Global Research Highlights

No signs of slowing down

Investment Strategy

It's been snowing

Total card spending per household, as measured by BAC aggregated credit and debit cards, was down 0.2% year-over-year (y/y) in January. Aditya Bhave and the US Economics team forecast a 0.3% decrease in the Census Bureau's retail sales ex-autos estimate for January. However, spending at gas stations and restaurants was particularly weak last month. Therefore, the team expects a 0.2% pickup in the core control group (retail sales ex autos, gas, building materials and restaurants). Widespread winter storms weighed on retail spending last month. Unsurprisingly, the impact was largest in the South, where winter weather disruptions are less common.

A blowout employment report

Nonfarm payroll employment increased by 353k above both the consensus forecast (+185k) and the highest forecast on Bloomberg (+300k). In addition to the strength of hiring in January, the last two months were revised up by a total of 126k, with most of that increase occurring in December (333k v 216k initially). This broke a trend of downward revisions seen throughout most of last year. Over the last three months, payroll employment has increased by an average of a staggering 289k compared to 207k in October. In short, Michael Gapen and the US Economics team believe the jobs data show little sign of an impending slowdown in activity.

AI contribution ramps as macro pressures ease

Justin Post notes that in 4Q, commentary indicated y/y optimization headwinds to consumption are attenuating "significantly", while AI contribution continues to grow. While Amazon notes that AI, on an absolute basis, is large, Amazon CEO Andy Jassy believes there is still plenty of headroom with a "tens of billions" dollar opportunity ahead. The top-3 Cloud providers indicated growing cloud capex to support generative AI and LLM development. Post estimates aggregate 2023 capex reached $92.3bn, up 10% y/y, and for 2024, he now projects industry capex to grow 33% to $122.7bn.

Less-than-truckload truckers are focused on pricing

Ken Hoexter noted that LTL pricing momentum remains strong as carriers move to convert the rapidly tightening industry capacity to higher rates. Saia pulled forward 2024 rate renewals, as it repriced 50% more contracts year-year in 4Q23, at an 8.7% higher rate on average. XPO made similar gains as it benefited from contract rate increases of 9.0%, given a rapid influx of demand, a level it expects to accelerate in 1Q24. Alternatively, best-in-class LTL carrier Old Dominion Freight Line took a more long-term view as it aims to price 150-200 bps higher than costs consistently through renewals. Unionized carrier ArcBest renewed contracts 5.6% higher in 4Q23 as it culled its less profitable spot freight with its core LTL-rated business repricing at a double-digit percent uptick. Hoexter expects LTL yields (Rev/cwt ex-fuel) to increase in the high-single-digit % range in 1Q, as higher rates offset negative volume impacts from harsh weather. He believes increased LTL pricing focus, moves to improve service and LTL capacity tightness should drive multi-year margin upside after Yellow's 2023 bankruptcy, an industry seminal event.

09 February 2024

Global

Investment Strategy
BofAS

Derek Harris
Portfolio Strategist
BofAS
+1 646 743 0218
derek.harris@bofa.com

Thomas Hopkins
Portfolio Strategist
BofAS
thopkins2@bofa.com

Evan Morris
Portfolio Strategist
BofAS
evan.morris@bofa.com

Andrew Shields, CFA
Portfolio Strategist
BofAS
andrew.shields@bofa.com

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BofA on USA

Weather and other seasonal factors

08 February 2024

Macro
United States

BofA
Data
Analytics

Aditya Bhave
US Economist
BofAS
+1 646 855 9929
aditya.bhave@bofa.com

Shruti Mishra
US and Global Economist
BofAS
+1 646 855 1040
smishra44@bofa.com

US Economics
BofAS

See Team Page for List of Analysts

We expect a soft retail sales report for January

Total card spending per household (HH), as measured by BAC aggregated credit and debit cards, was down 0.2% year-over-year (y/y) in January. Card spending per HH fell 0.3% month-over-month (m/m) in January on a seasonally adjusted (SA) basis. We forecast a 0.3% decrease in the Census Bureau's retail sales ex-autos estimate for January (**Exhibit 1.**). However, spending at gas stations and restaurants was particularly weak last month (**Exhibit 2)** Therefore, we expect a 0.2% pickup in the core control group (retail sales ex autos, gas, building materials and restaurants). In our view, two factors explain the weak January data.

Winter storms disrupted retail spending

Widespread winter storms weighed on retail spending last month. Unsurprisingly, the impact was largest in the South, where winter weather disruptions are less common (**Exhibit 8.**). Another way to assess the impact of weather on retail sales is to look at which categories had outsized moves in January. As discussed above, restaurants and gas were very weak, likely because consumers spent more time than usual at home. Probably for the same reason, there was a large pickup in grocery spending (**Exhibit 2.**). Interestingly, however, online retail spending (card not present) was down in January.

Seasonal adjustments: it's payback time

As we had forecast, December retail sales came in above consensus expectations, buoyed by a favorable seasonal adjustment. However, seasonal adjustments are a zero-sum game: they balance out over the course of a full year. The Census Bureau's projected seasonal adjustments for January 2024 are significantly less favorable than they were in January 2023 (**Exhibit 9.**). This will weigh on SA retail sales in January 2024, assuming the final seasonal adjustments are close to the Census Bureau's projections.

Sifting out the noise, consumer spending looks solid

We suggested that readers look through the strength in December retail sales, and by the same token we recommend looking through the expected weakness in January. In fact, we think a report in line with our forecasts would point to a healthy US consumer. If our projections are correct, the ex-autos and core control components would be up about 0.1% and 1.0%, respectively, over the last two months. And as the weather normalizes, there is scope for meaningful sequential gains in the ex-autos components that were impacted by the January disruptions. In our view, with real (i.e., inflation-adjusted) income growth picking up due to a strong labor market and continued disinflation, the risks to consumer spending are increasingly to the upside.

Click BofA on USA for full report including important disclosures.

US Watch

January employment: A blowout report

Hiring shifts into high gear

Nonfarm payroll employment increased by 353k above both the consensus forecast (+185k) and the highest forecast on Bloomberg (+300k). In addition to the strength of hiring in January, the last two months were revised up by a total of 126k, with most of that increase occurring in December (333k v 216k initially). This broke a trend of downward revisions seen throughout most of last year. Over the last three-months, payroll employment has increased by an average of a staggering 289k compared to 207k in October. In short, the jobs data show little sign of an impending slowdown in activity.

Industry details

The increase in employment was broad-based across industries—the one-month diffusion index for private industries increased from 64.0% to 65.6%. Job growth was once again led by education and healthcare (+112k). However, there were notable increases in professional and business services (+74k), retail trade (+45k) and manufacturing (+23k).

Noise or signal

Some of these gains appear to buck the recent trend. For example, administrative and waste services, which is a subcomponent of professional and business services added 29k jobs in January after falling for seven consecutive months. Similarly, nondurable goods manufacturing added 19k jobs after declining in nine out of twelve months in 2023. However, even if you toss out these numbers hiring would have still been robust. So, it's hard to argue that this is anything but a strong report.

