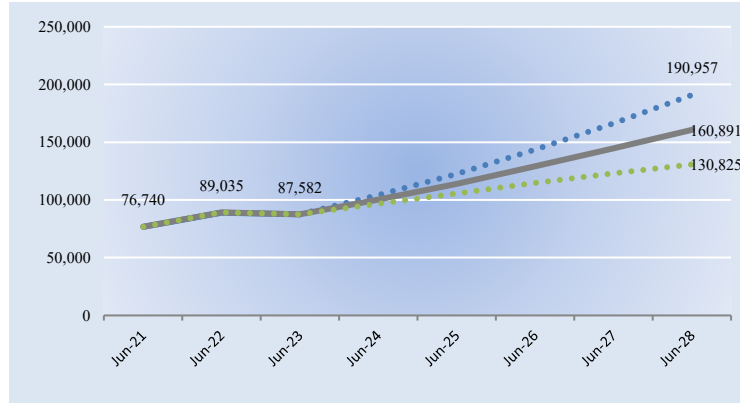


The bars above show the firm's annual debt-to-EBITDA. The red line shows the firm's normalized measure.

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. Microsoft's normalized debt-to-EBITDA measure of about 0.5 puts it in the **LOW** camp.

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

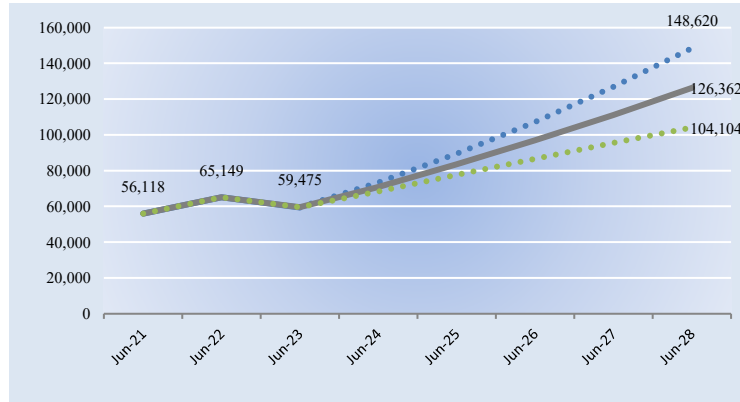
Source: Company Filings, Valuentum Projections



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.

Microsoft MSFT FAIRLY VALUED

VALUENTUM

**Buying Index™**

**5**

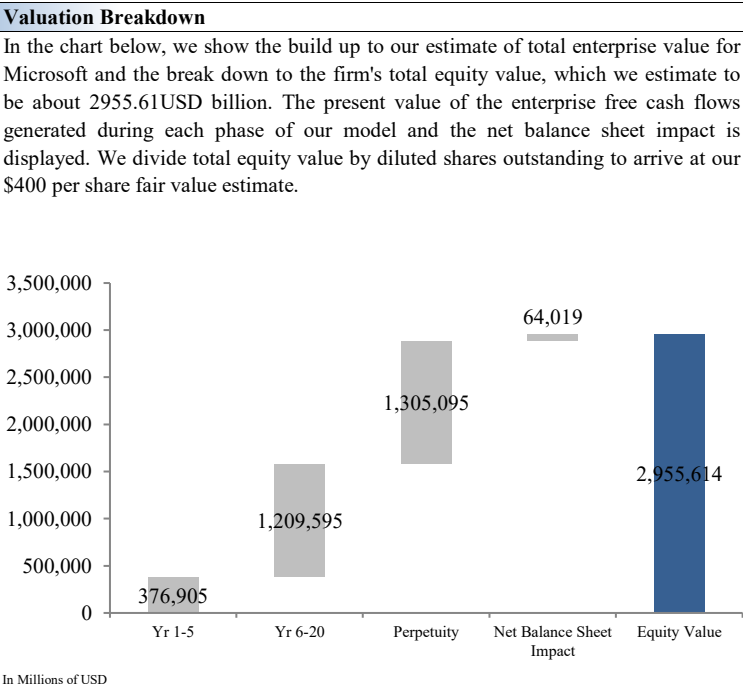
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**Value Rating**

<b>Economic Castle</b> Attractive	<b>Estimated Fair Value</b> \$400.00	<b>Fair Value Range</b> \$320.00 - \$480.00	<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 %	12.4%	
Avg. EBIT Margin %	42.5%	
Avg. Cash Tax Rate %	18.0%	
Earnings Before Interest CAGR %	13.3%	
Earnings Per Share CAGR %	14.7%	
Free Cash Flow to the Firm CAGR %	19.7%	
Earnings before interest = Net operating profits less adjusted taxes		
	<u>Long-term Projections</u>	
Phase II --> III FCFF CAGR %	6.3% (II)	3% (III)
Cost of Equity %	8.2%	
After-tax Cost of Debt %	3.9%	
Discount Rate (WACC) %	8.1%	
Synthetic credit spread = 0.875%		
	<u>Results</u>	
Phase I Present Value	376,905	
Phase II Present Value	1,209,595	
Phase III Present Value	1,305,095	
Total Firm Value	2,891,595	
Net Balance Sheet Impact	64,019	
Total Equity Value	2,955,614	
Diluted Shares Outstanding	7,397.3	
Fair Value per Share	\$400.00	



