

Hannover Re

Minor update ahead of FY24 results

We make minor updates to our estimates ahead of FY24 results on 13th March and Hannover Re's renewals update on 6th February, where we expect preliminary FY24 headline figures as per usual company practice. Our headline 2024-28E net income estimates remain broadly unchanged and we maintain our PT of €300.

- **FY24E:** We expect net income just above the ~€2.3bn guidance at €2.4bn (+1% change) and a dividend of €9.0 to be announced (of which €7.5 regular and €1.5 special), implying a ~45% payout ratio. In P&C our combined ratio is ~88%, with an assumption for large losses to be below budget for the FY totalling ~€1.6bn vs €1.8bn budget although we believe the company is likely to add most of the remainder to reserve buffers. In L&H we forecast reinsurance service result of €880m vs > €850m guidance. Our Solvency II ratio estimate is 259%, broadly flat QoQ with capital generation largely offset by expected impact from dividends.
- Our 2025E net income is unchanged at €2.56bn vs ~€2.4bn guidance, while our FY26-28E estimates also remain unchanged.

Table 1: Hannover Re - summary of estimate changes

€ million

	JPM 2024E	JPM 2025E	JPM 2026E	JPM 2027E	Old 2024E	Old 2025E	Old 2026E	Old 2027E	% change 2024E	% change 2025E	% change 2026E	% change 2027E
Reinsurance revenue	25,948	27,372	28,193	29,038	25,948	27,372	28,193	29,038	0%	0%	0%	0%
Reinsurance service result (net)	2,820	2,964	2,856	2,937	2,801	2,962	2,855	2,936	1%	0%	0%	0%
P&C	1,539	2,072	1,957	2,015	1,904	2,072	1,957	2,015	2%	0%	0%	0%
L&H	880	892	900	922	895	890	898	921	-2%	0%	0%	0%
Investment income	1,922	2,058	2,238	2,329	1,934	2,058	2,238	2,329	-1%	0%	0%	0%
Operating profit (EBIT)	3,241	3,607	3,662	3,815	3,274	3,606	3,660	3,814	-1%	0%	0%	0%
P&C	2,306	2,612	2,631	2,748	2,320	2,612	2,631	2,748	-1%	0%	0%	0%
L&H	946	995	1,031	1,067	954	993	1,029	1,065	-2%	0%	0%	0%
Net income	2,371	2,558	2,598	2,711	2,342	2,557	2,597	2,710	1%	0%	0%	0%
DPS	9.00	9.50	10.00	10.50	9.00	9.50	10.00	10.50	0%	0%	0%	0%
EPS	19.66	21.21	21.55	22.48	19.42	21.20	21.54	22.47	1%	0%	0%	0%
P/C COR	87.9%	88.2%	89.2%	89.2%	88.1%	88.2%	89.2%	89.2%	-0.2%	0.0%	0.0%	0.0%

Source: J.P. Morgan estimates.

Overweight

HNRGn.DE, HNR1 GR
Price (27 Jan 25): €262.10

Price Target (Jun-26): €300.00



European Insurance

Kamran M Hossain ^{AC}

(44-20) 3493-3780
kamran.hossain@jpmorgan.com
J.P. Morgan Securities plc

Nadia Claressa

(44-20) 7134-7613
nadia.claressa@jpmorgan.com
J.P. Morgan Securities plc

Farooq Hanif

(44 207) 742-8091
farooq.hanif@jpmorgan.com
J.P. Morgan Securities plc

Bingdi Fan, CFA

(44-20) 7742-5336
bingdi.fan@jpmorgan.com
J.P. Morgan Securities plc

Kriti Jain

(91-22) 6157-5083
kriti.jain@jpmchase.com
J.P. Morgan India Private Limited

Specialist Sales contact details:

Gigi Sparling - Specialist Sales - European Financials

(44-20) 7134-0355
ghislaine.sparling@jpmorgan.com

Style Exposure

Quant Factors	Current %Rank	Hist %Rank (1=Top)			
		6M	1Y	3Y	5Y
Value	46	41	39	31	40
Growth	11	68	70		
Momentum	9	35	28	28	12
Quality	67		29	44	
Low Vol	87	26	22	14	1
ESGQ	50	28	30	9	39

Sources for: Style Exposure – J.P. Morgan Quantitative and Derivatives Strategy; all other tables are company data and J.P. Morgan estimates.

See page 6 for analyst certification and important disclosures, including non-US analyst disclosures.

