

## JPMorgan Chase &amp; Co.

## Meets high bar

Reiterate Rating: BUY | PO: 188.00 USD | Price: 169.05 USD

## No change to our outlook, reiterate Buy rating

Following an initial strong reaction to better-than-expected 4Q23 results the stock closed relatively unchanged on the day, trading inline with the broader banks group. Although 4Q23 results and mgmt's FY24 guidance met the high bar for a stock trading near all-time highs, the update may not be enough of a catalyst to drive new dollars into the stock. No change to our FY24/25e EPS of \$15/\$15.25 as higher net interest income (NII) is offset by higher expenses/lower fee revenues. Relevant research: [US Banks: First read JPM, WFC, BK: Results/guide supportive of move in bank stocks](#)

## Rate-cuts, customer behavior to determine NII trajectory

Mgmt. guidance calls for FY24 NII of \$90bn (\$88bn ex. markets) exceeding our/cons. pre-4Q expectations. This is 7% below the \$97bn annualized NII reported for 4Q23. In addition to a continued catch-up on deposit pricing, NII to be negatively impacted by rate-cuts (guidance assumes six cuts) owing to a modestly asset sensitive balance sheet. Fewer rate-cuts should be a positive. We forecast FY24/25 NII \$90.2bn/\$86.9bn.

## Plowing stronger revenue growth toward investments

Mgmt. guided for FY24e expenses of ~\$90bn compared to ~\$86bn (ex. FDIC special assessment) 4Q23 annualized run-rate. This assumes ~\$1bn of volume-related expense growth (investment banking, markets rebound); continued expansion of the branch footprint (expects to open ~170 new branches FY24); tech investments. While addressing A.I. investments, mgmt. noted that it was pursuing a "well-chosen list of high-impact use cases" with the strategy led by JPM veteran (30yrs) Teresa Heitsenrether. We see impact of AI as evolutionary vs. revolutionary for now, although use cases should grow. Relevant research: [US Banks: 2024 Year Ahead: Top ten questions asked \(and answered\)](#)

## Stock momentum should continue, reiterate Buy rating

While lacking an obvious catalyst, we view JPMorgan-JPM shares as offering an attractive risk/reward given the range of macro-economic outcomes (rates/GDP) facing the banking sector. A fortress balance sheet with a common equity tier 1 (CET1) capital ratio of 15%, best-in-class return on tangible common equity (ROTCE), revenue diversity across businesses/geographies, franchise investments, all topped with solid execution, should lead to superior EPS growth and returns. Reiterate Buy rating and \$188 PO.

Relevant research: [JPM: 2024 Year Ahead: An elephant with the agility of a tiger](#)

Estimates (Dec) (US\$)	2021A	2022A	2023E	2024E	2025E
EPS	15.26	12.59	16.47	15.00	15.25
GAAP EPS	15.32	12.08	16.04	15.00	15.25
EPS Change (YoY)	70.9%	-17.5%	30.8%	-8.9%	1.7%
Consensus EPS (Bloomberg)			16.76	15.67	15.83
DPS	3.80	4.00	4.10	4.31	4.74
Valuation (Dec)					
P/E	11.1x	13.4x	10.3x	11.3x	11.1x
GAAP P/E	11.0x	14.0x	10.5x	11.3x	11.1x
Dividend Yield	2.2%	2.4%	2.4%	2.5%	2.8%

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12 January 2024

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## Stock Data

Price	169.05 USD
Price Objective	188.00 USD
Date Established	4-Jan-2024
Investment Opinion	B-1-7
52-Week Range	123.11 USD -176.31 USD
Mrkt Val / Shares Out (mn)	488,725 USD / 2,891.0
Free Float	98.8%
Average Daily Value	1625.00 USD
BofA Ticker / Exchange	JPM / NYS
Bloomberg / Reuters	JPM US / JPM.N
ROE (2023E)	17.2%
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"](#).