Wage growth surges but could be due to drop in hours

In addition to strong job growth, average hourly earnings rose by 0.6% m/m and 4.5% y/y. This is above what the Fed would see as consistent with 2% inflation outcome if labor productivity is stable at 1.5%. Strong wage growth was driven by the service sector (+0.6%) as the goods-producing sector saw wage growth moderate to 0.2% m/m. We take the acceleration with a grain of salt as hours worked fell two-tenths to 34.1, which could very well be a weather effect. Moreover, two industries that saw a significant acceleration in wage growth—professional and businesses services and education and healthcare services—saw hours worked decline this month.

Don't discount the consumer

On net, this report bodes well for growth in labor income. Aggregate hours for production and nonsupervisory workers were down 1.1% in January over the 4Q average (1m/3m %chg saar). The payroll proxy, which is the product of aggregate hours worked and average hourly earnings, rose 3.9% 1m/3m saar in January. The drop in weekly hours offsets to some degree the signal from employment and wage growth, but on net it is a positive signal for growth in labor market income and, in turn, domestic consumption.

Click US Watch for full report including important disclosures.

02 February 2024

Macro
United States

US Economics
BofAS

Michael Gapen
US Economist
BofAS
+1 646 855 3270
michael.gapen@bofa.com

Stephen Juneau
US Economist
BofAS
+1 202 442 7429
stephen.juneau@bofa.com

US Rates Research
BofAS

Meghan Swiber, CFA
Rates Strategist
BofAS
+1 646 743 7020
meghan.swiber@bofa.com

G10 FX Strategy
MLI (UK)

Alex Cohen, CFA
FX Strategist
BofAS
+1 646 743 7015
alex.cohen2@bofa.com

See Team Page for List of Analysts

AHE: Average Hourly Earnings

k: thousand

saar: seasonally adjusted annual rate

Internet/e-Commerce

Big-3 Infrastructure Cloud Review: Macro pressures easing & AI contribution ramps

Industry Overview

05 February 2024

Equity
United States

Justin Post
Research Analyst
BofAS
+1 415 676 3547
justin.post@bofa.com

Brad Sills
Research Analyst
BofAS
+1 415 676 3531
brad.sills@bofa.com

Michael McGovern
Research Analyst
BofAS
mmcgovern@bofa.com

Nitin Bansal, CFA
Research Analyst
BofAS
nbansal7@bofa.com

Adam Bergere
Research Analyst
BofAS
adam.bergere@bofa.com

Steven McDermott
Research Analyst
BofAS
steven.mcdermott@bofa.com

AWS: Amazon Web Services

GC: Google Cloud

IaaS: Infrastructure as a Service

PaaS: Platform as a Service

AI: Artificial Intelligence

LLM: Large Language Models

Less client cost cutting, & AI contribution begins to scale

For 4Q'23, industry IaaS/PaaS revenue grew 21%E y/y to $47.3bn, slightly above our expectations for $46.6bn. Industry growth accelerated 130bps vs. 3Q, with AWS and GCP accelerating and estimated acceleration for Azure. AWS grew 13% (51% market share), Azure IaaS/PaaS grew 33%E (32% share), and GCP IaaS/PaaS grew 28%E (16% share). Commentary suggests y/y optimization trends are fading, migrations are growing (with an increasing number of large deals), and AI demand continues to ramp (AI added 6pts to Azure growth while AWS notes "significant interest" in GenAI services). For '24, we now project AWS to grow 17% y/y (adding $15.1bn in incremental IaaS/PaaS rev.), Azure to grow 30% (+$16.8bn), and GCP to grow 26% (+$7.1bn).

AWS acceleration to continue into 2024

AWS 4Q revenue of $24.2bn grew 13.2% y/y, a 90bps accel vs. 3Q. AWS added $1.15bn in q/q dollars, the most of any quarter in '23, with workload optimization headwinds attenuating "very significantly" in 4Q. Management now expects "accelerating trends to continue into 2024" and the biggest positive of the quarter, in our view, was large 4Q backlog growth, accelerating to 41% y/y (+$23bn q/q). While mgmt. noted robust AI growth, CEO Andy Jassy reiterated that AI is still relatively small and can build to a $10s-of-billions-dollar opportunity. AWS generated $7.2bn of operating income (30% margin), 7% above Street at $6.7bn, with margins continuing to benefit from headcount reductions from 2Q'23. On capex, commentary from CFO Brian Olsavsky indicated that total capex will increase in '24 to primarily support AWS growth, as well as additional investments in Generative AI and LLMs. Given growing AI investments, we are raising our 2024 total Amazon capex est. to $56bn from $52bn, with $31bn AWS capex in '24.

Azure sees 6pts of AI contribution to y/y growth

For Microsoft, C4Q Intelligent Cloud revenue of $25.9bn grew 20% y/y. Azure grew 28% y/y CC (stable vs. 3Q) to an est. $18.3bn while IaaS/PaaS revenue grew an est. 33% to $15.3bn. Strength was driven from OpenAI consumption and Microsoft's 1P AI offerings, with Azure now reaching 53k+ AI customers and a growing number of $1bn+ commitments. Biggest positive vs ests. was for guidance that calls for stable y/y growth in C1Q'24 vs. 2pt decel last quarter, suggesting an improving macro and continued AI acceleration. More importantly, however, the outlook suggests that 30%+ total Azure growth is achievable in C2Q'24, with an AI product cycle likely driving demand.

GC revenues accelerate on robust start-up adoption

Total Google Cloud revenue of $9.2bn was 3% above Street and grew 26% y/y, a 4pt accel vs. 3Q. GC generated $864mn in GAAP profit (9.4% margin, up from 3.2% in 3Q), driven by slower hiring & increased efficiencies in computing infrastructure. We est. IaaS/PaaS rev. grew 28% y/y to $7.8bn, with mgmt. emphasizing positive initial results from Gemini integration (backlog growth of $9.2bn q/q, though y/y backlog growth slowed to 15%) and adoption of GC by Gen-AI startups. Long-term, we think there is opportunity for Google to build margins toward 20%, which could add $6bn in incremental annual profits as Google leverages its infrastructure investments.

Investment decisions should not be made prior to reading the research report, which includes important information and disclosures.
Click Internet/e-Commerce for full report including important disclosures.

US Semiconductors

Core Wars: Q4 CPU review, near-term peak, increasing competition

Industry Overview

06 February 2024

Equity
United States
Semiconductors

Vivek Arya
Research Analyst
BofAS
+1 646 855 1755
vivek.arya@bofa.com

Blake Friedman
Research Analyst
BofAS
+1 646 556 1850
blake.friedman@bofa.com

Duksan Jang
Research Analyst
BofAS
+1 646 556 4825
duksan.jang@bofa.com

Lauren Guy
Research Analyst
BofAS
+1 646 855 4273
lauren.guy2@bofa.com

Strong Q4 CPU ramp, but Q1 slowdown

We review Q4 CPU trends based on Mercury Research data. Overall, Q4 marked a continued recovery in CPU shipments for both PCs and servers. PC units increased +12% QoQ (+47% YoY), while ASPs were flattish QoQ (-5% YoY). Importantly, both INTC and AMD ramped PC shipments in the quarter, with a combined shipment of 68.7mn units above IDC's PC estimate (61.4mn) for the first time in ten quarters. Given INTC's sub-seasonal MarQ PC outlook, we highlight a potential over-build of CPUs again, just a few months following signs of "channel normalization". Separately, AMD PC ASPs declined -13% QoQ (vs. INTC up +3%), suggesting potential discounting to maintain share against increasingly competitive INTC/ARM offerings. In servers, units increased +10% QoQ (-31% YoY) with ASPs continuing to expand +1% QoQ (+47% YoY), though we highlight a seasonal slowdown into Q1 and an ongoing enterprise weakness in China. Overall, near-term CPU trends are mixed, though new product launches (INTC Granite Rapids/Arrow Lake, AMD Zen 5, ARM PCs/servers) could help increase CPU TAM in an increasingly GPU-centric AI world into 2H/CY25E. We maintain Buy on ARM (content gains in mobile, PCs) and AMD (server value share gains, accelerator ramps), and Neutral on INTC (stabilizing PC/server shares but structural challenges as an IDM).