**DCF Valuation Summary**

We think Microsoft is worth \$400 per share with a fair value range of \$320.00 - \$480.00. 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 12.4% during the next five years, a pace that is lower than the firm's 3-year historical compound annual growth rate of 14%. Our model reflects a 5-year projected average operating margin of 42.5%, which is above Microsoft's trailing 3-year average. Beyond year 5, we assume free cash flow will grow at an annual rate of 6.3% for the next 15 years and 3% in perpetuity. For Microsoft, we use a 8.1% weighted average cost of capital to discount future free cash flows.

Enterprise Free Cash Flow				
	Fiscal Year End:	6/30/2021	6/30/2022	6/30/2023
Earnings before Interest		63,500	72,071	76,810
+ Depreciation		9,300	12,600	11,000
- Capital Expenditures		20,622	23,886	28,107
- Change in Working Capital		1,957	8,983	6,842
- Acquisitions		8,909	22,038	1,670
Enterprise Free Cash Flow (FCFF)		41,312	29,764	51,191
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 Microsoft. Over the next five years, we expect the firm's enterprise free cash flow to expand at about a 20% compound annual growth rate. During years 6 through 20, we expect the measure to grow at a 6.3% rate. Beyond year 20 (in perpetuity), we grow the firm's free cash flow at inflation (3%).				

Source: Company Filings, Valuentum Projections

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
Microsoft	5	32.4	24.3	2.6	22.8	17.6	14.7%	54.3%	0.8%	91.9%
Apple	6	29.2	24.4	3.6	22.5	19.3	8.7%	92.6%	0.5%	107.6%
Amazon.com	6	NMF	31.4	NMF	21.6	13.9	-297.3%	12.6%	0.0%	99.6%
Alphabet	7	24.6	18.3	1.8	16.7	13.0	17.1%	70.7%	0.0%	93.9%
Meta Platforms	7	23.2	16.6	1.6	16.3	12.3	24.9%	68.6%	0.0%	99.9%
Peer Median	6.5	24.6	21.3	1.8	19.1	13.5	12.9%	69.7%	0.0%	99.7%
Industry Median	6.0	23.7	18.2	2.0	16.3	13.0	13.4%	60.7%	0.7%	95.6%

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.





Microsoft MSFT FAIRLY VALUED

Economic Castle Attractive	Estimated Fair Value \$400.00	Fair Value Range \$320.00 - \$480.00	Investment Style MEGA-CAP BLEND	Sector Information Technology	Industry Technology Giants
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Valuentum

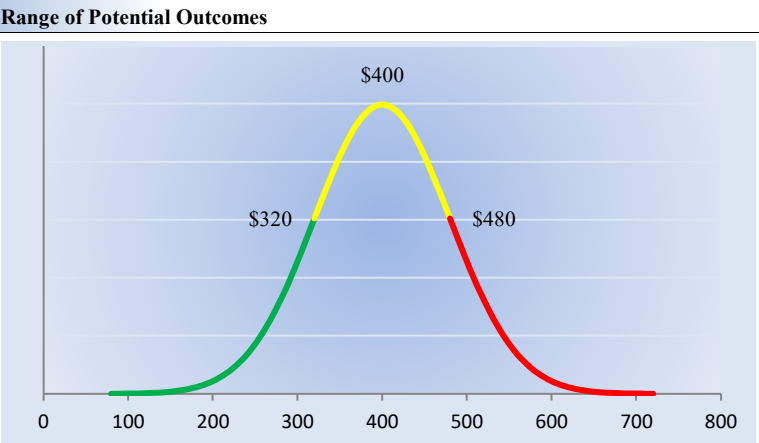
Buying Index™

5

Valuentum

Value Rating

Margin of Safety Analysis



ValueRisk™

LOW

Microsoft receives a ValueRisk™ rating of LOW based of 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	14.6%
Gross Margin Volatility	14.9%
Earnings (EBI) Volatility	15.8%
Cash Flow (FCFF) Volatility	17.1%
Fair Value Range	20.0%