# iQprofile<sup>SM</sup> JPMorgan Chase & Co.

## Income Statement Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Net Interest Income	52,741	67,144	88,535	85,694	82,871
% change	-4.1%	27.3%	31.9%	-3.2%	-3.3%
Net Fee Income	NA	NA	NA	NA	NA
Securities Gains / (Losses)	NA	NA	NA	NA	NA
Total Operating Income	125,054	134,276	162,020	160,845	162,566
Operating Expenses	(70,793)	(76,140)	(85,208)	(88,478)	(91,171)
% change	7.0%	7.6%	11.9%	3.8%	3.0%
Provisions Expense	9,256	(6,389)	(9,543)	(11,641)	(11,179)
% change	-153.0%	NA	49.4%	22.0%	-4.0%
Operating Pre-Tax Income	63,517	51,747	67,269	60,726	60,217
Operating Net Income to Comm S/Hold.	46,182	37,387	48,472	43,308	42,738
GAAP Net Income	47,782	38,982	49,955	44,644	44,270

## Balance Sheet Data (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Total Assets	3,743,567	3,665,743	3,973,866	4,031,350	4,109,393
Average Interest Earning Assets	3,215,351	3,349,466	3,322,871	3,428,353	3,500,184
Total Gross Customer Loans	1,077,714	1,135,647	1,321,482	1,355,391	1,411,784
% change	6.4%	5.4%	16.4%	2.6%	4.2%
Total Customer Deposits	2,462,303	2,340,179	2,370,754	2,364,329	2,388,936
% change	14.8%	-5.0%	1.3%	-0.3%	1.0%
Tangible Equity	210,591	214,552	240,893	265,260	286,988
Common Shareholders' Equity	259,289	264,928	293,647	317,926	339,566

## Key Metrics (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Net Interest Margin	1.64%	2.00%	2.66%	2.50%	2.37%
Effective Tax Rate	24.4%	24.3%	25.3%	26.0%	26.0%
Loan / Deposit Ratio	43.8%	48.5%	55.7%	57.3%	59.1%
Tangible Common Equity / Assets	5.6%	5.9%	6.1%	6.6%	7.0%
ROA	1.2%	1.0%	1.3%	1.1%	1.1%
ROE	18.4%	14.8%	17.2%	14.1%	13.0%
RoTE	22.4%	17.6%	21.3%	17.1%	15.5%
Dividend Payout Ratio	24.9%	31.8%	24.9%	28.7%	31.1%
Efficiency Ratio (Cost / Income Ratio)	56.6%	56.7%	52.6%	55.0%	56.1%

## Quality of Earnings (Dec)

(US\$ Millions)	2021A	2022A	2023E	2024E	2025E
Total Non-Interest Inc / Operating Inc	57.8%	50.0%	45.4%	46.7%	49.0%
NPLs plus Foreclosed Real Estate / Loans	0.7%	0.6%	0.6%	0.7%	0.6%
Loan Loss Reserves / NPLs	207.61%	289.97%	296.38%	302.43%	306.55%
Loan Loss Reserves / Total Loans	1.50%	1.72%	1.76%	1.98%	1.99%

## Company Sector

Banks-Multinational/Universal

## Company Description

J.P. Morgan Chase (JPM) is one of the leading global financial services firms and one of the largest banking institutions in the US, with nearly \$4 trillion in assets. The company as it is today formed through the merger of retail bank Chase Manhattan and investment bank JP Morgan. The firm has many operating divisions including investment and corporate banking, asset and wealth management, retail financial services, commercial banking, credit cards, and financial transaction services.

## Investment Rationale

We view JPM as best of breed when it comes to earnings diversification combined with strong execution. JPM's commitment toward digital (such as launch of the UK retail bank, investment in Brazilian bank C6, Blockchain platform Onyx, JPM Coin, dozens of Fintech acquisitions) combined with the talent to navigate a rapidly changing banking landscape sets the bank apart from peers, in our opinion.