J.P. Morgan does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Price Performance



Company Data

Shares O/S (mn)	121
52-week range (€)	265.60-205.70
Market cap (\$ mn)	33,163.85
Exchange rate	0.95
Free float (%)	49.8%
3M ADV (mn)	0.10
3M ADV (\$ mn)	26.7
Volatility (90 Day)	19
Index	MSCI Europe
BBG ANR (Buy Hold Sell)	11 7 4

Key Metrics (FYE Dec)

in	FY23A	FY24E	FY25E	FY26E
Financial Estimates				
Operating profit - Life	-	-	-	-
Life Reinsurance Operating Profit	871	946	995	1,031
P&C Insurance Operating Profit	-	-	-	-
P&C Reinsurance Operating Profit	1,098	2,306	2,612	2,631
Other pre-tax operating profit	(116)	(120)	(126)	(126)
Pre Tax Operational Income	1,854	3,132	3,480	3,535
Adj. net income	1,825	2,371	2,558	2,598
Comprehensive Profit	2,681	4,007	2,374	2,788
Adj. EPS	15.13	19.66	21.21	21.55
Comprehensive EPS	22.23	33.23	19.69	23.12
DPS	7.20	9.00	9.50	10.00
BVPS	84.0	96.9	109.1	121.2
Comprehensive BVPS	131.21	157.71	168.40	182.02
Margins and Growth				
Adj. EPS growth	-	29.9%	7.9%	1.6%
Comprehensive EPS growth	-	49.4%	(40.7%)	17.4%
DPS growth	20.0%	25.0%	5.6%	5.3%
Ratios				
Primary P&C combined ratio (%)	-	-	-	-
Reinsurance P&C combined ratio (%)	94.0%	87.9%	88.2%	89.2%
Life New Business CSM	359	323	400	380
Life New Business CSM Margin (%)	-	-	-	-
CSM Release Ratio (%)	(15.6%)	(13.7%)	(12.1%)	(11.6%)
ROE	18.0%	21.7%	20.6%	18.7%
Comprehensive ROE	16.9%	23.0%	12.1%	13.2%
Debt leverage ratio	19.2%	16.5%	15.6%	14.6%
Valuation				
Dividend yield	2.7%	3.4%	3.6%	3.8%
P/ BV	3.1	2.7	2.4	2.2
Comprehensive P/BV	2.0	1.7	1.6	1.4

Summary Investment Thesis and Valuation

Investment Thesis

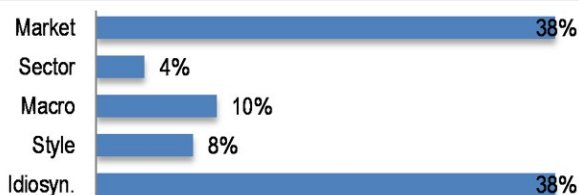
Hannover Re is our preferred European reinsurer name because with a stronger balance sheet than before, we believe the company can continue its track record of consistent delivery on targets against almost any reinsurance market backdrop.

- **Most reliable P&C name.** With the reinsurance market likely to stabilise, we see Hannover Re as a good way to gain exposure to the cycle. Having added to reserve buffers in 2023-24 and more reserve conservatism to flow through, we view the company as well positioned to deliver strong reliable returns against almost any market backdrop.
- **Capital return potential.** Hannover Re has the potential to increase its payouts and with the positive outcome of the S&P model changes, we believe that the company could potentially increase its payout ratios.
- **Buffers to support earnings growth into 2025 and beyond.** In addition to the reserve redundancy in P&C, Hannover's consistent conservatism in a number of areas implies there are buffers available to support future earnings.

Valuation

We value Hannover Re by estimating its sustainable across-the-cycle comprehensive ROE of 13% and use this to derive a valuation multiple on Comprehensive Equity. We adjust for dividends and apply a CoE of 8% and growth rate of 0%. This results in our Jun-26 PT of €300.

Performance Drivers



Factors	6M Corr	1Y Corr
Market: MSCI Europe ex UK	0.74	0.67
Sect: Financials	0.34	0.29
Ind: Insurance	0.64	0.57
Macro:		
Eurozone CPI	-0.15	-0.18
Eurozone Exports	0.19	0.14
Citi Eco Surprise Eurozone	-0.11	-0.10
Quant Styles:		
Momentum	0.40	0.42
LowVol	0.37	0.35
Size	0.23	0.32

Source: J.P. Morgan Quantitative and Derivatives Strategy for Performance Drivers; company data, Bloomberg Finance L.P. and J.P. Morgan estimates for all other tables. Note: Price history may not be complete or exact.

This document is being provided for the exclusive use of JACOPO BAZZANO at SARANAC PARTNERS LIMITED.