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

Upside and Downside Probabilities

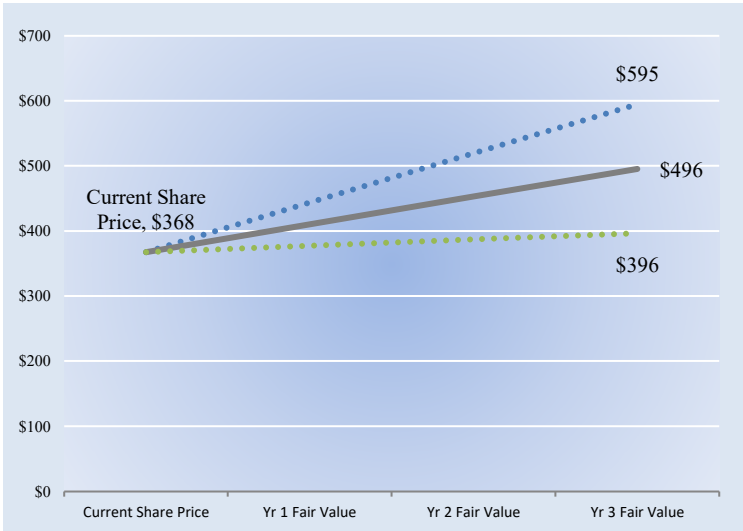
Probability (fair value < \$0)	Less than 0.1%
Probability (fair value > 2x current share price)	0.00%

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 \$400 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 Microsoft. We think the firm is attractive below \$320 per share (the green line), but quite expensive above \$480 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.

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 Microsoft's fair value at this point in time to be about \$400 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 Microsoft'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 \$496 per share in Year 3 represents our existing fair value per share of \$400 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.



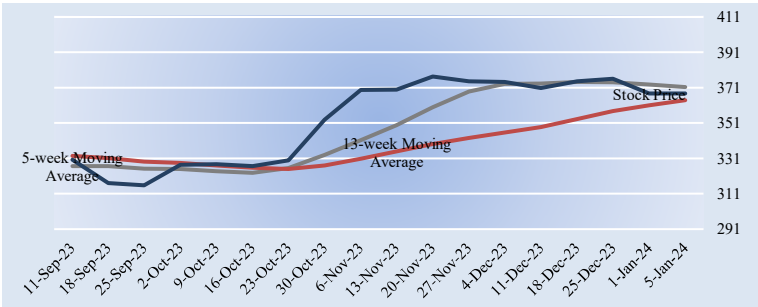
The graph above shows the expected future fair value of the firm's shares relative to its current stock price.

Microsoft MSFT FAIRLY VALUED

Economic Castle Attractive	Estimated Fair Value \$400.00	Fair Value Range \$320.00 - \$480.00	Investment Style MEGA-CAP BLEND	5	Value Rating	Industry Technology Giants
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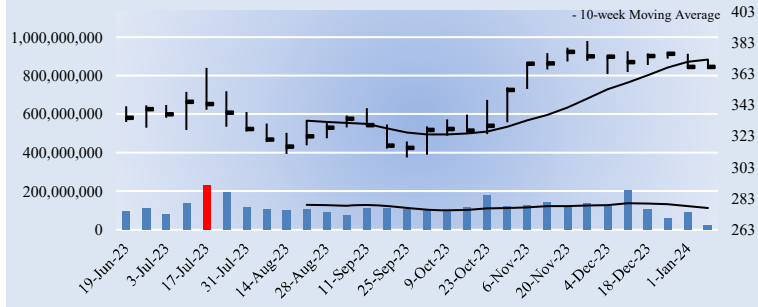
Technical Analysis

Technical EvaluationNEUTRAL



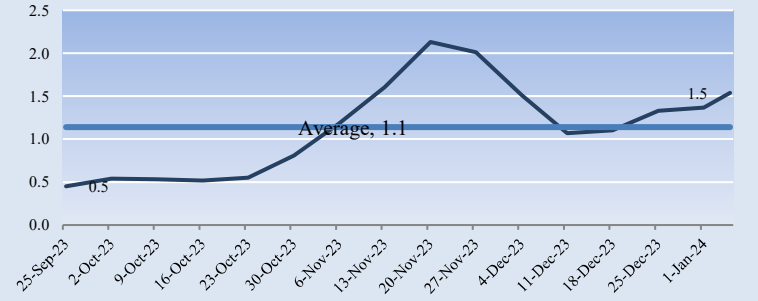
The firm's near-term moving average (5-week, grey line) and medium-term moving average (13-week, red line) are shown in the chart above. Typically, when a shorter-term moving average crosses a medium- or longer-term moving average from below, it represents a bullish signal. If the short-term moving average crosses from above, traders often view this as bearish. Microsoft's 5-week moving average resides above its 13-week measure, indicating a strong uptrend. However, the firm's Money Flow Index (MFI) suggests that a near-term pullback should be expected. We're NEUTRAL on the firm's technicals for now.