Q4 CPU trends in detail

We highlight the following Q4 CPU trends: (1) For notebooks, Q4 units increased +12% QoQ, and +50% YoY. AMD outperformed INTC in units (up +17% QoQ vs. INTC +11%), though significantly underperformed in ASPs (down -17% QoQ vs. INTC +3%.) This resulted in 230bp of value share gains QoQ for INTC to 85.0%. (2) For desktops, Q4 units +11% QoQ/+42% YoY. AMD ASPs decreased -4% QoQ (vs. INTC's +2%), while units increased +15% QoQ (vs. INTC's +10%). (3) For servers, Q4 units were +10% QoQ and -31% YoY. AMD unit/value share of 23.1%/31.1% was -20/+110bp QoQ, with total AMD server sales of $1.7bn up +16% QoQ (vs. INTC +10%). Despite a modest unit share loss, AMD continued to gain server value share from INTC in Q4, reaching 31.1% (+110bps QoQ) or the highest levels in 10+ years at (with ASPs ~50% above INTC's).

AMD server gain continues in CY24E, ARM proliferating

Our model suggests AMD's overall PC + Server CPU revenue share to reach 21.3% (vs. 22.3% prior) in CY24E YoY and increase to 21.5%/21.5% in CY25/26E. This includes a PC market share that stays largely within 14-15% (flattish since CY21), and a server share that expands to 32%+ by CY26E (from 28% in CY23). Though AMD's overall x86 share gains (PC + server) is modestly slowing, we note a continued increase in AMD server value share into CY24E, with AMD sales expected to rise +34% YoY vs. INTC's +13%. AMD is also expected to launch Zen 5 Turin products later in the year, the first major server update in two years, and we anticipate significant unit/ASP tailwinds associated with its upgraded process node (3nm) and AI (inference) features. Meanwhile, we highlight a continued proliferation of ARM products, with NVDA's Grace server CPU ramping today and numerous ARM-based PC products slated to launch in the coming quarters. We expect ARM to make up 10-15% of PC sales and 3-5% of server sales in CY24E, representing a total of 7.5% CPU value share.

Key terms

AI: artificial intelligence

AMD: Advanced Micro Devices

ARM: Arm Holdings

ASP: average selling price

CPU/MPU: central processing Unit/microprocessor

DT: desktop

IDM: integrated device manufacturer

INTC: Intel

NB: notebook

Nm: nanometer

NVDA: Nvidia

PC: personal computer

TAM: total addressable market

Transport Tracker

Issue #1111, week ending Feb. 7, 2024; LTL check-in: price focus; 3 more 4Q posts

Industry Overview

07 February 2024

Equity
United States
Transport/Infrastructure

Ken Hoexter
Research Analyst
BofAS
+1 646 855 1498
ken.hoexter@bofa.com

Adam Roszkowski, CFA
Research Analyst
BofAS
+1 646 855 5498
adam.roszkowski@bofa.com

Nathan Ho, CFA
Research Analyst
BofAS
+1 646 855 3599
nathan.m.ho@bofa.com

Hoexter's Thought of the Week

4Q23 LTL check-in: Carriers continue to focus on pricing

Less-than-Truckload pricing momentum remains strong as carriers move to convert the rapid tightening industry capacity to higher rates. Saia (see SAIA Report) pulled forward 2024 rate renewals, as it repriced 50% more contracts year-year in 4Q23, at an 8.7% higher rate on average (it launched its 7.5% GRI in early December). XPO made similar gains as it benefited from contract rate increases of 9.0%, given a rapid influx of demand (see XPO Report), a level it expects to accelerate in 1Q24. It did not launch its GRI until January, at up +5.2%. Alternatively, best-in-class LTL carrier Old Dominion Freight Line took a more long-term view as it aims to price 150-200 bps higher than costs consistently through renewals (see ODFL Report). Unionized carrier ArcBest renewed contracts 5.6% higher in 4Q23 as it culled its less profitable spot freight with its core LTL-rated business repricing at a double-digit percent uptick (see ARCB Report). 4Q rev/cwt ex-fuel results were led by SAIA (+11.7%), XPO (+10.3%), KNX (+9.5%), and ODFL (+7.5%). LTL yields (Rev/cwt ex-fuel) are expected to increase in the high-single-digit % range in 1Q (ODFL was +6% in Jan, XPO/SAIA target ~double-digits), as higher rates offset negative volume impacts from harsh weather. We believe increased LTL pricing focus, moves to improve service (XPO's Network LTL 2.0 plans), and LTL capacity tightness should drive multi-year margin upside after Yellow's 2023 bankruptcy, an industry seminal event. LTL carriers continue to drive accretive growth, led by KNX (+9.7%), SAIA (+8.2%), XPO (+2.0%), ODFL (-2.0%), ARCB (-7.2%), and FDX (-10.1%).

Transports 4Q23 Earnings continue with TFI, WAB, STNG

Transport 4Q23 earnings continue next week with 1 LTL/multimodal carrier (TFI Int'l), 1 rail equipment manufacturer (Wabtec), and 1 product tanker (Scorpio Tankers). For TFI, we expect it to expand on plans to spin its non-LTL ops and improve US LTL returns. For Wabtec, we focus on its ability to convert its backlog and grow revenues. At Scorpio Tankers, we expect its 1Q24 view to focus on rising product tanker rate backdrop with certain lanes rising to $70-$100k/day (vs ~$30k/day in 4Q23)

TFI (Thu Feb 8, aftermarket): We expect 4Q23 EPS of US$1.70, above Street's US$1.67. We target a US LTL operating ratio of 89.4%, a 140 bps seq improvement as better yields lead to improved returns (despite negative seasonality).

WAB (Wed Feb 14, premarket): We estimate 4Q23 EPS of $1.58, in-line with Street. We target Revenues to increase 6% year-year driven by its strong backlog. Freight Operating Margins are expected to improve 380 bps year-year to 20.8%, aided by mix of Digital sales and loco modernization. We target Transit Operating Margins of 13.3%.

STNG (Wed Feb 14, premarket): We estimate 4Q23 EPS of $2.79, above Street's $2.59. We expect 4Q23 average fleet time-charter equivalent of $33,600/day, down 26% year-year. We target interest expense of $39 mil from $44 mil in 3Q as it replaced lease financings to lower its financing costs.

Key Data This Week:

- Week 5 Rail Carloads: Up 7.2% Y-Y vs Week 4: -2.5% Y-Y, first uptick in x weeks

- Dry Van spot rates ex-fuel = $1.47/mile vs $1.48 last week, up 5% from $1.41 on Dec 31, 2023. Spot rates with fuel were $1.94 vs. $1.95 last week, and up 2% from $1.91 on Dec. 31, 2023.