## Stock Data

Average Daily Volume 9956,234

## Quarterly Earnings Estimates

	2022	2023
Q1	2.76A	4.27A
Q2	2.91A	4.06A
Q3	3.36A	4.51A
Q4	3.56A	3.63E

**Exhibit 1: JPM Variance Table**

New vs. old EPS estimates, assumptions

		Actual	Estimate		New	Old		New	Old	
		4Q23	4Q23E	Variance	2024E	2024E	Variance	2025E	2025E	Variance
<b>KEY FORECAST VARIABLES:</b>										
EOP Loans	1,310,059	1,323,706	1,321,482	0.17%	1,357,809	1,355,391	0.18%	1,418,807	1,411,784	0.50%
Average Loans	1,306,322	1,315,439	1,315,770	-0.03%	1,331,992	1,331,286	0.05%	1,388,308	1,383,587	0.34%
Average Earning Assets	3,331,728	3,408,395	3,399,220	0.27%	3,465,437	3,428,353	1.08%	3,520,620	3,500,184	0.58%
Net Interest Margin (%)	2.72	2.81	2.68	13bp	2.60	2.50	10bp	2.47	2.37	10bp
Net Interest Income (FTE)	22,856.0	24,177.0	22,965.3	5.28%	90,222.1	85,694.2	5.28%	86,870.2	82,871.7	4.82%
Loan Loss Provision	1,384.0	2,762.0	2,985.3	-7.48%	10,376.6	11,641.5	-10.87%	9,733.7	11,178.8	-12.93%
Noninterest Revenues	18,560.0	16,611.0	17,117.6	-2.96%	71,877.5	75,151.1	-4.36%	75,072.3	79,695.0	-5.80%
Tot. Revenue	41,416	40,788	40,083	1.76%	162,100	160,845	0.78%	161,943	162,567	-0.38%
Total Expenses	21,757.0	21,604.0	22,521.8	-4.08%	90,410.6	88,477.6	2.18%	91,904.2	91,170.9	0.80%
Pre-Tax Income (FTE)	18,275.0	16,422.0	14,575.8	12.67%	61,312.5	60,726.3	0.97%	60,304.6	60,217.1	0.15%
FTE Tax Rate (%)	25.0	26.2	24.2	2pp	26.9	26.0	1pp	26.9	26.0	1pp
Net Income	13,701.2	12,120.8	11,041.3	9.78%	44,844.0	44,964.1	-0.27%	44,069.1	44,590.6	-1.17%
Available For Common	13,235.2	11,683.8	10,593.5	1090mn	43,305.0	43,308.0	-3mn	42,334.0	42,737.7	-404mn
<b>Op. EARNINGS PER SHARE (F.D.)</b>	<b>\$4.51</b>	<b>\$4.00</b>	<b>\$3.63</b>	<b>10%</b>	<b>\$15.00</b>	<b>\$15.00</b>	<b>0%</b>	<b>\$15.25</b>	<b>\$15.25</b>	<b>0%</b>
<b>GAAP EPS (F.D.)</b>	<b>\$4.33</b>	<b>\$3.04</b>	<b>\$2.85</b>	<b>7%</b>	<b>\$15.00</b>	<b>\$15.00</b>	<b>0%</b>	<b>\$15.25</b>	<b>\$15.25</b>	<b>0%</b>
Book Value Per Share	\$100.30	\$104.45	\$102.04	\$2.41	\$114.63	\$112.44	\$2.20	\$122.58	\$122.25	\$0.33
Tangible Book Value Per Share	\$82.04	\$86.07	\$83.71	\$2.36	\$95.96	\$93.81	\$2.15	\$103.25	\$103.32	(\$0.07)
Dividends Per Share	\$1.05	\$1.05	\$1.05	\$0.00	\$4.31	\$4.31	\$0.00	\$4.74	\$4.74	\$0.00