30-week Price and Volume Chart (weekly)



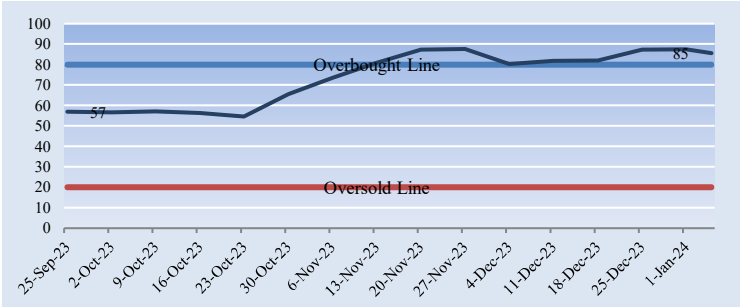
In the chart above, we pinpoint the heaviest accumulation or distribution week of the firm, determined by the week with the highest trading volume during the past 30 weeks. A heavy accumulation (buying) or distribution (selling) week often determines the future near-term direction of the firm's share 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 Microsoft, the week with the highest trading volume out of the last 30 weeks was a week of heavy selling, or distribution (red bar). Such market activity could indicate a reversal of an uptrend or further confirmation of a downtrend.

Upside/Downside VolumeBULLISH



The level and trend of the Upside/Downside (U/D) volume ratio reveals whether institutional participation has been bullish or bearish as of late. Microsoft's U/D volume ratio of 1.5 is not only greater than 1 but also is better than its trailing average, indicating BULLISH institutional interest during the past several weeks.

Money Flow Index (MFI)OVERBOUGHT



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. Microsoft's MFI of 85 indicates an OVERBOUGHT position and a high likelihood of a short-term pullback. We think the firm's shares have increased too far too fast to jump in at this point. The MFI can also be used to gauge the strength or weakness of a firm's price trend. In Microsoft's case, we think its price has reached an unsustainable near-term price extreme, trumping the presence of any near-term divergences between its stock price and money flow action.

Relative Price StrengthNEUTRAL

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, Microsoft's shares returned 11.1%, while the market benchmark returned 10.4%. We think Microsoft's 13-week relative price performance is NEUTRAL.

5-week Company Performance	-0.2%
5-week Market Benchmark Performance	5.1%
5-week Relative Performance vs. Market Benchmark	-5.3%
13-week Company Performance	11.1%
13-week Market Benchmark Performance	10.4%
13-week Relative Performance vs. Market Benchmark	0.7%
30-week Company Performance	8.4%
30-week Market Benchmark Performance	12.2%
30-week Relative Performance vs. Market Benchmark	-3.8%

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.

**Microsoft MSFT FAIRLY VALUED****Buying Index™****5****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$400.00**Fair Value Range**  
\$320.00 - \$480.00**Investment Style**  
MEGA-CAP BLEND**Sector**  
Information Technology**Industry**  
Technology Giants**Pro Forma Income Statement**

	----- Historical -----			----- Projected -----	
In Millions of USD (except for per share items)					
	Jun-21	Jun-22	Jun-23	Jun-24	Jun-25
Total Revenue	168,088	198,270	211,915	243,278	277,337
Cost of Goods Sold	52,232	62,650	65,863	75,724	86,169
Selling, General and Administrative Expenses	25,224	27,725	30,334	34,876	39,686
Other Operating Expenses	20,716	24,512	27,195	31,267	35,579
<b>Operating Income</b>	<b>69,916</b>	<b>83,383</b>	<b>88,523</b>	<b>101,412</b>	<b>115,902</b>
Unusual items	0	0	0	0	0
Operating Income, including unusual items	69,916	83,383	88,523	101,412	115,902
Interest Expense	(2,330)	(2,047)	(1,995)	(1,995)	(1,995)
Other Non-operating Income	3,516	2,380	2,783	2,994	2,994
<b>Pre-tax Income</b>	<b>71,102</b>	<b>83,716</b>	<b>89,311</b>	<b>102,411</b>	<b>116,901</b>
Income Taxes	9,831	10,978	16,950	18,434	21,042
<b>Income after tax</b>	<b>61,271</b>	<b>72,738</b>	<b>72,361</b>	<b>83,977</b>	<b>95,859</b>
Minority Interest and Equity Income	0	0	0	0	0
Net Income, excluding extra items	61,271	72,738	72,361	83,977	95,859
<b>Income Available to Common, excluding extra items</b>	<b>61,271</b>	<b>72,738</b>	<b>72,361</b>	<b>83,977</b>	<b>95,859</b>
<b>Diluted Earnings per Share, excluding extra items</b>	<b>8.05</b>	<b>9.65</b>	<b>9.68</b>	<b>11.35</b>	<b>13.09</b>
Diluted Weighted Shares Outstanding	7,608.0	7,540.0	7,472.0	7,397.3	7,323.3

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.