- **DAT Load to Truck Ratio – 2.07 for the week of Feb. 4, down 21% seq.** from 2.63 last week.

- **January ISM Manufacturing Index 49.1, +2.0 pts.** vs 47.1 in Dec.

- IATA Freight Vols: +10.8% Y-Y in December vs Nov. +8.3% Y-Y

- **Prelim. January Class 8 Orders at 27,000** vs 26,352 in December

Click Transport Tracker for full report including important disclosures.

Palantir Technologies

Unlocking the value of AI at speed & scale - Reiterate Buy & raise PO to $24

Reiterate Rating: BUY | PO: 24.00 USD | Price: 16.72 USD

06 February 2024

Equity

Leader in accessible AI and data-driven solutions

Palantir's Artificial Intelligence Platform (AIP) is still in its infancy and already contributing in a meaningful way. US Commercial sales were up 70% Y/Y in 4Q23 and the business added 40 new customers (up 22% Q/Q). We expect the momentum to continue. We think this remarkable growth is a sign of Palantir's unique position as an enabler of AI-powered data-driven decision making in a tangible, accessible, and operational way. We reiterate our Buy rating and raise PO from $21 to $24.

Bootcamps do in 10hrs what internal teams in 10 months

The newest bootcamp-like pilot approach is accelerating PLTR's go-to-market strategy and expanding addressable market. Since launched last October, PLTR has completed 560+ AIP bootcamps across 465 organizations (5x larger than the pilots run in 2022). The company has run more than 200 use cases with applications across defense, healthcare, telecom, insurance, car rental, finance, pharma, manufacturing, and others.

US Government re-accelerating through several channels

We continue to see significant opportunities within the US Government (USG). Software is becoming increasingly critical to military missions, and the primes seem to be lagging. Sales from the USG will be fueled by 1) Palantir's strong portfolio of existing solutions to rapidly respond to accelerating software requirements, 2) Strengthening customer intimacy and understanding of the mission through traditional programs of record, 3) Newly launched Mission Manager solutions (infrastructure that allows the USG to build and manage multivendor continuous-competition ecosystems), and 4) Deepening relationships with the defense industrial base (from start-ups to primes).

Cash is king: FCF margin of 33-34% & $3.7bn of net cash

Palantir printed 36% adjusted operating margins in 4Q and expects 2024 to be 31-32%. Most importantly, the company generated FCF at 33% of sales and expects to at least repeat this performance in 2024. We view the financial strength as a significant differentiator. In both the government and commercial arenas, prospective customers pay attention to these metrics as a proxy for survivability.

Estimates (Dec) (US$)	**2022A**	**2023A**	**2024E**	**2025E**	**2026E**
EPS	0.06	0.25	0.30	0.38	0.49
GAAP EPS	(0.18)	0.09	0.13	0.21	0.34
EPS Change (YoY)	-53.8%	316.7%	20.0%	26.7%	28.9%
Consensus EPS (Bloomberg)			0.30	0.35	0.53
DPS	0	0	0	0	0
Valuation (Dec)					
P/E	278.7x	66.9x	55.7x	44.0x	34.1x
GAAP P/E	NM	185.8x	128.6x	79.6x	49.2x
EV / EBITDA*	74.6x	49.7x	37.4x	28.7x	21.6x
Free Cash Flow Yield*	0.5%	2.0%	2.5%	3.3%	4.3%

Investment decisions should not be made prior to reading the research report, which includes the opinion key and other important information and disclosures. Click Palantir Technologies for full report including important disclosures.

Key Changes

(US$)	**Previous**	**Current**
Price Obj.	21.00	24.00
2024E Rev (m)	2,670.8	2,679.0
2025E Rev (m)	3,323.3	3,333.3
2026E Rev (m)	4,112.8	4,164.3
2024E EPS	0.27	0.30
2025E EPS	0.37	0.38
2026E EPS	0.48	0.49

Mariana Perez Mora
Research Analyst
BofAS
+1 646 855 5696
mariana.perezmora@bofa.com

Ronald J. Epstein
Research Analyst
BofAS
+1 646 855 5695
r.epstein@bofa.com

Andre Madrid
Research Analyst
BofAS
andre.madrid@bofa.com

Jordan Lyonnais
Research Analyst
BofAS
jordan.lyonnais@bofa.com

Samantha Stiroh
Research Analyst
BofAS
samantha.stiroh@bofa.com

Stock Data

Price	16.72 USD
Price Objective	24.00 USD
Date Established	6-Feb-2024
Investment Opinion	C-1-9
52-Week Range	7.19 USD - 21.85 USD
Mrkt Val (mn) / Shares Out (mn)	34,601 USD / 2,069.4
Free Float	93.4%
Average Daily Value (mn)	754.10 USD
BofA Ticker / Exchange	PLTR / NYS
Bloomberg / Reuters	PLTR US / PLTR.N
ROE (2024E)	18.7%
Net Dbt to Eqty (Dec-2023A)	-23.3%
ESGMeter™	Medium

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

BofA SECURITIES

ExxonMobil Corp.

4Q23 earnings recap: inflection in free cashflow to accelerate in 2024

Reiterate Rating: BUY | PO: 140.00 USD | Price: 101.97 USD

05 February 2024

Equity

Doug Leggate
Research Analyst
BofAS
+1 713 247 6013
doug.leggate@bofa.com

John H. Abbott
Research Analyst
BofAS
john.h.abbott@bofa.com

Kalei Akamine
Research Analyst
BofAS
kalei.akamine@bofa.com

Carlos Escalante
Research Analyst
BofAS
carlos.escalante@bofa.com

Noah Hungness
Research Analyst
BofAS
noah.hungness@bofa.com

2024 to see step change in project contribution to FcF

Contrasting the earnings calls between ExxonMobil (XOM) and Chevron (CVX), at the simplest level, we see the difference in the tone of the Q&A underlining what has been a strong execution story. XOM has now doubled its earnings capacity vs a 2019 baseline, and we expect the project contribution to FcF to accelerate in 2024 led by Guyana at a pace that should position XOM to beat its target to double cashflow by 2027 vs a 2019 baseline. Over the next 18 months, our estimates suggest XOM will add the equivalent of ~80% of its pro-forma dividend burden, including the presumed closure of its pending Permian acquisition, which management expects in 2Q23. With a sector outlook we have characterized as rangebound, with a backward forward curve a headwind to absolute value, we see the timing of XOM's inflection in FcF as a critical differentiator vs the broader sector, and European peers in particular. Our rating is Buy, PO $140/sh.

Upwards reset in dividend capacity accelerates in 2024

By our analysis, the combination of organic growth and timing of strategic acquisitions pulls XOM's post dividend breakeven towards $40 Brent, addressing CFO Kathy Mickell's overriding philosophy when joining XOM in 2021 that its dividend burden vs cashflow capacity needed to be reset. We expect XOM to get there in 2024, setting up the balance of the period through 2027 for a similar reset in the rate of dividend growth, that we see as the primary mechanism for market recognition of value. With share buybacks also expected to be reset post close to an annual rate of $20bn, we believe XOM's per share growth has the potential to be best in class amongst major oil peers.