Average Fully-Diluted Shares	2,932.1	2,919.1	2,918.5	1mn	2,887.4	2,886.9	1mn	2,776.7	2,802.6	-26mn
<b>CAPITAL RATIOS:</b>										
EOP Common Equity/Assets (%)	7.44	7.75	7.39	36bp	8.18	7.89	30bp	8.32	8.26	5bp
Tang. Common Equity/Assets (%)	6.17	6.48	6.15	33bp	6.95	6.67	28bp	7.10	7.08	2bp
Tangible Common Equity/RWA (%)	14.02	14.78	14.11	67bp	16.03	15.43	60bp	16.52	16.54	-3bp
<b>PROFITABILITY RATIOS:</b>										
Return On Assets (%)	1.31	0.90	0.84	7bp	1.10	1.08	2bp	1.06	1.05	1bp
Return On Common Equity (%)	17.67	11.95	11.31	64bp	13.83	14.10	-27bp	12.86	13.00	-14bp
Return On Tangible Common Equity (%)	21.69	14.57	13.99	58bp	16.83	17.23	-40bp	15.48	15.65	-16bp
Operating Expenses/Revenues (%)	52.53	52.97	56.19	-322bp	55.77	55.01	77bp	56.75	56.08	67bp
<b>BALANCE SHEET ITEMS:</b>										
EOP Total Deposits	2,379,526	2,400,688	2,370,754	1.26%	2,388,635	2,364,329	1.03%	2,398,313	2,388,936	0.39%
AVG Total Deposits	2,355,741	2,372,101	2,375,140	-0.13%	2,395,745	2,370,153	1.08%	2,393,474	2,376,632	0.71%
EOP Total Assets	3,898,333	3,875,393	3,973,866	-2.48%	3,959,313	4,031,350	-1.79%	4,019,110	4,109,393	-2.20%
EOP Equity	317,371	327,878	321,051	2.13%	351,433	345,330	1.77%	361,631	366,970	-1.46%
EOP Preferred Equity	27,404	27,404	27,404	0.00%	27,404	27,404	0.00%	27,404	27,404	0.00%
EOP Common Equity	289,967	300,474	293,647	2.33%	324,029	317,926	1.92%	334,227	339,566	-1.57%
EOP Tangible Common Equity	237,191	247,611	240,893	2.79%	271,254	265,260	2.26%	281,540	286,988	-1.90%
<b>CREDIT QUALITY INDICATORS:</b>										
Net Charge-Offs	1,497	2,164	1,724	25.49%	8,068	7,589	6.31%	9,666	9,452	2.27%
% Average Loans	0.45	0.65	0.52	13bp	0.61	0.57	4bp	0.70	0.68	1bp
Nonperforming Assets	8,131	7,597	8,492	-10.54%	8,318	9,348	-11.02%	8,501	9,184	-7.44%
% EOP Loans + OREO	0.62	0.57	0.64	-7bp	0.61	0.69	-8bp	0.60	0.65	-5bp
Nonperforming Loans	7,520	6,917	7,858	-11.98%	7,823	8,888	-11.98%	8,070	9,168	-11.98%
% EOP Loans (excl. OREO)	0.57	0.52	0.59	-7bp	0.58	0.66	-8bp	0.57	0.65	-8bp
Loan Loss Reserve	22,161	22,894	23,291	-1.70%	24,763	26,880	-7.87%	24,330	28,105	-13.43%
% EOP Loans	1.69	1.73	1.76	-3bp	1.82	1.98	-16bp	1.71	1.99	-28bp
% Nonperforming Loans	294.69	330.98	296.38	3460bp	316.54	302.43	1411bp	301.50	306.55	-505bp