**Microsoft MSFT FAIRLY VALUED****Buying Index™****5****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$400.00**Fair Value Range**  
\$320.00 - \$480.00**Investment Style**  
MEGA-CAP BLEND**Sector**  
Information Technology**Industry**  
Technology Giants**Pro Forma Balance Sheet**

	----- Historical -----			----- Projected -----	
In Millions of USD (except for per share items)	Jun-21	Jun-22	Jun-23	Jun-24	Jun-25
<b>Assets</b>					
Total Cash (including marketable securities)	130,256	104,749	111,256	132,359	164,065
Inventory	2,636	3,742	2,500	2,945	3,432
Accounts Receivable	38,043	50,361	57,888	65,754	74,160
Other Current Assets	13,471	10,832	12,613	12,613	12,613
<b>Total Current Assets</b>	<b>184,406</b>	<b>169,684</b>	<b>184,257</b>	<b>213,671</b>	<b>254,270</b>
Gross Fixed Assets	122,154	147,206	178,238	207,750	238,148
(Accumulated Depreciation)	(51,351)	(59,660)	(68,251)	(80,879)	(95,275)
Net Property, Plant, and Equipment	70,803	87,546	109,987	126,871	142,873
Goodwill, Net	49,711	67,524	67,886	67,886	67,886
Intangibles, Net	7,800	11,298	9,366	6,866	4,366
Other Long-term Assets	21,059	28,788	40,480	40,480	40,480
<b>Total Assets</b>	<b>333,779</b>	<b>364,840</b>	<b>411,976</b>	<b>455,774</b>	<b>509,875</b>
<b>Liabilities</b>					
Accounts Payable	15,163	19,000	18,095	21,005	23,987
Other Current Liabilities	65,422	73,333	80,807	82,388	84,309
Current Portion of Long-term Debt	8,072	2,749	5,247	5,247	5,247
<b>Total Current Liabilities</b>	<b>88,657</b>	<b>95,082</b>	<b>104,149</b>	<b>108,640</b>	<b>113,542</b>
Long-term Debt	50,074	47,032	41,990	41,990	41,990
Other Long-term Liabilities	53,060	56,184	59,614	59,614	59,614
<b>Total Liabilities</b>	<b>191,791</b>	<b>198,298</b>	<b>205,753</b>	<b>210,244</b>	<b>215,146</b>
Preferred Stock	0	0	0	0	0
<b>Shareholders' Equity</b>					
Common Stock and Additional Paid in Capital	83,111	86,939	93,718	93,718	93,718
Retained Earnings	57,055	84,281	118,848	180,633	251,886
Other Equity	1,822	(4,678)	(6,343)	(28,821)	(50,875)
<b>Total Shareholders' Equity</b>	<b>141,988</b>	<b>166,542</b>	<b>206,223</b>	<b>245,530</b>	<b>294,729</b>
<b>Total Liabilities and Shareholders' Equity</b>	<b>333,779</b>	<b>364,840</b>	<b>411,976</b>	<b>455,774</b>	<b>509,875</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.

**Microsoft MSFT FAIRLY VALUED****Buying Index™****5****Value Rating****Economic Castle**  
Attractive**Estimated Fair Value**  
\$400.00**Fair Value Range**  
\$320.00 - \$480.00**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)	Jun-21	Jun-22	Jun-23	Jun-24	Jun-25
<b>Cash from Operations</b>					
Net Income	61,271	72,738	72,361	83,977	95,859
Depreciation and Amortization	10,900	14,600	13,500	15,128	16,896
Deferred Income Taxes	0	0	0	0	0
Operating Gains Or Losses	4,569	1,697	1,721	5,000	5,150
Changes in Working Capital	0	0	0	(3,820)	(3,991)
<b>Cash Flow from Operations</b>	<b>76,740</b>	<b>89,035</b>	<b>87,582</b>	<b>100,285</b>	<b>113,914</b>
<b>Cash from Investing</b>					
Purchase of Property, Plant, Equipment	(20,622)	(23,886)	(28,107)	(29,512)	(30,398)
Other Investing Cash Flows	(6,955)	(6,425)	5,427	0	0
<b>Cash Flow from Investing</b>	<b>(27,577)</b>	<b>(30,311)</b>	<b>(22,680)</b>	<b>(29,512)</b>	<b>(30,398)</b>
<b>Cash from Financing</b>					
Issuance (Retirement) of Stock	(25,692)	(30,855)	(20,379)	(27,478)	(27,203)
Issuance (Retirement) of Debt	(3,750)	(9,023)	(2,750)	0	0
Dividends Paid	(16,521)	(18,135)	(19,800)	(22,192)	(24,606)
Other Financing Cash Flows	(2,523)	(863)	(1,006)	0	0
<b>Cash Flow from Financing</b>	<b>(48,486)</b>	<b>(58,876)</b>	<b>(43,935)</b>	<b>(49,670)</b>	<b>(51,810)</b>
Foreign Exchange	(29)	(141)	(194)	0	0
<b>Net Change in Cash</b>	<b>648</b>	<b>(293)</b>	<b>20,773</b>	<b>21,103</b>	<b>31,707</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.

