

Server & Enterprise Software

Private perspectives: cloud cost analytics with Millworks Analytics

Industry Overview

Cloud consumption cost analytics mature

We recently hosted a web session with Millworks Analytics' CEO Damon Fletcher. Mr. Fletcher was formerly the CFO of Tableau and DataRobot and has deep insights in consumption dynamics and volatility. Millworks is the company behind Caliper, a cloud cost analytics platform for customers to manage cloud consumption. Main topics discussed include **1)** the pain points of cloud consumption management and **2)** the current state of cloud/workload optimization.

What we learned about consumption cost dynamics

The secular trend of cloud migrations is likely to continue over the long-term, and cloud spend is often becoming one of the largest expense items for many organizations. Because of this, organizations are likely adopting more cost-conscious approaches to utility-based pricing models, particularly in the infrastructure software category. Although the major wave of spend optimizations is probably over, there is likely still some rightsizing of contracts signed during the spending euphoria in 2020/2021 to go. In addition, to avoid over-purchasing, buyers (renewals and new) are more inclined to adopt pay-as-you-go contracts instead of large upfront annual commitments, even if this would come at the cost of a less efficient pricing, resulting in less model visibility.

Decentralized usage drives inefficient spending patterns

Consumption bills are typically dependent on end-user usage (i.e., developers making independent decisions such as running queries on Snowflake), which can lead to inefficient usage of compute resources and low visibility of spend. In addition, open-source technologies (OSS), such as Kubernetes (container orchestration), which are free to use, are often directly tied to cloud costs. Organizations that leverage OSS tooling often have limited cloud consumption visibility tied to those workflows. Millworks aims to provide a granular visibility for effective consumption monitoring and cost management, at the end-user level and end-service level.

Implications: Positive for Millworks target integrations

We believe the webinar is a positive read-through for Microsoft (MSFT), MongoDB (MDB), Snowflake (SNOW), and Datadog (DDOG), which are its target integrations within our coverage universe. This is because Millworks is integrating with the largest, most strategic vendors within each category, and is often driven by customer requests. This implies that demand for these software vendors is likely healthy.

Prioritizing AI might come at the cost of other software

Companies are beginning to prioritize AI strategies, which will lead to higher utilization of cloud services. Developing AI strategies have become mandates among most technology companies and budget is being allocated for it. However, total IT budgets still appear to be constrained, and AI budgets will likely come at the expense of other software categories being optimized. Specifically, some companies are evaluating license recaptures, especially among the more traditional IT seat-based technologies.

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Equity
Americas
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Exhibit 1: Stocks mentioned

Prices and ratings for stocks mentioned in this report

BofA Ticker	Bloomberg ticker	Company name	Price	Rating
DDOG	DDOG US	Datadog Inc	US\$ 122.65	C-2-9
MSFT	MSFT US	Microsoft	US\$ 425.22	B-1-7
MDB	MDB US	MongoDB	US\$ 368.94	C-1-9
SNOW	SNOW US	Snowflake	US\$ 158.92	C-2-9

Source: BofA Global Research

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Price objective basis & risk**Datadog Inc (DDOG)**

Our \$144 PO is based on an EV/revenue multiple of 19.1x EV/CY24E (was 18.8x) to our CY24E revenue estimate of \$2.6bn. We raise our multiple to account for our increased confidence in Datadog's potential to drive upside to consensus estimates and infrastructure group multiple expansion. The 19.1x multiple represents an EV/revenue/growth multiple of 0.9x, which is above infrastructure peers at 8.3x/0.7x.

Upside risks to our PO: 1) better-than-expected revenue growth, 2) faster-than-expected AI tailwinds, 3) better-than-expected expanding free cash flow margins, 4) expanding NRR, and 5) stronger-than-expected competitive differentiation.

Downside risks to our PO: 1) valuation risk, 2) competition, 3) deteriorating NRR, 4) execution, and 5) enterprise software spend can be cyclical.

Microsoft Corporation (MSFT)

Our PO of \$480 is based on an EV/FCF multiple of 43x our C25E free cash flow estimate. The growth-adjusted multiple of 1.8x trades at a premium to the large cap GARP group, which we view as warranted given our view of Microsoft as a leading AI play in software.