Source: BofA Global Research, Company filings

BofA GLOBAL RESEARCH





## Price objective basis & risk

### JPMorgan Chase & Co. (JPM)

Our \$188 PO is based on a 50%/50% weighting between our 2024e EPS and 2024e TBV. We assign 12.9x/1.9x multiples, respectively, in-line with/above 5Y pre-pandemic average (11.8x/1.7x, respectively) due to the bank's best-in-class revenue generation and better EPS defensibility.

Downside risks to our price objective are macro risks, such as slower-than-expected rate increases, additional regulatory requirements, and scrutiny of the financials industry.

Upside risks are better-than-expected credit quality (i.e., lower loan losses) and better interest rate defensibility

## Analyst Certification

I, Ebrahim H. Poonawala, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

### North America - Banks Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
<b>BUY</b>	Ares Capital Corporation	ARCC	ARCC US	Derek Hewett
	Ares Commercial Real Estate Corporation	ACRE	ACRE US	Derek Hewett
	Bank of Montreal	BMO	BMO US	Ebrahim H. Poonawala
	Bank of Montreal	YBMO	BMO CN	Ebrahim H. Poonawala
	Barings BDC Inc	BBDC	BBDC US	Derek Hewett
	Blackstone Mortgage Trust Inc	BXMT	BXMT US	Derek Hewett
	Blue Owl Capital Corporation	OBDC	OBDC US	Derek Hewett
	Carlyle Secured Lending Inc	CGBD	CGBD US	Derek Hewett
	Citigroup Inc.	C	C US	Ebrahim H. Poonawala
	Compass Diversified Holdings	CODI	CODI US	Derek Hewett
	Crescent Capital BDC	CCAP	CCAP US	Derek Hewett
	Cullen/Frost Bankers Inc	CFR	CFR US	Ebrahim H. Poonawala
	East West Bancorp, Incorporated	EWBC	EWBC US	Ebrahim H. Poonawala
	Fifth Third Bank	FITB	FITB US	Ebrahim H. Poonawala
	First Bancorp Puerto Rico	FBP	FBP US	Brandon Berman
	First Horizon Corporation	FHN	FHN US	Ebrahim H. Poonawala
	FNB Corporation of Pennsylvania	FNB	FNB US	Brandon Berman
	Goldman Sachs	GS	GS US	Ebrahim H. Poonawala
	JPMorgan Chase & Co.	JPM	JPM US	Ebrahim H. Poonawala
	KeyCorp	KEY	KEY US	Ebrahim H. Poonawala
	M&T Bank	MTB	MTB US	Ebrahim H. Poonawala
	Morgan Stanley	MS	MS US	Ebrahim H. Poonawala
	New Mountain Finance Corporation	NMFC	NMFC US	Derek Hewett
	New York Community Bancorp	NYCB	NYCB US	Ebrahim H. Poonawala
	Northern Trust Corporation	NTRS	NTRS US	Ebrahim H. Poonawala
	Royal Bank of Canada	RY	RY US	Ebrahim H. Poonawala
	Royal Bank of Canada	YRY	RY CN	Ebrahim H. Poonawala
	Safehold, Inc	SAFE	SAFE US	Derek Hewett
	Sixth Street Specialty Lending, Inc	TSLX	TSLX US	Derek Hewett
	Starwood Property Trust	STWD	STWD US	Derek Hewett
	Synovus Financial Corp.	SNV	SNV US	Ebrahim H. Poonawala
	The Bank of New York Mellon Corporation	BK	BK US	Ebrahim H. Poonawala
	Truist Financial	TFC	TFC US	Ebrahim H. Poonawala
	U.S. Bancorp	USB	USB US	Ebrahim H. Poonawala
	Webster Financial Corp.	WBS	WBS US	Brandon Berman
	Wells Fargo & Company	WFC	WFC US	Ebrahim H. Poonawala
	Western Alliance Bancorp	WAL	WAL US	Ebrahim H. Poonawala
<b>NEUTRAL</b>	AGNC Investment Corp	AGNC	AGNC US	Derek Hewett



## North America - Banks Coverage Cluster

Investment rating	Company	BofA Ticker	Bloomberg symbol	Analyst
	Ally Financial	ALLY	ALLY US	Brandon Berman
	Annaly Capital Management	NLY	NLY US	Derek Hewett
	Apollo Commercial Real Estate Finance	ARI	ARI US	Derek Hewett
	Associated Banc-Corp	ASB	ASB US	Brandon Berman
	Bain Capital Specialty Finance, Inc.	BCSF	BCSF US	Derek Hewett
	Bank of Nova Scotia	YBNS	BNS CN	Ebrahim H. Poonawala
	Bank of Nova Scotia	BNS	BNS US	Ebrahim H. Poonawala
	Blackstone Secured Lending Fund	BXSL	BXSL US	Derek Hewett
	BrightSpire Capital Inc.	BRSP	BRSP US	Derek Hewett
	Canadian Imperial Bank of Commerce	CM	CM US	Ebrahim H. Poonawala
	Canadian Imperial Bank of Commerce	YCM	CM CN	Ebrahim H. Poonawala
	Citizens Financial Group	CFG	CFG US	Ebrahim H. Poonawala
	Comerica Incorporated	CMA	CMA US	Brandon Berman
	Commerce Bancshares Inc.	CBSH	CBSH US	Brandon Berman
	Goldman Sachs BDC, Inc.	GSBD	GSBD US	Derek Hewett
	Golub Capital BDC, Inc.	GBDC	GBDC US	Derek Hewett
	Huntington Bancshares Inc.	HBAN	HBAN US	Ebrahim H. Poonawala
	Ladder Capital Corp	LADR	LADR US	Derek Hewett
	PennyMac Mortgage Investment Trust	PMT	PMT US	Derek Hewett
	Popular Inc	BPOP	BPOP US	Brandon Berman
	Regions Financial	RF	RF US	Ebrahim H. Poonawala
	The PNC Financial Services Group, Inc.	PNC	PNC US	Ebrahim H. Poonawala
	Toronto-Dominion Bank	TD	TD US	Ebrahim H. Poonawala
	Toronto-Dominion Bank	YTD	TD CN	Ebrahim H. Poonawala
	TPG RE Finance Trust, Inc.	TRTX	TRTX US	Derek Hewett

## UNDERPERFORM

	Bank of Hawaii Corp.	BOH	BOH US	Brandon Berman
	First Hawaiian Inc.	FHB	FHB US	Brandon Berman
	Guild Holdings Company	GHL	GHL US	Derek Hewett
	Invesco Mortgage Capital, Inc.	IVR	IVR US	Derek Hewett
	loanDepot Inc	LDI	LDI US	Derek Hewett
	MidCap Financial Investment Co	MFIC	MFIC US	Derek Hewett
	Prosperity Bancshares Inc	PB	PB US	Ebrahim H. Poonawala
	State Street Corporation	STT	STT US	Ebrahim H. Poonawala
	Texas Capital Bancshares Inc.	TCBI	TCBI US	Brandon Berman
	Zions Bancorp	ZION	ZION US	Brandon Berman