Microsoft MSFT FAIRLY VALUED

VALUENTUM

Buying Index™

5

VALUENTUM

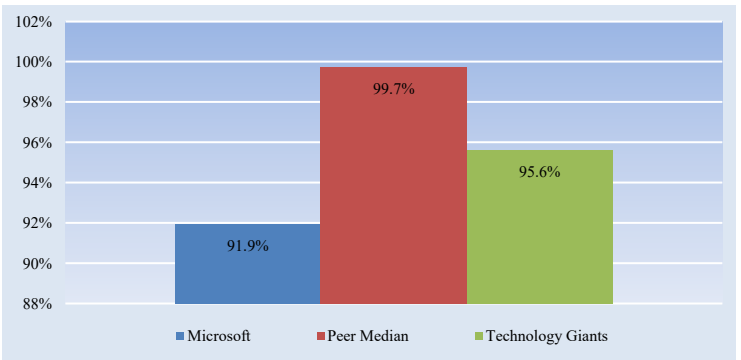
Value Rating

Economic Castle Attractive	Estimated Fair Value \$400.00	Fair Value Range \$320.00 - \$480.00	Investment Style MEGA-CAP BLEND	Sector Information Technology	Industry 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
Apple	AAPL	3,030,687	MEGA-CAP CORE	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BULLISH	STRONG
Adobe Systems	ADBE	275,300	MEGA-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	LOW	NEGATIVE	BULLISH	STRONG
Analog Devices	ADI	101,645	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
Automatic Data Processing	ADP	96,359	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	VERY BULLISH	WEAK
Applied Materials	AMAT	134,194	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	POSITIVE	BULLISH	STRONG
Advanced Micro Devices	AMD	223,502	MEGA-CAP BLEND	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	NEUTRAL	STRONG
Amazon.com	AMZN	1,562,789	MEGA-CAP BLEND	FAIRLY VALUED	UNATTRACTIVE	GOOD	MEDIUM	NEGATIVE	BULLISH	STRONG
Ansys	ANSS	29,806	LARGE-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	STRONG
Broadcom	AVGO	390,332	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	POSITIVE	BULLISH	NEUTRAL
Alibaba	BABA	195,671	LARGE-CAP VALUE	UNDervalUED	ATTRACTIVE	EXCELLENT	MEDIUM	POSITIVE	BEARISH	WEAK
Baidu	BIDU	42,653	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	GOOD	MEDIUM	POSITIVE	VERY BULLISH	WEAK
Booking Holdings	BKNG	124,935	LARGE-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	VERY BULLISH	WEAK
Salesforce.com	CRM	229,659	MEGA-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	LOW	POSITIVE	BULLISH	WEAK
Cisco	CSCO	198,007	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BEARISH	WEAK
eBay	EBAY	23,900	LARGE-CAP VALUE	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	POSITIVE	BULLISH	WEAK
Enphase Energy	ENPH	12,975	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BEARISH	WEAK
Alphabet	GOOG	1,840,491	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
IBM	IBM	145,521	LARGE-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
Intel	INTC	189,658	LARGE-CAP CORE	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	STRONG
Korn/Ferry	KFY	2,683	MID-CAP VALUE	UNDervalUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
KLA-Tencor	KLAC	80,600	LARGE-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
Lam Research	LRCX	103,275	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
Mastercard	MA	407,174	MEGA-CAP BLEND	FAIRLY VALUED	NEUTRAL	EXCELLENT	LOW	POSITIVE	BULLISH	STRONG
Manpower	MAN	4,056	MID-CAP CORE	FAIRLY VALUED	NEUTRAL	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	STRONG
Meta Platforms	META	909,386	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	STRONG
Microsoft	MSFT	2,720,350	MEGA-CAP BLEND	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	LOW	NEGATIVE	NEUTRAL	NEUTRAL
Micron Technology	MU	80,002	LARGE-CAP BLEND	FAIRLY VALUED	NEUTRAL	POOR	MEDIUM	NEGATIVE	BULLISH	NEUTRAL
Nvidia	NVDA	1,197,744	MEGA-CAP BLEND	FAIRLY VALUED	UNATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	NEUTRAL
Oracle	ORCL	320,884	MEGA-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	BULLISH	WEAK
PayPal	PYPL	65,300	LARGE-CAP VALUE	UNDervalUED	ATTRACTIVE	GOOD	LOW	POSITIVE	BEARISH	WEAK
QUALCOMM	QCOM	146,335	LARGE-CAP VALUE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	NEGATIVE	NEUTRAL	STRONG
Taiwan Semiconductor	TSM	504,119	MEGA-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	POSITIVE	BULLISH	NEUTRAL
Texas Instruments	TXN	154,186	LARGE-CAP CORE	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	MEDIUM	NEGATIVE	BULLISH	NEUTRAL
Visa	V	632,109	MEGA-CAP BLEND	FAIRLY VALUED	ATTRACTIVE	EXCELLENT	LOW	POSITIVE	BULLISH	NEUTRAL

