

How Much Is Microsoft's Investment in OpenAI Worth?

By: Jon Tang, Managing director

OpenAI is transitioning from a non-profit organization with a for-profit subsidiary to a fully for-profit corporation. Microsoft, as the largest investor in OpenAI's for-profit subsidiary, has invested a total of \$13.75 billion. The two companies are currently engaged in intense negotiations to determine the equity interest Microsoft should receive in the new corporate structure. To assist in these discussions, Microsoft has enlisted Morgan Stanley, while OpenAI has turned to Goldman Sachs for guidance.

Recently, OpenAI closed a funding round at a remarkable valuation of \$157 billion. According to the Wall Street Journal, Microsoft's investment entitles it to specific contingent claims on OpenAI's future profits:

1. **0% of the first \$194 million**, with all profits allocated to earlier OpenAI investors.
2. **75% of the next \$17.3 billion**, with the remaining 25% going to those early investors and employees.
3. **49% of the next \$XXX billion**, with remaining profits allocated as follows: 41% going to employees, 8% to other investors, and 2% to the nonprofit that oversees OpenAI.
4. **0% of profits beyond \$XXX billion**: Microsoft's returns are capped and profits exceeding this threshold will all go to the nonprofit.

The figure represented as \$XXX is a mutually agreed cap on Microsoft's returns, which has not been publicly disclosed. Reports suggest this cap could range from 10 times Microsoft's invested capital (approximately \$137.5 billion) to as high as 100 times (\$1.375 trillion), though the latter seems less likely.

For those of us experienced in valuing contingent claims within complex capital structures – like those found in venture capital and private equity – there's a well-established method called the **Option Pricing Method (OPM)**.

OPM operates on the principle that a company's equity represents a contingent claim (or option) on its assets. For example, if a company has a debt of \$100 million, its equity acts like an option with a \$100 million strike price. If the company's total value falls below \$100 million, all value goes to the debt holders, leaving equity holders with nothing. However, if the company's value exceeds \$100 million, equity holders receive the excess amount.

To apply the OPM to Microsoft's interest in OpenAI, I made the following assumptions:

1. OpenAI's equity value is \$157 billion, in line with the recent funding round valuation.
2. A likely liquidity event is projected to occur in 5 years.
3. The company's equity volatility is estimated at 50%.
4. The Microsoft return cap is set at 10 times.

Continued

Using these inputs, the OPM yields the following results:

Firm Value Range Exercise (Strike) Price	1 \$0	2 \$194	3 \$17,494	4 \$271,627
Firm Value at Valuation Date	\$157,000	\$157,000	\$157,000	\$157,000
Years to Maturity	5.00	5.00	5.00	5.00
Riskfree Rate (Rf)	4.00%	4.00%	4.00%	4.00%
Volatility	50%	50%	50%	50%
Value of Call Option	\$157,000	\$156,841	\$142,947	\$51,145
Incremental Option Value for Value Range	\$159	\$13,894	\$91,801	\$51,145
Microsoft Claim in Range	0.00%	75.00%	49.00%	0.00%
Total Value of Microsoft Claims	\$55,403			
Total OpenAI Equity Value	\$157,000			
% of Value	35.3%			

Based on this model, Microsoft's interest in OpenAI is valued at **\$55.4 billion**, which represents **35.3%** of the total value. If OpenAI converts all its stock into common shares, Microsoft would receive 35.3% of those common shares.

You may question some of my assumptions, particularly regarding volatility and the return cap. To address this, here's a sensitivity table displaying outcomes under various volatility and cap scenarios.

Vol/Cap	10	25	50	75	100
30%	44.0%	50.7%	51.3%	51.3%	51.3%
40%	39.6%	48.7%	50.8%	51.1%	51.2%
50%	35.3%	45.4%	49.3%	50.3%	50.7%
60%	31.1%	41.3%	46.5%	48.4%	49.4%
70%	27.0%	36.9%	42.8%	45.4%	46.9%
80%	23.3%	32.4%	38.6%	41.6%	43.5%

If you believe a 5-year liquidity event is overly optimistic, consider this sensitivity table for a 10-year liquidity event.

Vol/Cap	10	25	50	75	100
30%	34.9%	46.0%	49.6%	50.4%	50.6%
40%	29.3%	40.3%	46.0%	48.0%	49.0%
50%	24.1%	34.0%	40.5%	43.5%	45.2%
60%	19.4%	27.9%	34.2%	37.6%	39.7%
70%	15.2%	22.2%	27.9%	31.2%	33.4%
80%	11.7%	17.3%	22.1%	25.0%	27.1%

If only Microsoft or OpenAI had reached out to us first, it would have saved them millions in advisory fees!

Empire Valuation Consultants is one of the largest and most respected valuation firms in the country. Our wealth of valuation experience includes every industry, every size (from small businesses to the Fortune 50), and every type of financial security, as well as intangible and tangible assets. This breadth of knowledge provides clients with well-balanced valuations specifically tailored to each situation. With a staff of approximately 100 employees in New York, Rochester, Long Island, Boston, and San Francisco, we have both a national and international breadth of clients. We are well known for our preeminent high-quality work, responsiveness, and timeliness, as well as for our creative, customized solutions to our clients' most complex engagements.



Jon's expertise relates to complex securities, carried interest, intangible assets, and mergers and acquisitions. He has advised private equity, hedge fund, venture capital and corporate clients through complex audits and has managed engagements for financial reporting purposes, including Fair Value Measurements (ASC 820), Business Combinations (ASC 805), Stock Compensation (ASC 718/IRC 409(a)), and impairment testing related to Intangible – Goodwill and Others (ASC 350) and Property, Plant and Equipment (ASC 360). He has also performed valuations for tax reporting, acquisition and divestiture, transfer pricing, fairness opinions, ESOPs, estate planning and general corporate planning purposes.

jtang@empireval.com

212.714.1483