EPS beat on strong E&P vols; Guyana hits record prod

ExxonMobil adj EPS of $2.48/sh beat street estimates / BofAe of $2.23 & 2.22 on strong upstream and downstream (product solutions) results. Upstream earnings of $6.3bn beat BofAe of $5.7bn on strong oil and gas production (3.8mm boepd vs 3.67mm boepd), mainly on the Permian & Canada. Product solution result of $3.1bn handily beat our $2.1bn estimate, repeating the strength of refiner earnings so far. C/flow from operations (ex w/c of -$2.2bn & asset sales $1.0bn) of $15.9bn beat consensus at $14bn. Free cashflow $8.0bn after cash capex of $6.7bn, fully covered dividends of $3.8bn and buybacks of $4.4bn.

Estimates (Dec) (US$)	**2021A**	**2022A**	**2023E**	**2024E**	**2025E**
EPS	5.46	14.05	9.27	8.15	9.93
GAAP EPS	5.52	13.69	9.53	8.15	9.93
EPS Change (YoY)	NM	157.3%	-34.0%	-12.1%	21.8%
Consensus EPS (Bloomberg)			9.28	9.01	9.54
DPS	3.49	3.55	3.64	3.53	3.50
Valuation (Dec)					
P/E	18.7x	7.3x	11.0x	12.5x	10.3x
GAAP P/E	18.5x	7.4x	10.7x	12.5x	10.3x
Dividend Yield	3.4%	3.5%	3.6%	3.5%	3.4%
EV / EBITDA*	8.2x	4.3x	6.1x	7.3x	6.2x
Free Cash Flow Yield*	7.3%	13.5%	8.0%	7.2%	9.8%

Investment decisions should not be made prior to reading the research report, which includes the opinion key and other important information and disclosures. Click ExxonMobil Corp for full report including important disclosures.

Stock Data

Price	101.97 USD
Price Objective	140.00 USD
Date Established	5-Jan-2024
Investment Opinion	B-1-7
52-Week Range	95.77 USD - 120.70 USD
Mrkt Val (mn) / Shares Out (mn)	425,011 USD / 4,168.0
Free Float	99.6%
Average Daily Value (mn)	1947.78 USD
BofA Ticker / Exchange	XOM / NYS
Bloomberg / Reuters	XOM US / XOM.N
ROE (2023E)	18.6%
Net Dbt to Eqty (Dec-2022A)	5.5%
ESGMeter™	High

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

FcF – free cashflow

Caterpillar Inc

CAT fights off the bears: Next leg to the story requires green shoots for 2025

Reiterate Rating: BUY | PO: 363.00 USD | Price: 321.40 USD

Break out earned: margin up, inventory down - impressive

CAT shares broke out to new highs (+1.9% vs SPX -0.3%) on the back of a solid Q4 and guiding flat 2024 outlook. Why is that impressive? Q4 adj EPS of $5.23, up 35% YoY and 10% ahead of cons included $900mn inventory de-stock ($1.4bn from Machines). Construction & Resources expanded margins 180bps & 90bps YoY on 5% sales declines that included a de-stock. CAT reported a record EPS of ~$21 in FY23 and now believes inventories are broadly rightsized into '24 (note: Komatsu shared similar sentiments).

Too much focus on what can go wrong…what can go right?

There is an overwhelming investor focus on the downside risks (i.e., *what could go wrong?*). Growth is clearly slowing: backlog down, retail sales decelerating, price moderating, inventory drawn down. In our view, this is somewhat expected given the cyclical headwinds over the last year - tightening cycle, weak China, & industrial indicators (ISM) in contraction for 15 months. Begs the question - if CAT is still delivering ~$21 of EPS in this backdrop – what happens when these headwinds turn?

Tech capex: be careful on 'themes' yet it moves the needle

We are always skeptical of cyclical OEMs attaching to tech 'themes'. That said, data center growth is starting to move the needle - Power Gen sales +29% YoY (now 11% of ME&T) – offers growth as other end markets slow. Last week, Meta guided capex $30-37bn in '24 (vs $27bn '23), partly driven by data centers. Another reason this theme catches our attention: CAT's management team – laser focused on FCF - is spending capex for the first time in a decade ($2-2.5bn in '24) to build capacity to meet growth.

Eyes turn to '25: Next leg requires Copper, China, ISM, Fed

CAT proved its EPS resiliency yet upside requires green shoots to indicate if EPS grows in '25-26. What to watch: i) BofA expects higher copper price in 2H – key for Resources unit that is still below peak, ii) China excavators 40% below vs 2020, ii) ISM typically leads retail sales (exhibit 1) iv) easing cycle leads end user demand (albeit., two year lag).

Buy: CAT raises long-term margin & FCF targets

We update our estimates and raise our PO to $363 ($319) based on16.5x (from 15x prior), as CAT raising its long-term margin and FCF targets warrants a higher multiple, in our view. Reiterate Buy rating as CAT is delivering higher EPS power through cycle.

Estimates (Dec) (US$)	2022A	2023A	2024E	2025E	2026E
EPS	13.84	21.21	22.00	24.00	26.50
GAAP EPS	12.64	20.12	21.24	23.59	26.07
EPS Change (YoY)	28.0%	53.3%	3.7%	9.1%	10.4%
Consensus EPS (Bloomberg)			20.68	21.54	23.41
DPS	4.71	5.10	5.50	5.94	6.42
Valuation (Dec)					
P/E	23.2x	15.2x	14.6x	13.4x	12.1x
GAAP P/E	25.4x	16.0x	15.1x	13.6x	12.3x
Dividend Yield	1.5%	1.6%	1.7%	1.8%	2.0%
EV / EBITDA*	16.4x	11.5x	11.4x	10.8x	10.2x
Free Cash Flow Yield*	3.1%	6.1%	5.5%	5.6%	6.5%

Investment decisions should not be made prior to reading the research report, which includes the opinion key and other important information and disclosures. Click Caterpillar Inc for full report including important disclosures.

06 February 2024

Equity

Key Changes

(US$)	Previous	Current
Price Obj.	319.00	363.00
2024E Rev (m)	66,551.5	65,247.0
2025E Rev (m)	70,280.3	68,922.9
2026E Rev (m)	NA	72,778.1
2024E EPS	21.25	22.00
2025E EPS	23.00	24.00
2026E EPS	NA	26.50

Michael Feniger
Research Analyst
BofAS
michael.feniger@bofa.com

Sherif El-Sabbahy
Research Analyst
BofAS
sherif.el-sabbahy@bofa.com

Blake Greenhalgh
Research Analyst
BofAS
blake.greenhalgh@bofa.com

Stock Data

Price	321.40 USD
Price Objective	363.00 USD
Date Established	6-Feb-2024
Investment Opinion	B-1-7
52-Week Range	204.04 USD - 334.87 USD
Mrkt Val (mn) / Shares Out (mn)	164,750 USD / 512.6
Free Float	99.8%
Average Daily Value (mn)	902.37 USD
BofA Ticker / Exchange	CAT / NYS
Bloomberg / Reuters	CAT US / CAT.N
ROE (2024E)	65.5%
Net Dbt to Eqty (Dec-2023A)	22.2%
ESGMeter™	Medium

ESGMeter is not indicative of a company's future stock price performance and is not an investment recommendation or rating. ESGMeter is independent of BofA Global Research's equity investment rating, volatility risk rating, income rating, and price objective for that company. For full details, refer to "BofA ESGMeter Methodology".