## Valuentum's Full Page Stock Report

## A DCF Valuation

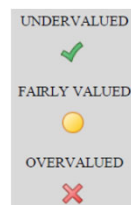
Shows whether the firm is undervalued, fairly valued, or overvalued based on our DCF process and by how much.

**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.

 **Valuentum Value Rating (VVR)**

**Value-at-Risk (VaR)**  
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

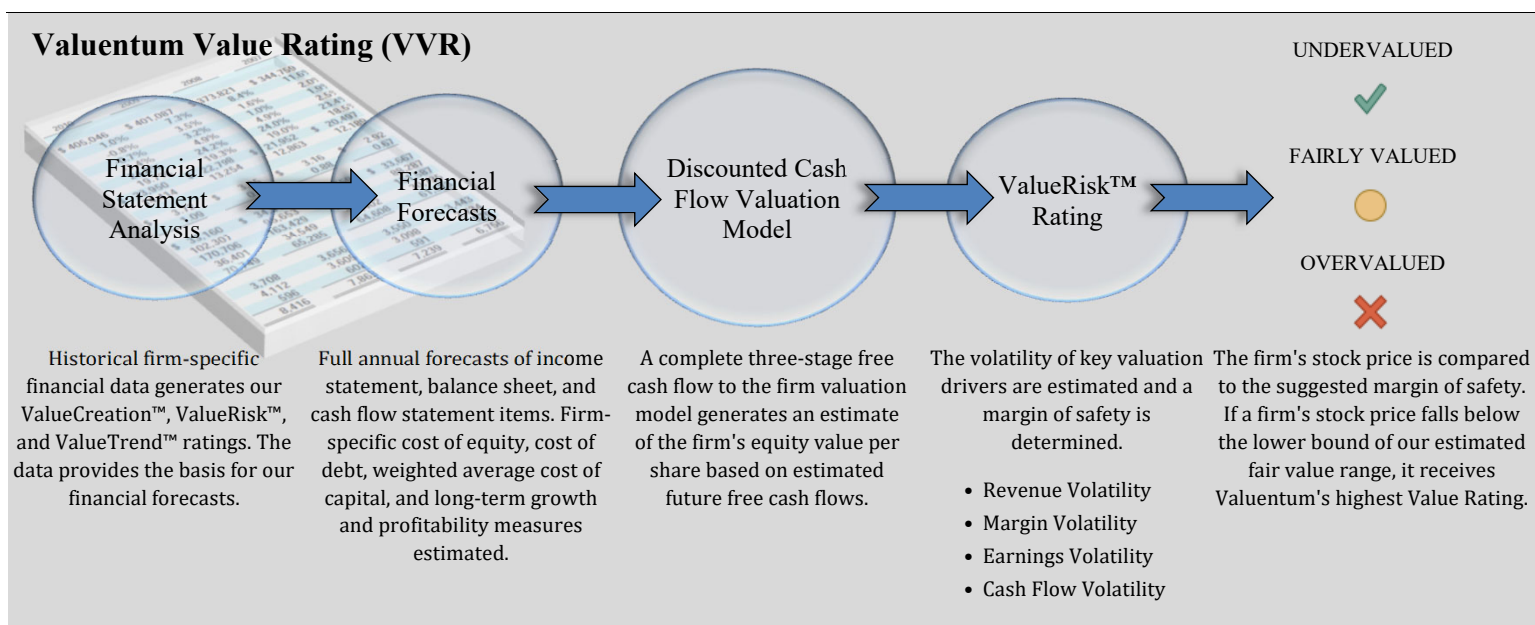
@Valuentum, we strive to stand out from the crowd. Most investment research publishers fall into a few camps, whether it be value, growth, income, momentum, chartist or some variant of the aforementioned. We think each in its own right holds merit, but we think the combination of these approaches can 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)