Investment Thesis, Valuation and Risks

Hannover Re *(Overweight; Price Target: €300.00)*

Investment Thesis

Hannover Re is our preferred European reinsurer name because with a stronger balance sheet than before, we believe the company can continue its track record of consistent delivery on targets against almost any reinsurance market backdrop. We see the potential for earnings growth to continue for 2025E and beyond, which should also support more capital returns

- **Most reliable P&C name.** With the reinsurance market likely to stabilise, we see Hannover Re as a good way to gain exposure to the cycle. Having added to reserve buffers in 2023-24 and more reserve conservatism to flow through, we view the company as well positioned to deliver strong reliable returns against almost any market backdrop.
- **Capital return potential.** Hannover Re has the potential to increase its payouts and with the positive outcome of the S&P model changes, we believe that the company could potentially increase its payout ratios.
- **Buffers to support earnings growth into 2025 and beyond.** In addition to the reserve redundancy in P&C, Hannover's consistent conservatism in a number of areas implies there are buffers available to support future earnings. These include not recognising the higher discounting benefit into earnings and its approach to reserving large losses to budget when there is 'good luck'.

Valuation

We value Hannover Re by estimating its sustainable across-the-cycle comprehensive ROE of 13% and use this to derive a valuation multiple on Comprehensive Equity. We adjust for dividends and apply a CoE of 8% and growth rate of 0%. This results in our Jun-26 PT of €300.

Hannover Re – IFRS17-based valuation

€ million, unless stated otherwise

Business unit	Sustainable comprehensive profit €mn	Insurance service result €mn	Net financial result €mn	Other profit €mn	CSM value added €mn
P&C	2,630	1,899	834	-160	57
L&H	956	900	291	-160	-75
Consolidation	0	0	0	0	0
Other non-operating items	-127	0	0	-127	0
Pre-tax sustainable comprehensive profit FY24E	3,460	900	291	-160	-75
Tax	-865	Assume 25%			
Minorities and other	-52				
Sustainable comprehensive profit FY24E	2,543				
Comprehensive equity FY23E	20,349				
Sustainable comprehensive ROE	12.5%				
COE	7.7%				
g	0%				
Valuation price to Comp BV	1.6x				
Valuation FY23E	32,940				
Dividends / buybacks outstanding in 23E	1,146				
Valuation roll-forward	1,483				
Valuation	35,569				
NOSH mn	121				
Value per share €	294.9				
Target price €	300.0				

Source: J.P. Morgan estimates.

Risks to Rating and Price Target

Downside risks include utilisation of reserve buffers, outsized catastrophe losses and lower life reinsurance results.

Hannover Re: Summary of Financials

INCOME STATEMENT	FY23A	FY24E	FY25E	FY26E	BALANCE SHEET	FY23A	FY24E	FY25E	FY26E
Divisional profit					Cash & Cash Equivalents	1,055	1,578	1,642	1,708
Life operating profit	-	-	-	-	Investments	57,592	60,950	63,425	66,000
Life reinsurance operating profit	871	946	995	1,031	Investment property	2,537	2,629	2,736	2,847
P&C operating profit	-	-	-	-	Goodwill	78	80	80	80
P&C reinsurance operating profit	1,098	2,306	2,612	2,631	Other intangibles	-	-	-	-
Other pre-tax profit	(116)	(120)	(126)	(126)	Other assets	2,052	2,106	2,192	2,281
					Total Assets	66,487	70,979	73,767	76,631
Consolidated P&L					Insurance liabilities	44,239	47,568	48,417	49,016
Insurance revenue	24,456	25,948	27,372	28,193	o/w CSM	7,699	9,504	9,696	9,897
Insurance service result	1,658	2,820	2,964	2,856	o/w Risk adjustment	3,729	4,039	4,111	4,139
Insurance net financial result	708	870	983	1,125	o/w PVCF	-	-	-	-
Interest expense	(117)	(109)	(127)	(127)	Investment contract liabilities	-	-	-	-
Other income and expenses	(395)	(449)	(340)	(320)	Senior debt	747	707	707	707
Total pre-tax profit	1,854	3,132	3,480	3,535	Subordinated debt	3,230	3,232	3,232	3,232
Income taxes	(26)	(708)	(870)	(884)	Other liabilities	3,431	3,125	3,467	4,162
Minority interest	-	-	-	-	Total Liabilities	55,468	58,373	59,572	60,870
Net income	1,825	2,371	2,558	2,598	Shareholders' equity	10,127	11,689	13,162	14,614
Pre Tax Operational Income	1,854	3,132	3,480	3,535	Preferred equity / hybrid capital	-	-	-	-
Adjusted Net income	1,825	2,371	2,558	2,598	Minority Interests	893	918	1,033	1,147
Comprehensive profit	2,681	4,007	2,374	2,788	Total Liabilities and Shareholder Equity	66,487	70,979	73,767	76,631
Adj. EPS	15.13	19.66	21.21	21.55	Comprehensive equity	15,823	19,020	20,309	21,951
Comprehensive EPS	22.23	33.23	19.69	23.12	Net CSM	5,774	7,411	7,227	7,416
DPS	7.20	9.00	9.50	10.00					
Ratio Analysis					Ratio Analysis				
Insurance margin	-	-	-	-	BVPS	84.0	96.9	109.1	121.2
Adj. EPS y/y Growth	-	29.9%	7.9%	1.6%	Comprehensive BVPS	131.21	157.71	168.40	182.02
Comprehensive EPS y/y growth	-	49.4%	(40.7%)	17.4%	ROE	18.0%	21.7%	20.6%	18.7%
DPS y/y Growth	20.0%	25.0%	5.6%	5.3%	Comprehensive ROE	16.9%	23.0%	12.1%	13.2%
Adj. P/E (x)	17.3	13.3	12.4	12.2	P/BV	3.1	2.7	2.4	2.2
Comprehensive P/E (x)	11.8	7.9	13.3	11.3	Comprehensive P/BV	2.0	1.7	1.6	1.4
Dividend Yield	2.7%	3.4%	3.6%	3.8%	Debt leverage ratio	19.2%	16.5%	15.6%	14.6%
P&C combined ratio	-	-	-	-					
Reinsurance P&C combined ratio	94.0%	87.9%	88.2%	89.2%					
Life new business CSM	359	323	400	380					
Life new business CSM margin	-	-	-	-					
CSM release ratio	(15.6%)	(13.7%)	(12.1%)	(11.6%)					