Downside risks to our price objective: 1) Microsoft could see some near term gross margin pressure as the Azure business grows as a percentage of overall revenue. While Microsoft's on premise offerings offer a high margin profile, growth in these lines of business is decelerating. 2) Enterprise application spending has proven to be highly cyclical, given the more discretionary nature of applications projects. During an economic slowdown, when firms are faced with shrinking IT budgets, projects involving application upgrades, migrations or new installations are often deferred. This could present a higher degree of risk for a bookings deceleration for Microsoft and other application vendors, in the event of an economic slowdown.

MongoDB Inc (MDB)

Our PO of \$500 is based on EV/sales of 17x our CY25e, or 0.7x our C25 revenue growth rate of 26%, a premium to the large-cap peers at 0.6x (17% growth) for higher growth trajectory.

Downside risks to our PO are: 1) MongoDB trades at a significant premium to its software large-cap peer group on an EV/Sales basis. In the event of changes to market sentiment stemming from global macro uncertainty, or potentially disappointing quarterly revenue results, there could be risk of a potential pullback. 2) The company recognizes a large majority of its revenue based on actual consumption which implies more revenue volatility than a traditional subscription model. 3) MongoDB serves in a highly competitive market, which consists of deep-pocketed next-gen NoSQL database,

public cloud vendors and legacy database vendors. An inability to execute on a product roadmap for added capabilities could result in slowing share gains or even share losses.

Snowflake (SNOW)

Our PO of \$212 is based on EV/sales of 22x our CY25e, or 0.6x our C26E exit revenue growth rate of 28%, in line with the large-cap peers at 0.6x.

Upside risks to our PO: Snowflake recognizes revenue based on actual consumption (versus subscription ratably in arrears). In the event of changes to market sentiment on macro abating and IT spend returning to normal, consumption and revenue growth could quickly reaccelerate which could drive multiple expansion.

Downside risks to our PO: 1) Snowflake trades at a significant premium to its software large-cap peer group. In the event of changes to market sentiment stemming from global macro uncertainty, or potentially disappointing quarterly revenue results, there could be risk of a potential pullback, 2) The company's consumption model implies more revenue volatility than a traditional subscription model, 3) Snowflake serves in a highly competitive market, which consists of deep-pocketed next-gen DBMS vendors, public cloud vendors and legacy DBMS. An inability to execute on a product roadmap for added capabilities could result in slowing share gains or even share losses.