ME&T = machine, energy & transportatio

Price objective basis & risk

Advanced Micro Devices, Inc (AMD)

Our $195 PO is based on 38x our 2025E non-GAAP EPS, which is towards the middle of AMD's historical 17x-64x range, justified by AI upside offset by slowdown in cyclical embedded/console markets.

Downside risks: 1) M&A integration risks, 2) Strong competition from larger names, 3) Lumpy nature of consumer and enterprise spending that could create delays in acceptance and success of new products, 4) High reliance on one outsourced manufacturing partner, 5) Maturity of current game console cycle.

Alphabet (GOOGL / GOOG)

Our price objective of $173/$173 is based on 21x 2025E core Google GAAP EPS plus cash. Alphabet has traded at an average multiple of 22x GAAP P/E over the last ten years and we think our multiple is reasonable vs history given expectations for double-digit revenue growth, Cloud margin expansion, and opportunity to capitalize on strong AI assets.

Risks for the stock are 1) loss of search traffic to AI tools from competitors, 2) LLM integration in search may take longer than expected or negatively impact search revenues, 3) revenue pressure from compliance with the EU Digital Markets Act (DMA), 4) adverse judge ruling on the ongoing Department of Justice (DOJ) search distribution trial, 5) potential for increasing Capex and lower FCF-given AI focus.

Amazon.com (AMZN)

Our PO of $204 is based on our SOTP analysis that values the 1P retail business at 1.1x 2025E Revenue (including subscription/Prime membership fees), 3P retail business at 2.6x 2025E Revenue, AWS at 8.0x 2025 Sales, and the advertising business at 5.0x 2025 Sales. For 2025E, our 8.0x AWS multiple is relatively below our SaaS comps at 8.9x, our 1.1x GMV multiple is a slight discount to our retail comps at 1.2x, and our 5.0x advertising multiple is a slight discount to our digital advertising comps at 5.2x. We think some conglomerate discount is warranted with elevated regulatory/antitrust risk, but long-term we believe that in-line to discount multiples are warranted given growth rates in-excess of peers.
Our PO of $204 for Amazon implies 3.0x P/Sales, a multiple toward the high end of Amazon's historical range of 1.0-3.5x. With improving margins long-term, we expect the revenue multiple should trend upward over time.

Downside risks to our price objective are increasing competition from offline and local retailers, AWS client cost optimization impact on revenues and margins, and regulatory pressure on the 3P marketplace. The stock has been subject to heavy volatility in the past, based on margin trends, and this volatility could increase due to economic uncertainty.

Arm Holdings (ARM)

We assign a $110 PO, which is based on 58x our CY25E non-GAAP EPS. This is above peers trading at 30x-36x but is still within 1-2x PEG framework and is justified, in our view, given Arm's superior growth profile.

Downside risks: 1) historically cyclical nature of semiconductor units, 2) high exposure to mature smartphone market, 3) competition against established x86 in the data center, 4) emerging competition from RISC-V in low-end consumer markets, 5) rising geopolitical tensions and deterioration of Arm China relationship, 6) ongoing Qualcomm/Nuvia litigation, 7) small trading float

Caterpillar Inc (CAT)
Our $363 PO on CAT is on based on 16.5x 2024e EPS which is in-line with the long term historical range of 15-17x. While we see some headwinds that are likely to slow growth (higher inventories, capex plateauing, pricing moderating, backlog softening), there are unique macro and business cycle factors that are underpinning stronger cycle over cycle earnings: infrastructure, construction spending mix shifts towards heavy vs light, higher miner free cash flow generation, aging fleets, and data centers.

Downside risks to our PO: 1) widening global coronavirus pandemic that tilts global economy into recession, 2) a greater-than-expected reduction or delay in capital spending among large mining, and oil and gas customers, 3) intensifying pricing pressure in the construction and mining equipment industries, 4) greater than expected dealer destocking, 5) ongoing deterioration in dealer sales growth.

Upside risks: 1) a faster recovery in the global economy, 2) firming earthmoving construction equipment market, 3) stronger-than-expected fleet replacement, 4) continuing recovery in commodity prices, 5) stronger-than-expected demand trends in gas compression, 6) quicker-than-expected resolution to the pandemic.

ExxonMobil Corp. (XOM)
Our price objective of $140/sh assumes $75 Brent and $70 WTI long-term. We assume long-term HH natural gas of $4.00. We apply a long-term (post-tax) weighted average cost of capital (WACC) of 7.4%, which is based on the BofA strategy team's assumed risk premium and a five-year monthly beta.

The risks to our price objective are (1) the oil and gas price and margin environment, (2) significant delays to the new upstream projects critical to its growth targets, and (3) inability to capture the price environment due to cost pressures (opex, capex, and taxation). Upside risks to our price objective are higher oil & gas prices.

Intel (INTC)
Our $50 price objective is based on 26x our 2025E pf-EPS ex-stock comp expense, in the middle of compute peers (15x-40x), which we view as appropriate given manufacturing uncertainties and risks of new foundry strategy.

Upside risks to our price objective are 1) clarity or breakthrough on yields for 7nm process technology, 2) new products allowing Intel to limit share loss, 3) improving product mix which can drive upside to gross margins, 4) manufacturing slip up at key foundry competitors.

Downside risks to our price objective are 1) weaker-than-expected trends in a mature PC market, which is largest revenue generator for Intel, 2) further delays in 7nm process technology and roadmap, 3) accelerated share loss to AMD, 4) more competition in profitable data center market.

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.

Palantir Technologies (PLTR)

Our PO of $24 is based on a 0.6x EV/Sales/Growth multiple to 2025e and represents a sum of the parts of 0.6x on Government (above Defense IT svs on stronger EBITDA margins) and 0.7x on Commercial (in line with GAAP profitable software infrastructure and industrial automation). We think that higher-than-peers' stock based compensation, outsized founders' voting power, and a less conventional investment and sales strategy are balanced by a beneficial position to national security and US government/allies' modernization efforts, a leading role in artificial intelligence (AI)-powered platforms, opportunistic partnerships, strong balance sheet and strengthening profitability.

Downside risks to our PO are lower-than-expected AI-platforms market growth, faster than expected commoditization, higher success from competitors to catch up with technologies, and/or stronger than expected resistance from government customers to use commercial off the shelf solutions.

Upside risks to our PO are stronger-than-expected growth of the AI-platforms market, higher-than-expected PLTR penetration, better-than-expected profitability, and/or successful agreements and investments.