Source: Company reports and J.P. Morgan estimates.

Note: € in millions (except per-share data). Fiscal year ends Dec

Analyst Certification: The Research Analyst(s) denoted by an “AC” on the cover of this report certifies (or, where multiple Research Analysts are primarily responsible for this report, the Research Analyst denoted by an “AC” on the cover or within the document individually certifies, with respect to each security or issuer that the Research Analyst covers in this research) that: (1) all of the views expressed in this report accurately reflect the Research Analyst’s personal views about any and all of the subject securities or issuers; and (2) no part of any of the Research Analyst’s compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the Research Analyst(s) in this report. For all Korea-based Research Analysts listed on the front cover, if applicable, they also certify, as per KOFIA requirements, that the Research Analyst’s analysis was made in good faith and that the views reflect the Research Analyst’s own opinion, without undue influence or intervention.

All authors named within this report are Research Analysts who produce independent research unless otherwise specified. In Europe, Sector Specialists (Sales and Trading) may be shown on this report as contacts but are not authors of the report or part of the Research Department.

Important Disclosures

- **Market Maker/ Liquidity Provider:** J.P. Morgan is a market maker and/or liquidity provider in the financial instruments of/related to Hannover Re or related entities.
- **Client:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients: Hannover Re or related entities.
- **Client/Non-Investment Banking, Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients, and the services provided were non-investment-banking, securities-related: Hannover Re or related entities.
- **Client/Non-Securities-Related:** J.P. Morgan currently has, or had within the past 12 months, the following entity(ies) as clients, and the services provided were non-securities-related: Hannover Re or related entities.
- **Non-Investment Banking Compensation Received:** J.P. Morgan has received compensation in the past 12 months for products or services other than investment banking from Hannover Re or related entities.
- **Debt Position:** J.P. Morgan may hold a position in the debt securities of Hannover Re or related entities, if any.

Company-Specific Disclosures: Important disclosures, including price charts and credit opinion history tables, are available for compendium reports and all J.P. Morgan-covered companies, and certain non-covered companies, by visiting <https://www.jpmm.com/research/disclosures>, calling 1-800-477-0406, or e-mailing research.disclosure.inquiries@jpmorgan.com with your request.

Hannover Re (HNRGn.DE, HNR1 GR) Price Chart



Date	Rating	Price (€)	Price Target (€)
07-Feb-22	OW	166.15	210
10-Mar-22	OW	152.70	205
11-Jul-22	OW	138.30	185
04-Aug-22	OW	141.30	175
03-Nov-22	OW	163.65	190
08-Dec-22	OW	184.75	210
09-Mar-23	OW	182.20	205
18-Jul-23	OW	190.60	235
09-Aug-23	OW	192.10	240
22-Sep-23	OW	212.20	255
19-Mar-24	OW	244.60	290
14-Aug-24	OW	231.90	300

Source: Bloomberg Finance L.P. and J.P. Morgan; price data adjusted for stock splits and dividends.
Initiated coverage Jul 14, 1999. All share prices are as of market close on the previous business day.