Analyst Certification

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US - Enterprise Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	8x8	EGHT	EGHT US	Michael J. Funk
	Adobe	ADBE	ADBE US	Brad Sills
	Alarm.com	ALRM	ALRM US	Michael J. Funk
	Amplitude, Inc.	AMPL	AMPL US	Koji Ikeda, CFA
	Asana	ASAN	ASAN US	Michael J. Funk
	BILL	BILL	BILL US	Brad Sills
	CCC Intelligent Solutions	CCCS	CCCS US	Michael J. Funk
	Dynatrace	DT	DT US	Koji Ikeda, CFA
	Elastic NV	ESTC	ESTC US	Koji Ikeda, CFA
	GitLab Inc.	GTLB	GTLB US	Koji Ikeda, CFA
	Global-e Online Ltd.	GLBE	GLBE US	Koji Ikeda, CFA
	HubSpot	HUBS	HUBS US	Brad Sills
	Informatica Inc.	INFA	INFA US	Koji Ikeda, CFA
	Intapp Inc.	INTA	INTA US	Koji Ikeda, CFA
	Intuit	INTU	INTU US	Brad Sills
	JFrog Ltd	FROG	FROG US	Koji Ikeda, CFA
	MeridianLink, Inc.	MLNK	MLNK US	Koji Ikeda, CFA
	Microsoft Corporation	MSFT	MSFT US	Brad Sills
	Monday.com	MNDY	MNDY US	Michael J. Funk
	MongoDB Inc	MDB	MDB US	Brad Sills
	nCino, Inc.	NCNO	NCNO US	Adam Bergere
	NICE Ltd.	NICE	NICE US	Michael J. Funk
	NICE Ltd.	NCSYF	NICE IT	Michael J. Funk
	PagerDuty	PD	PD US	Koji Ikeda, CFA
	PowerSchool Holdings, Inc.	PWSC	PWSC US	Koji Ikeda, CFA
	RingCentral	RNG	RNG US	Michael J. Funk
	Salesforce.com	CRM	CRM US	Brad Sills
	ServiceNow	NOW	NOW US	Brad Sills
	UiPath	PATH	PATH US	Brad Sills
	Unity	U	U US	Michael J. Funk
	Weave	WEAV	WEAV US	Michael J. Funk
	Workday Inc.	WDAY	WDAY US	Brad Sills
	Zeta Global	ZETA	ZETA US	Koji Ikeda, CFA
	ZoomInfo	ZI	ZI US	Koji Ikeda, CFA
NEUTRAL				
	Autodesk	ADSK	ADSK US	Michael J. Funk
	Bentley Systems	BSY	BSY US	Michael J. Funk
	BigCommerce Holdings, Inc.	BIGC	BIGC US	Koji Ikeda, CFA
	Coveo	YCVO	CVO CN	Koji Ikeda, CFA
	Datadog Inc	DDOG	DDOG US	Koji Ikeda, CFA
	DocuSign	DOCU	DOCU US	Brad Sills
	Freshworks, Inc.	FRSH	FRSH US	Adam Bergere
	HashiCorp	HCP	HCP US	Brad Sills
	Jamf	JAMF	JAMF US	Koji Ikeda, CFA
	Lightspeed Commerce Inc.	LSPD	LSPD US	Koji Ikeda, CFA
	Lightspeed Commerce Inc.	YLSPD	LSPD CN	Koji Ikeda, CFA
	Oracle Corporation	ORCL	ORCL US	Brad Sills
	Paycom	PAYC	PAYC US	Adam Bergere
	Paylocity	PCTY	PCTY US	Adam Bergere
	Shopify, Inc.	SHOP	SHOP US	Brad Sills
	Snowflake	SNOW	SNOW US	Brad Sills
	Veeva Systems, Inc.	VEEV	VEEV US	Brad Sills
	Vertex, Inc.	VERX	VERX US	Brad Sills
	Zoom Video Communications	ZM	ZM US	Michael J. Funk
UNDERPERFORM				
	AvidXchange, Inc.	AVDX	AVDX US	Brad Sills
	Blackbaud, Inc.	BLKB	BLKB US	Koji Ikeda, CFA
	BlackLine, Inc.	BL	BL US	Koji Ikeda, CFA
	C3.ai	AI	AI US	Brad Sills
	Confluent	CFLT	CFLT US	Brad Sills
	CS Disco, Inc.	LAW	LAW US	Koji Ikeda, CFA
	Dropbox	DBX	DBX US	Michael J. Funk
	Enfusion, Inc.	ENFN	ENFN US	Koji Ikeda, CFA

US - Enterprise Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Five9	FIVN	FIVN US	Michael J. Funk
	Guidewire Software, Inc.	GWRE	GWRE US	Michael J. Funk
	Smartsheet	SMAR	SMAR US	Michael J. Funk
	Twilio	TWLO	TWLO US	Michael J. Funk
RSTR	Splunk	SPLK	SPLK US	Brad Sills