Analyst Certification

We, Mariana Perez Mora, Michael Feniger and Vivek Arya, hereby certify that the views each of us has expressed in this research report accurately reflect each of our respective personal views about the subject securities and issuers. We also certify that no part of our respective compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

US - Aerospace and Defense Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AerCap Holdings N.V.	AER	AER US	Ronald J. Epstein
	Air Lease Corporation	AL	AL US	Ronald J. Epstein
	Booz Allen Hamilton	BAH	BAH US	Mariana Perez Mora
	BWX Technologies, Inc.	BWXT	BWXT US	Ronald J. Epstein
	CACI International	CACI	CACI US	Mariana Perez Mora
	Cadre Holdings Inc	CDRE	CDRE US	Ronald J. Epstein
	Crane Co.	CR	CR US	Ronald J. Epstein
	Embraer	ERJ	ERJ US	Ronald J. Epstein
	General Dynamics	GD	GD US	Ronald J. Epstein
	HEICO Corporation	HEI	HEI US	Ronald J. Epstein
	Howmet Aerospace Inc.	HWM	HWM US	Ronald J. Epstein
	KBR	KBR	KBR US	Mariana Perez Mora
	Leidos Holdings	LDOS	LDOS US	Mariana Perez Mora
	Leonardo DRS, Inc.	DRS	DRS US	Ronald J. Epstein
	Northrop Grumman	NOC	NOC US	Ronald J. Epstein
	Palantir Technologies	PLTR	PLTR US	Mariana Perez Mora
	Parsons Corporation	PSN	PSN US	Mariana Perez Mora
	RBC Bearings Inc	RBC	RBC US	Ronald J. Epstein
	Rocket Lab	RKLB	RKLB US	Ronald J. Epstein
	Teledyne Technologies Inc	TDY	TDY US	Ronald J. Epstein
	TransDigm Group Inc.	TDG	TDG US	Ronald J. Epstein
	Triumph Group	TGI	TGI US	Ronald J. Epstein
NEUTRAL				
	Albany International	AIN	AIN US	Ronald J. Epstein
	Boeing	BA	BA US	Ronald J. Epstein
	Garmin	GRMN	GRMN US	Ronald J. Epstein
	Hexcel Corporation	HXL	HXL US	Ronald J. Epstein
	L3Harris	LHX	LHX US	Ronald J. Epstein
	Lockheed Martin	LMT	LMT US	Ronald J. Epstein
	RTX Corp	RTX	RTX US	Ronald J. Epstein
	Textron	TXT	TXT US	Ronald J. Epstein
UNDERPERFORM				
	Bombardier	BDRBF	BDRBF US	Ronald J. Epstein
	Bombardier Inc.	YBBD B	BBD/B CN	Ronald J. Epstein
	CAE Inc.	YCAE	CAE CN	Ronald J. Epstein
	CAE Inc.	CAE	CAE US	Ronald J. Epstein
	Huntington Ingalls Industries	HII	HII US	Ronald J. Epstein
	Mercury Systems	MRCY	MRCY US	Ronald J. Epstein
	Spirit AeroSys-A	SPR	SPR US	Ronald J. Epstein

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
	BILL	BILL	BILL US	Brad Sills
	CCC Intelligent Solutions	CCCS	CCCS US	Michael J. Funk
	Dropbox	DBX	DBX 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

US - Enterprise Software Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	MeridianLink, Inc.	MLNK	MLNK US	Koji Ikeda, CFA
	Microsoft Corporation	MSFT	MSFT US	Brad Sills
	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
	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
	Enfusion, Inc.	ENFN	ENFN US	Koji Ikeda, CFA
	Five9	FIVN	FIVN US	Michael J. Funk
	Guidewire Software, Inc.	GWRE	GWRE US	Michael J. Funk
	Twilio	TWLO	TWLO US	Michael J. Funk
	Vertex, Inc.	VERX	VERX US	Brad Sills
RSTR				
	Splunk	SPLK	SPLK US	Brad Sills

US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Alphabet	GOOGL	GOOGL US	Justin Post
	Alphabet	GOOG	GOOG US	Justin Post
	Amazon.com	AMZN	AMZN US	Justin Post
	AppLovin	APP	APP US	Omar Dessouky, CFA
	DoorDash	DASH	DASH US	Michael McGovern
	DoubleVerify Holdings, Inc.	DV	DV US	Omar Dessouky, CFA

US - Internet Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Electronic Arts	EA	EA US	Omar Dessouky, CFA
	Integral Ad Science Holding Corp.	IAS	IAS US	Omar Dessouky, CFA
	LegalZoom	LZ	LZ US	Michael McGovern
	Match Group	MTCH	MTCH US	Curtis Nagle, CFA
	Meta Platforms Inc	META	META US	Justin Post
	Pinterest	PINS	PINS US	Justin Post
	RH	RH	RH US	Curtis Nagle, CFA
	Roblox Corp. Class A	RBLX	RBLX US	Omar Dessouky, CFA
	Squarespace, Inc.	SQSP	SQSP US	Michael McGovern
	Uber	UBER	UBER US	Justin Post
	Udemy Inc	UDMY	UDMY US	Curtis Nagle, CFA
	Vivid Seats	SEAT	SEAT US	Curtis Nagle, CFA
	Wayfair	W	W US	Curtis Nagle, CFA
	Wix.com	WIX	WIX US	Michael McGovern
NEUTRAL				
	ACV Auctions	ACVA	ACVA US	Curtis Nagle, CFA
	Airbnb	ABNB	ABNB US	Justin Post
	Beyond Inc	BYON	BYON US	Curtis Nagle, CFA
	Booking Holdings Inc	BKNG	BKNG US	Justin Post
	Bumble	BMBL	BMBL US	Curtis Nagle, CFA
	Digital Turbine, Inc	APPS	APPS US	Omar Dessouky, CFA
	Duolingo	DUOL	DUOL US	Curtis Nagle, CFA
	eBay	EBAY	EBAY US	Justin Post
	Etsy, Inc.	ETSY	ETSY US	Curtis Nagle, CFA
	Expedia	EXPE	EXPE US	Justin Post
	Instacart	CART	CART US	Justin Post
	Magnite, Inc.	MGNI	MGNI US	Omar Dessouky, CFA
	Snap	SNAP	SNAP US	Justin Post
	Take-Two Interactive	TTWO	TTWO US	Omar Dessouky, CFA
	Zillow	ZG	ZG US	Curtis Nagle, CFA
	Zillow	Z	Z US	Curtis Nagle, CFA
UNDERPERFORM				
	Chewy Inc	CHWY	CHWY US	Curtis Nagle, CFA
	Lyft, Inc.	LYFT	LYFT US	Michael McGovern
	Opendoor Technologies	OPEN	OPEN US	Curtis Nagle, CFA
	Peloton	PTON	PTON US	Curtis Nagle, CFA
	Playtika	PLTK	PLTK US	Omar Dessouky, CFA
	Redfin Corp	RDFN	RDFN US	Curtis Nagle, CFA
	Shutterstock	SSTK	SSTK US	Curtis Nagle, CFA

US - Machinery Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	AECOM	ACM	ACM US	Michael Feniger
	Blue Bird Corp	BLBD	BLBD US	Sherif El-Sabbahy
	Caterpillar Inc	CAT	CAT US	Michael Feniger
	CNH Industrial NV	CNHI	CNHI US	Michael Feniger
	Construction Partners Inc.	ROAD	ROAD US	Michael Feniger
	ESAB Corp	ESAB	ESAB US	Sherif El-Sabbahy
	Finning International Inc.	YFTT	FTT CN	Sherif El-Sabbahy
	H&E Equipment Services Inc	HEES	HEES US	Sherif El-Sabbahy
	Knife River Corp	KNF	KNF US	Sherif El-Sabbahy
	Republic Services	RSG	RSG US	Michael Feniger
	Techtronic Industries Co Ltd	TTNDF	669 HK	Michael Feniger
	Techtronic Industries Co Ltd	TTNDY	TTNDY US	Michael Feniger
	United Rentals Inc	URI	URI US	Michael Feniger
	Vulcan Materials	VMC	VMC US	Michael Feniger
	Waste Connections Inc	WCN	WCN US	Michael Feniger
	WillScot Mobile Mini	WSC	WSC US	Sherif El-Sabbahy