The chart(s) show J.P. Morgan’s continuing coverage of the stocks; the current analysts may or may not have covered it over the entire period. J.P. Morgan ratings or designations: OW = Overweight, N= Neutral, UW = Underweight, NR = Not Rated

Explanation of Equity Research Ratings, Designations and Analyst(s) Coverage Universe:

J.P. Morgan uses the following rating system: Overweight (over the duration of the price target indicated in this report, we expect this stock will outperform the average total return of the stocks in the Research Analyst’s, or the Research Analyst’s team’s, coverage universe); Neutral (over the duration of the price target indicated in this report, we expect this stock will perform in line with the average total return of the stocks in the Research Analyst’s, or the Research Analyst’s team’s, coverage universe); and Underweight (over the duration of the price target indicated in this report, we expect this stock will underperform the average total return of the stocks in the Research Analyst’s, or the Research Analyst’s

team's, coverage universe. NR is Not Rated. In this case, J.P. Morgan has removed the rating and, if applicable, the price target, for this stock because of either a lack of a sufficient fundamental basis or for legal, regulatory or policy reasons. The previous rating and, if applicable, the price target, no longer should be relied upon. An NR designation is not a recommendation or a rating. In our Asia (ex-Australia and ex-India) and U.K. small- and mid-cap Equity Research, each stock's expected total return is compared to the expected total return of a benchmark country market index, not to those Research Analysts' coverage universe. If it does not appear in the Important Disclosures section of this report, the certifying Research Analyst's coverage universe can be found on J.P. Morgan's Research website, <https://www.jpmorganmarkets.com>.

Coverage Universe: Hossain, Kamran M: Admiral Group Plc (ADML.L), Allianz (ALVG.DE), Beazley (BEZG.L), Direct Line Insurance Group plc (DLGD.L), Hannover Re (HNRGn.DE), Hiscox (HSX.L), Lancashire (LRE.L), Munich Re (MUVGn.DE), SCOR (SCOR.PA), Sampo (SAMPO.HE), Swiss Re (SRENH.S), Zurich Insurance Group AG (ZURN.S)

J.P. Morgan Equity Research Ratings Distribution, as of January 01, 2025

	Overweight (buy)	Neutral (hold)	Underweight (sell)
J.P. Morgan Global Equity Research Coverage*	50%	37%	13%
IB clients**	50%	48%	37%
JPMS Equity Research Coverage*	47%	40%	13%
IB clients**	73%	68%	52%

*Please note that the percentages may not add to 100% because of rounding.

**Percentage of subject companies within each of the "buy," "hold" and "sell" categories for which J.P. Morgan has provided investment banking services within the previous 12 months.

For purposes of FINRA ratings distribution rules only, our Overweight rating falls into a buy rating category; our Neutral rating falls into a hold rating category; and our Underweight rating falls into a sell rating category. Please note that stocks with an NR designation are not included in the table above. This information is current as of the end of the most recent calendar quarter.

Equity Valuation and Risks: For valuation methodology and risks associated with covered companies or price targets for covered companies, please see the most recent company-specific research report at <http://www.jpmorganmarkets.com>, contact the primary analyst or your J.P. Morgan representative, or email research.disclosure.inquiries@jpmorgan.com. For material information about the proprietary models used, please see the Summary of Financials in company-specific research reports and the Company Tearsheets, which are available to download on the company pages of our client website, <http://www.jpmorganmarkets.com>. This report also sets out within it the material underlying assumptions used.

A history of J.P. Morgan investment recommendations disseminated during the preceding 12 months can be accessed on the Research & Commentary page of <http://www.jpmorganmarkets.com> where you can also search by analyst name, sector or financial instrument.

Analysts' Compensation: The research analysts responsible for the preparation of this report receive compensation based upon various factors, including the quality and accuracy of research, client feedback, competitive factors, and overall firm revenues.

Registration of non-US Analysts: Unless otherwise noted, the non-US analysts listed on the front of this report are employees of non-US affiliates of J.P. Morgan Securities LLC, may not be registered as research analysts under FINRA rules, may not be associated persons of J.P. Morgan Securities LLC, and may not be subject to FINRA Rule 2241 or 2242 restrictions on communications with covered companies, public appearances, and trading securities held by a research analyst account.

Other Disclosures

J.P. Morgan is a marketing name for investment banking businesses of JPMorgan Chase & Co. and its subsidiaries and affiliates worldwide.

UK MIFID FICC research unbundling exemption: UK clients should refer to [UK MIFID Research Unbundling exemption](#) for details of J.P. Morgan's implementation of the FICC research exemption and guidance on relevant FICC research categorisation.

All research material made available to clients are simultaneously available on our client website, J.P. Morgan Markets, unless specifically permitted by relevant laws. Not all research content is redistributed, e-mailed or made available to third-party aggregators. For all research material available on a particular stock, please contact your sales representative.