Disclosures

Important Disclosures

Datadog Inc (DDOG) Price Chart

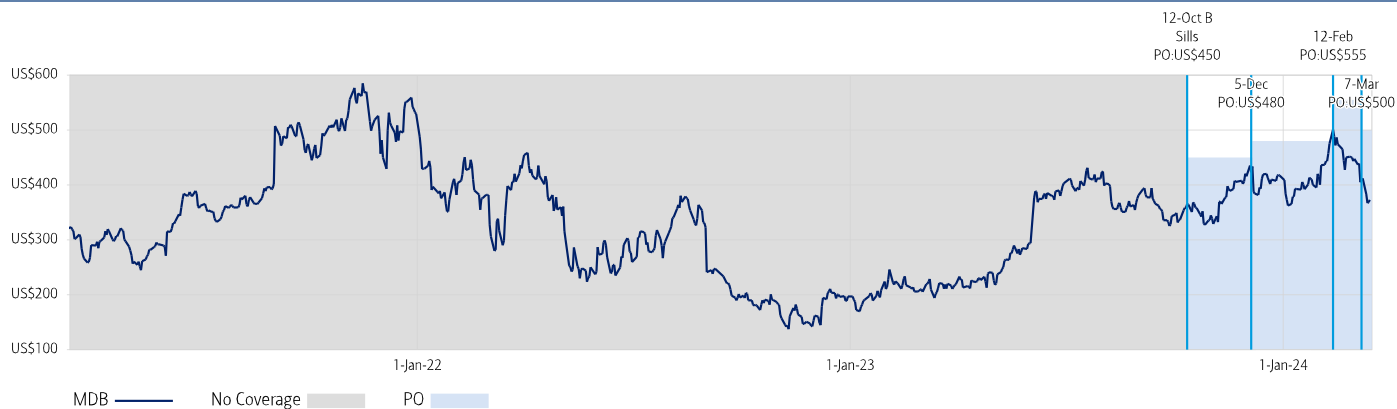


B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating
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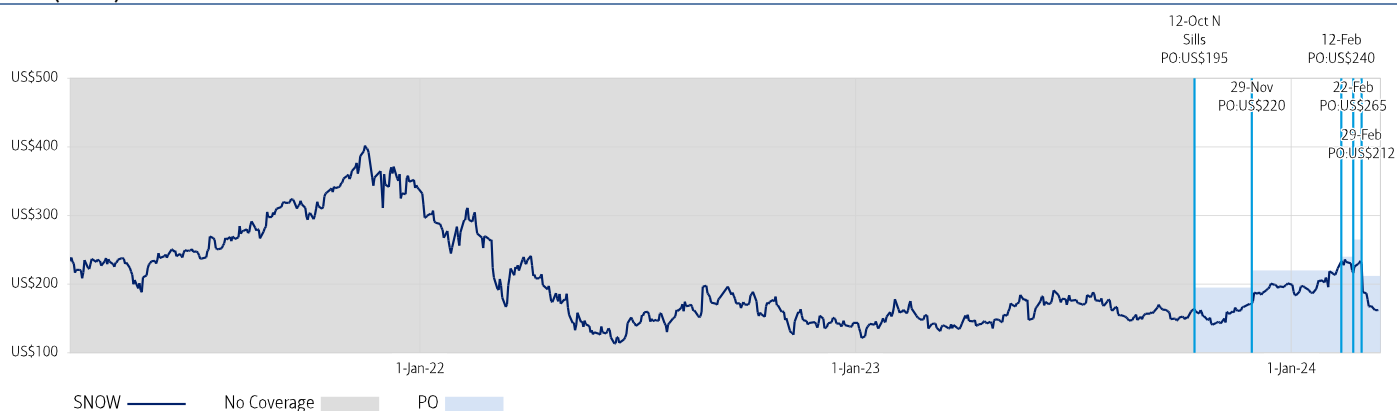
Microsoft (MSFT) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating
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MongoDB (MDB) Price Chart

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Snowflake (SNOW) Price Chart

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Equity Investment Rating Distribution: Technology Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	215	53.09%	Buy	111	51.63%
Hold	97	23.95%	Hold	45	46.39%
Sell	93	22.96%	Sell	24	25.81%

Equity Investment Rating Distribution: Global Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships ^{R1}	Count	Percent
Buy	1895	53.62%	Buy	1083	57.15%
Hold	832	23.54%	Hold	454	54.57%
Sell	807	22.84%	Sell	383	47.46%

^{R1} Issuers that were investment banking clients of BofA Securities or one of its affiliates within the past 12 months. For purposes of this Investment Rating Distribution, the coverage universe includes only stocks. A stock rated Neutral is included as a Hold, and a stock rated Underperform is included as a Sell.

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Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R2}Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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