Method <sup>SM</sup> Measures Definitions

## Business Performance

Return On Capital Employed

Return On Equity

Operating Margin

Earnings Growth

Free Cash Flow

## Quality of Earnings

Cash Realization Ratio

Asset Replacement Ratio

Tax Rate

Net Debt-To-Equity Ratio

Interest Cover

## Valuation Toolkit

Price / Earnings Ratio

Price / Book Value

Dividend Yield

Free Cash Flow Yield

Enterprise Value / Sales

EV / EBITDA

## Numerator

NOPAT = (EBIT + Interest Income) × (1 – Tax Rate) + Goodwill Amortization

Net Income

Operating Profit

Expected 5 Year CAGR From Latest Actual

Cash Flow From Operations – Total Capex

## Numerator

Cash Flow From Operations

Capex

Tax Charge

Net Debt = Total Debt – Cash &amp; Equivalents

EBIT

## Numerator

Current Share Price

Current Share Price

Annualised Declared Cash Dividend

Cash Flow From Operations – Total Capex

EV = Current Share Price × Current Shares + Minority Equity + Net Debt +

Other LT Liabilities

Enterprise Value

## Denominator

Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill Amortization

Shareholders' Equity

Sales

N/A

N/A

## Denominator

Net Income

Depreciation

Pre-Tax Income

Total Equity

Interest Expense

## Denominator

Diluted Earnings Per Share (Basis As Specified)

Shareholders' Equity / Current Basic Shares

Current Share Price

Market Cap = Current Share Price × Current Basic Shares

Sales

Basic EBIT + Depreciation + Amortization

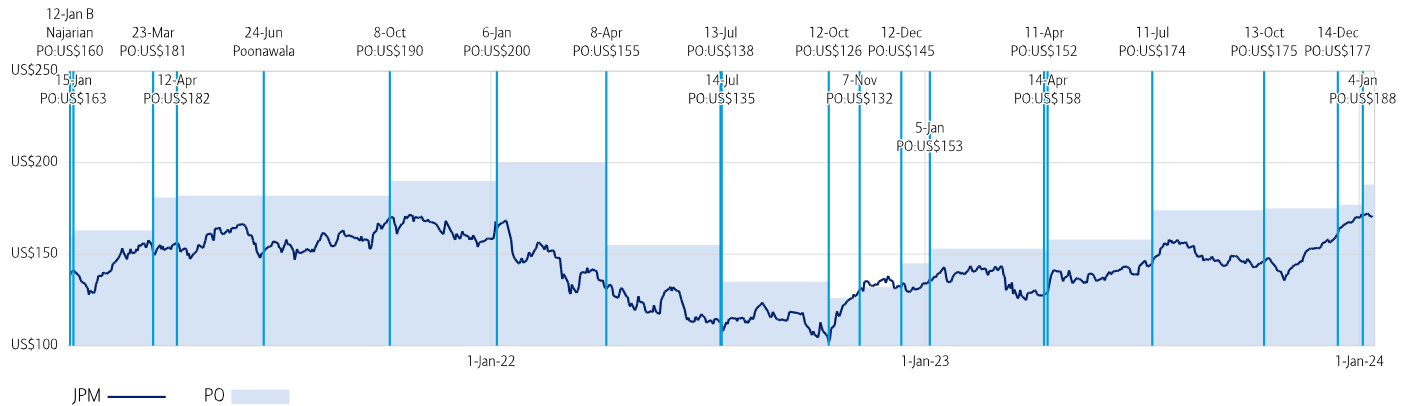
Valuation Toolkit	Numerator	Denominator
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### JP Morgan Chase (JPM) Price Chart



B: Buy, N: Neutral, U: Underperform, PO: Price Objective, NA: No longer valid, NR: No Rating

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

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	Count	Percent
Buy	100	49.75%	Buy	84	84.00%
Hold	54	26.87%	Hold	41	75.93%
Sell	47	23.38%	Sell	35	74.47%

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

Coverage Universe	Count	Percent	Inv. Banking Relationships <sup>R1</sup>	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%

<sup>R1</sup> 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 <sup>R2</sup>
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

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