Any long form nomenclature for references to China; Hong Kong; Taiwan; and Macau within this research material are Mainland China; Hong Kong SAR (China); Taiwan (China); and Macau SAR (China).

J.P. Morgan Research may, from time to time, write on issuers or securities targeted by economic or financial sanctions imposed or administered by the governmental authorities of the U.S., EU, UK or other relevant jurisdictions (Sanctioned Securities). Nothing in this report is intended to be read or construed as encouraging, facilitating, promoting or otherwise approving investment or dealing in such Sanctioned Securities. Clients should be aware of their own legal and compliance obligations when making investment decisions.

Any digital or crypto assets discussed in this research report are subject to a rapidly changing regulatory landscape. For relevant regulatory

advisories on crypto assets, including bitcoin and ether, please see <https://www.jpmorgan.com/disclosures/cryptoasset-disclosure>.

The author(s) of this research report may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so.

Exchange-Traded Funds (ETFs): J.P. Morgan Securities LLC ("JPMS") acts as authorized participant for substantially all U.S.-listed ETFs. To the extent that any ETFs are mentioned in this report, JPMS may earn commissions and transaction-based compensation in connection with the distribution of those ETF shares and may earn fees for performing other trade-related services, such as securities lending to short sellers of the ETF shares. JPMS may also perform services for the ETFs themselves, including acting as a broker or dealer to the ETFs. In addition, affiliates of JPMS may perform services for the ETFs, including trust, custodial, administration, lending, index calculation and/or maintenance and other services.

Options and Futures related research: If the information contained herein regards options- or futures-related research, such information is available only to persons who have received the proper options or futures risk disclosure documents. Please contact your J.P. Morgan Representative or visit <https://www.theocc.com/components/docs/riskstoc.pdf> for a copy of the Option Clearing Corporation's Characteristics and Risks of Standardized Options or http://www.finra.org/sites/default/files/Security_Futures_Risk_Disclosure_Statement_2018.pdf for a copy of the Security Futures Risk Disclosure Statement.

Changes to Interbank Offered Rates (IBORs) and other benchmark rates: Certain interest rate benchmarks are, or may in the future become, subject to ongoing international, national and other regulatory guidance, reform and proposals for reform. For more information, please consult: https://www.jpmorgan.com/global/disclosures/interbank_offered_rates

Private Bank Clients: Where you are receiving research as a client of the private banking businesses offered by JPMorgan Chase & Co. and its subsidiaries ("J.P. Morgan Private Bank"), research is provided to you by J.P. Morgan Private Bank and not by any other division of J.P. Morgan, including, but not limited to, the J.P. Morgan Corporate and Investment Bank and its Global Research division.

Legal entity responsible for the production and distribution of research: The legal entity identified below the name of the Reg AC Research Analyst who authored this material is the legal entity responsible for the production of this research. Where multiple Reg AC Research Analysts authored this material with different legal entities identified below their names, these legal entities are jointly responsible for the production of this research. Research Analysts from various J.P. Morgan affiliates may have contributed to the production of this material but may not be licensed to carry out regulated activities in your jurisdiction (and do not hold themselves out as being able to do so). Unless otherwise stated below, this material has been distributed by the legal entity responsible for production. If you have any queries, please contact the relevant Research Analyst in your jurisdiction or the entity in your jurisdiction that has distributed this research material.

Legal Entities Disclosures and Country-/Region-Specific Disclosures:

Argentina: JPMorgan Chase Bank N.A Sucursal Buenos Aires is regulated by Banco Central de la República Argentina ("BCRA"- Central Bank of Argentina) and Comisión Nacional de Valores ("CNV"- Argentinian Securities Commission - ALYC y AN Integral N°51). **Australia:** J.P. Morgan Securities Australia Limited ("JPMSAL") (ABN 61 003 245 234/AFS Licence No: 238066) is regulated by the Australian Securities and Investments Commission and is a Market Participant of ASX Limited, a Clearing and Settlement Participant of ASX Clear Pty Limited and a Clearing Participant of ASX Clear (Futures) Pty Limited. This material is issued and distributed in Australia by or on behalf of JPMSAL only to "wholesale clients" (as defined in section 761G of the Corporations Act 2001). A list of all financial products covered can be found by visiting <https://www.jpmm.com/research/disclosures>. J.P. Morgan seeks to cover companies of relevance to the domestic and international investor base across all Global Industry Classification Standard (GICS) sectors, as well as across a range of market capitalisation sizes. If applicable, in the course of conducting public side due diligence on the subject company(ies), the Research Analyst team may at times perform such diligence through corporate engagements such as site visits, discussions with company representatives, management presentations, etc. Research issued by JPMSAL has been prepared in accordance with J.P. Morgan Australia's Research Independence Policy which can be found at the following link: [J.P. Morgan Australia - Research Independence Policy](#). **Brazil:** Banco J.P. Morgan S.A. is regulated by the Comissão de Valores Mobiliários (CVM) and by the Central Bank of Brazil. Ombudsman J.P. Morgan: 0800-7700847 / 0800-7700810 (For Hearing Impaired) / ouvidoria.jp.morgan@jpmorgan.com. **Canada:** J.P. Morgan Securities Canada Inc. is a registered investment dealer, regulated by the Canadian Investment Regulatory Organization and the Ontario Securities Commission and is the participating member on Canadian exchanges. This material is distributed in Canada by or on behalf of J.P.Morgan Securities Canada Inc. **Chile:** Inversiones J.P. Morgan Limitada is an unregulated entity incorporated in Chile. **China:** J.P. Morgan Securities (China) Company Limited has been approved by CSRC to conduct the securities investment consultancy business. **Dubai International Financial Centre (DIFC):** JPMorgan Chase Bank, N.A., Dubai Branch is regulated by the Dubai Financial Services Authority (DFSA) and its registered address is Dubai International Financial Centre - The Gate, West Wing, Level 3 and 9 PO Box 506551, Dubai, UAE. This material has been distributed by JP Morgan Chase Bank, N.A., Dubai Branch to persons regarded as professional clients or market counterparties as defined under the DFSA rules. **European Economic Area (EEA):** Unless specified to the contrary, research is distributed in the EEA by J.P. Morgan SE ("JPM SE"), which is authorised as a credit institution by the Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht, BaFin) and jointly supervised by the BaFin, the German Central Bank (Deutsche Bundesbank) and the European Central Bank (ECB). JPM SE is a company headquartered in Frankfurt with registered address at TaunusTurm, Taunustor 1, Frankfurt am Main, 60310, Germany. The material has been distributed in the EEA to persons regarded as professional investors (or equivalent) pursuant to Art. 4 para. 1 no. 10 and Annex II of MiFID II and its respective implementation in their home jurisdictions ("EEA professional investors"). This material must not be acted on or relied on by persons who are not EEA professional investors. Any investment or investment activity to which this material relates is only available to EEA relevant persons and will be engaged in only with EEA relevant persons. **Hong Kong:** J.P. Morgan Securities (Asia Pacific) Limited (CE number AAJ321) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission in Hong Kong, and J.P. Morgan Broking (Hong