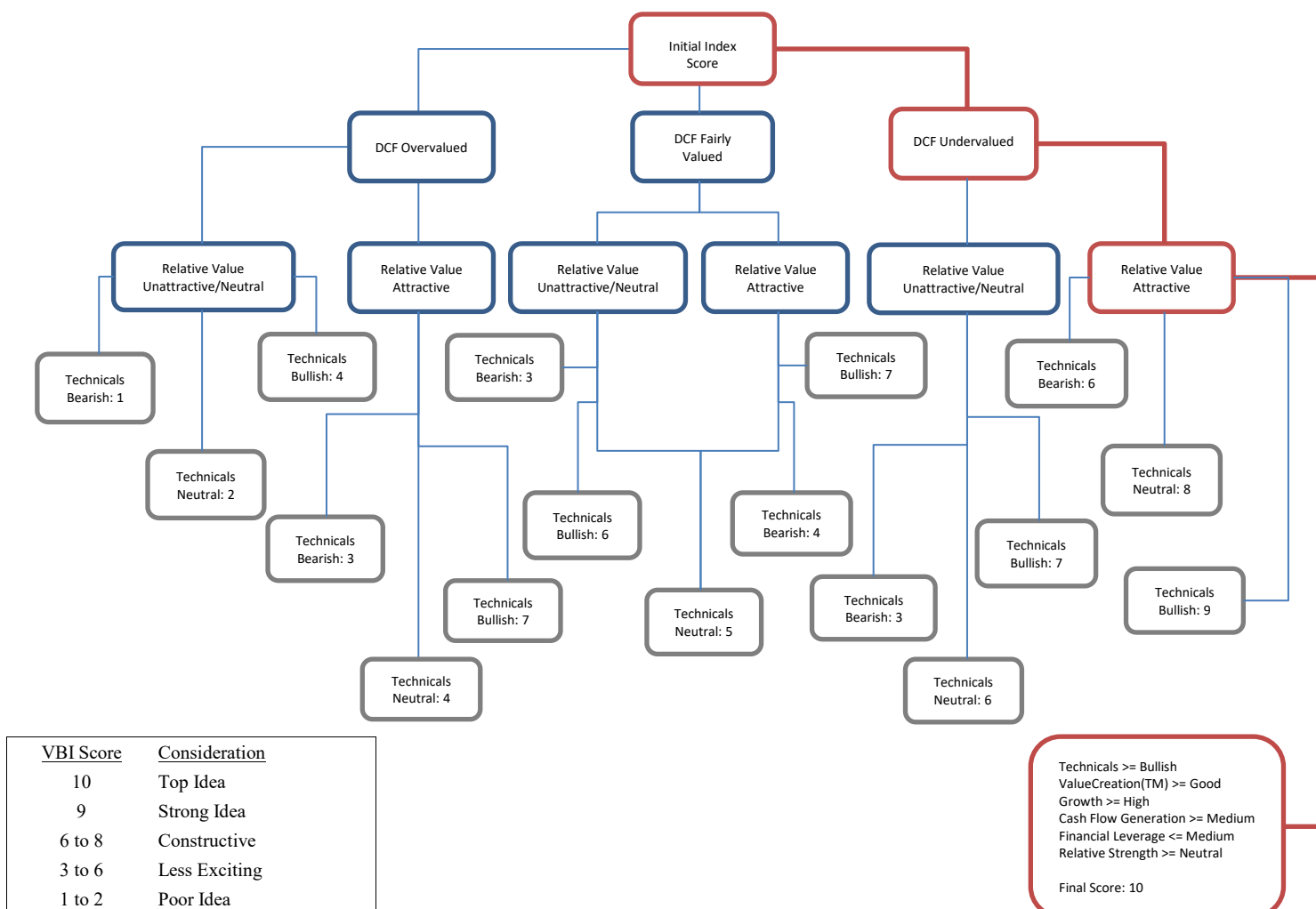
@ Valuentum, we like to look at companies from a number of different perspectives. The Valuentum Buying Index (VBI) combines rigorous financial and valuation analysis with an evaluation of a stock's technicals to derive a rating between 1 and 10 for each company. The VBI places considerable emphasis 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.

MSFT Rating History	Price	Fair Value	VBI
5-Jan-24	\$367.75	\$400.00	5
27-Nov-23	\$379.76	\$378.00	5
7-Jul-23	\$337.22	\$307.00	6
24-Dec-22	\$239.82	\$262.00	3
22-Sep-22	\$239.90	\$305.00	3
26-Aug-22	\$268.09	\$335.00	3
17-Jun-22	\$247.65	\$334.00	3
22-Mar-22	\$304.06	\$332.00	6
3-Dec-21	\$323.01	\$342.00	6
15-Nov-21	\$335.22	\$341.00	6
27-Jul-21	\$288.65	\$300.00	6
15-Apr-21	\$259.16	\$264.00	6
1-Dec-20	\$216.21	\$236.00	6
21-Aug-20	\$213.02	\$216.00	7

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