US - Machinery Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
NEUTRAL				
	AGCO Corp	AGCO	AGCO US	Michael Feniger
	Deere & Co	DE	DE US	Michael Feniger
	Fluor	FLR	FLR US	Michael Feniger
	GFL Environmental Inc	GFL	GFL US	Michael Feniger
	GFL Environmental Inc	YGFL	GFL CN	Michael Feniger
	Jacobs Eng.	J	J US	Michael Feniger
	Kennametal Inc.	KMT	KMT US	Michael Feniger
	Martin Marietta Materials	MLM	MLM US	Michael Feniger
	NV5 Global Inc.	NVEE	NVEE US	Michael Feniger
	PACCAR Inc	PCAR	PCAR US	Michael Feniger
	RB Global, Inc	RBA	RBA US	Michael Feniger
	Waste Management	WM	WM US	Michael Feniger
UNDERPERFORM				
	Allison Transmission Holdings Inc.	ALSN	ALSN US	Sherif El-Sabbahy
	Casella	CWST	CWST US	Michael Feniger
	Cummins Inc	CMI	CMI US	Michael Feniger
	Herc Holdings Inc	HRI	HRI US	Sherif El-Sabbahy
	IPG Photonics	IPGP	IPGP US	Michael Feniger
	Oshkosh Corp.	OSK	OSK US	Michael Feniger
	Terex Corp.	TEX	TEX US	Michael Feniger
	Timken Company	TKR	TKR US	Michael Feniger

US - Large Cap Oils Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	APA Corporation	APA	APA US	Doug Leggate
	Canadian Natural Resources	YCNQ	CNQ CN	Doug Leggate
	Canadian Natural Resources	CNQ	CNQ US	Doug Leggate
	Chesapeake Energy	CHK	CHK US	Doug Leggate
	Chevron Corp.	CVX	CVX US	Doug Leggate
	ConocoPhillips	COP	COP US	Doug Leggate
	Coterra Energy Inc	CTRA	CTRA US	Doug Leggate
	EQT Corporation	EQT	EQT US	John H. Abbott
	ExxonMobil Corp.	XOM	XOM US	Doug Leggate
	Granite Ridge Resources, Inc	GRNT	GRNT US	John H. Abbott
	Imperial Oil	IMO	IMO US	Doug Leggate
	Imperial Oil	YIMO	IMO CN	Doug Leggate
	Kimbell Royalty Partners	KRP	KRP US	John H. Abbott
	Occidental Petroleum Corp.	OXY	OXY US	Doug Leggate
	Ovintiv Inc	YOVV	OVV CN	Doug Leggate
	Ovintiv Inc	OVV	OVV US	Doug Leggate
	Range Resources Corp	RRC	RRC US	Doug Leggate
	Suncor	YSU	SU CN	Doug Leggate
	Suncor	SU	SU US	Doug Leggate
NEUTRAL				
	California Resources Corporation	CRC	CRC US	Kalei Akamine
	CNX Resources	CNX	CNX US	John H. Abbott
	Delek US Holdings, Inc.	DK	DK US	Doug Leggate
	Devon Energy Corp.	DVN	DVN US	Doug Leggate
	EOG Resources	EOG	EOG US	Doug Leggate
	Gulfport Energy Corporation	GPOR	GPOR US	Doug Leggate
	HF Sinclair Corporation	DINO	DINO US	Doug Leggate
	Marathon Petroleum Company	MPC	MPC US	Doug Leggate
	PBF Energy	PBF	PBF US	Doug Leggate
	Permian Resources Corporation	PR	PR US	Doug Leggate
	Phillips 66	PSX	PSX US	Doug Leggate
	Valero Energy Corp.	VLO	VLO US	Doug Leggate
UNDERPERFORM				
	Chord Energy Corporation	CHRD	CHRD US	John H. Abbott

US - Large Cap Oils Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Crescent Energy Company	CRGY	CRGY US	John H. Abbott
	Diamondback Energy Inc.	FANG	FANG US	Doug Leggate
	Marathon Oil Corp.	MRO	MRO US	Doug Leggate
	National Fuel Gas Company	NFG	NFG US	John H. Abbott
	Northern Oil and Gas	NOG	NOG US	John H. Abbott
	Vital Energy Inc	VTLE	VTLE US	John H. Abbott
RSTR				
	Pioneer Natural Resources	PXD	PXD US	Doug Leggate

US - Semiconductors and Semiconductor Capital Equipment Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
BUY				
	Advanced Micro Devices, Inc	AMD	AMD US	Vivek Arya
	Analog Devices Inc.	ADI	ADI US	Vivek Arya
	Applied Materials, Inc.	AMAT	AMAT US	Vivek Arya
	Arm Holdings	ARM	ARM US	Vivek Arya
	Broadcom Inc	AVGO	AVGO US	Vivek Arya
	Cadence	CDNS	CDNS US	Vivek Arya
	Camtek	CAMT	CAMT US	Vivek Arya
	KLA Corporation	KLAC	KLAC US	Vivek Arya
	Lam Research Corp.	LRCX	LRCX US	Vivek Arya
	M/A-Com	MTSI	MTSI US	Vivek Arya
	Marvell Technology Group Ltd.	MRVL	MRVL US	Vivek Arya
	Microchip	MCHP	MCHP US	Vivek Arya
	Micron Technology, Inc	MU	MU US	Vivek Arya
	Nova	NVMI	NVMI US	Vivek Arya
	NVIDIA Corporation	NVDA	NVDA US	Vivek Arya
	NXP Semiconductors NV	NXPI	NXPI US	Vivek Arya
	onsemi	ON	ON US	Vivek Arya
	Synopsys	SNPS	SNPS US	Vivek Arya
NEUTRAL				
	Advanced Energy Industries	AEIS	AEIS US	Duksan Jang
	Allegro MicroSystems	ALGM	ALGM US	Blake Friedman
	Axcelis Technologies	ACLS	ACLS US	Duksan Jang
	Coherent Corp	COHR	COHR US	Vivek Arya
	GlobalFoundries	GFS	GFS US	Vivek Arya
	Intel	INTC	INTC US	Vivek Arya
	Lattice Semiconductor	LSCC	LSCC US	Blake Friedman
	Texas Instruments Inc.	TXN	TXN US	Vivek Arya
UNDERPERFORM				
	Ambarella	AMBA	AMBA US	Vivek Arya
	Credo Technology	CRDO	CRDO US	Vivek Arya
	Lumentum Holdings	LITE	LITE US	Vivek Arya
	Qorvo Inc.	QRVO	QRVO US	Vivek Arya
	Skyworks Solutions, Inc.	SWKS	SWKS US	Vivek Arya
	Teradyne	TER	TER US	Vivek Arya
	Wolfspeed Inc	WOLF	WOLF US	Vivek Arya

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

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	83	61.48%	Buy	64	77.11%
Hold	28	20.74%	Hold	21	75.00%
Sell	24	17.78%	Sell	18	75.00%

Equity Investment Rating Distribution: Machinery/Diversified Manufacturing Group (as of 31 Dec 2023)

Coverage Universe	Count	Percent	Inv. Banking Relationships [R1]	Count	Percent
Buy	27	42.19%	Buy	8	29.63%
Hold	17	26.56%	Hold	8	47.06%
Sell	20	31.25%	Sell	8	40.00%

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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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster[R2]
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Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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