Kong) Limited (CE number AAB027) is regulated by the Securities and Futures Commission in Hong Kong. JP Morgan Chase Bank, N.A., Hong Kong Branch (CE Number AAL996) is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission, is organized under the laws of the United States with limited liability. Where the distribution of this material is a regulated activity in Hong Kong, the material is distributed in Hong Kong by or through J.P. Morgan Securities (Asia Pacific) Limited and/or J.P. Morgan Broking (Hong Kong) Limited. **India:** J.P. Morgan India Private Limited (Corporate Identity Number - U67120MH1992FTC068724), having its registered office at J.P. Morgan Tower, Off. C.S.T. Road, Kalina, Santacruz - East, Mumbai - 400098, is registered with the Securities and Exchange Board of India (SEBI) as a 'Research Analyst' having registration number INH000001873. J.P. Morgan India Private Limited is also registered with SEBI as a member of the National Stock Exchange of India Limited and the Bombay Stock Exchange Limited (SEBI Registration Number - INZ000239730) and as a Merchant Banker (SEBI Registration Number - MB/INM000002970). Telephone: 91-22-6157 3000, Facsimile: 91-22-6157 3990 and Website: <http://www.jpmpil.com>. JPMorgan Chase Bank, N.A. - Mumbai Branch is licensed by the Reserve Bank of India (RBI) (Licence No. 53/ Licence No. BY.4/94; SEBI - IN/CUS/014/ CDSL : IN-DP-CDSL-444-2008/ IN-DP-NSDL-285-2008/ INBI00000984/ INE231311239) as a Scheduled Commercial Bank in India, which is its primary license allowing it to carry on Banking business in India and other activities, which a Bank branch in India are permitted to undertake. For non-local research material, this material is not distributed in India by J.P. Morgan India Private Limited. Compliance Officer: Spurthi Gadamssetty; spurthi.gadamssetty@jpmchase.com; +912261573225. Grievance Officer: Ramprasadh K, jpmpl.research.feedback@jpmorgan.com; +912261573000. Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. **Indonesia:** PT J.P. Morgan Sekuritas Indonesia is a member of the Indonesia Stock Exchange and is registered and supervised by the Otoritas Jasa Keuangan (OJK). **Korea:** J.P. Morgan Securities (Far East) Limited, Seoul Branch, is a member of the Korea Exchange (KRX). JPMorgan Chase Bank, N.A., Seoul Branch, is licensed as a branch office of foreign bank (JPMorgan Chase Bank, N.A.) in Korea. Both entities are regulated by the Financial Services Commission (FSC) and the Financial Supervisory Service (FSS). For non-macro research material, the material is distributed in Korea by or through J.P. Morgan Securities (Far East) Limited, Seoul Branch. **Japan:** JPMorgan Securities Japan Co., Ltd. and JPMorgan Chase Bank, N.A., Tokyo Branch are regulated by the Financial Services Agency in Japan. **Malaysia:** This material is issued and distributed in Malaysia by JPMorgan Securities (Malaysia) Sdn Bhd (18146-X), which is a Participating Organization of Bursa Malaysia Berhad and holds a Capital Markets Services License issued by the Securities Commission in Malaysia. **Mexico:** J.P. Morgan Casa de Bolsa, S.A. de C.V. and J.P. Morgan Grupo Financiero are members of the Mexican Stock Exchange and are authorized to act as a broker dealer by the National Banking and Securities Exchange Commission. **New Zealand:** This material is issued and distributed by JPMSAL in New Zealand only to "wholesale clients" (as defined in the Financial Markets Conduct Act 2013). JPMSAL is registered as a Financial Service Provider under the Financial Service providers (Registration and Dispute Resolution) Act of 2008. **Philippines:** J.P. Morgan Securities Philippines Inc. is a Trading Participant of the Philippine Stock Exchange and a member of the Securities Clearing Corporation of the Philippines and the Securities Investor Protection Fund. It is regulated by the Securities and Exchange Commission. **Singapore:** This material is issued and distributed in Singapore by or through J.P. Morgan Securities Singapore Private Limited (JPMSS) [MDDI (P) 068/08/2024 and Co. Reg. No.: 199405335R], which is a member of the Singapore Exchange Securities Trading Limited, and/or JPMorgan Chase Bank, N.A., Singapore branch (JPMCB Singapore), both of which are regulated by the Monetary Authority of Singapore. This material is issued and distributed in Singapore only to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289 (SFA). This material is not intended to be issued or distributed to any retail investors or any other investors that do not fall into the classes of "accredited investors," "expert investors" or "institutional investors," as defined under Section 4A of the SFA. Recipients of this material in Singapore are to contact JPMSS or JPMCB Singapore in respect of any matters arising from, or in connection with, the material. **South Africa:** J.P. Morgan Equities South Africa Proprietary Limited and JPMorgan Chase Bank, N.A., Johannesburg Branch are members of the Johannesburg Securities Exchange and are regulated by the Financial Services Conduct Authority (FSCA). **Taiwan:** J.P. Morgan Securities (Taiwan) Limited is a participant of the Taiwan Stock Exchange (company-type) and regulated by the Taiwan Securities and Futures Bureau. Material relating to equity securities is issued and distributed in Taiwan by J.P. Morgan Securities (Taiwan) Limited, subject to the license scope and the applicable laws and the regulations in Taiwan. According to Paragraph 2, Article 7-1 of Operational Regulations Governing Securities Firms Recommending Trades in Securities to Customers (as amended or supplemented) and/or other applicable laws or regulations, please note that the recipient of this material is not permitted to engage in any activities in connection with the material that may give rise to conflicts of interests, unless otherwise disclosed in the "Important Disclosures" in this material. **Thailand:** This material is issued and distributed in Thailand by JPMorgan Securities (Thailand) Ltd., which is a member of the Stock Exchange of Thailand and is regulated by the Ministry of Finance and the Securities and Exchange Commission, and its registered address is 3rd Floor, 20 North Sathorn Road, Silom, Bangrak, Bangkok 10500. **UK:** Unless specified to the contrary, research is distributed in the UK by J.P. Morgan Securities plc ("JPMS plc") which is a member of the London Stock Exchange and is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. JPMS plc is registered in England & Wales No. 2711006, Registered Office 25 Bank Street, London, E14 5JP. This material is directed in the UK only to: (a) persons having professional experience in matters relating to investments falling within article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) (Order) 2005 ("the FPO"); (b) persons outlined in article 49 of the FPO (high net worth companies, unincorporated associations or partnerships, the trustees of high value trusts, etc.); or (c) any persons to whom this communication may otherwise lawfully be made; all such persons being referred to as "UK relevant persons". This material must not be acted on or relied on by persons who are not UK relevant persons. Any investment or investment activity to which this material relates is only available to UK relevant persons and will be engaged in only with UK relevant persons. Research issued by JPMS plc has been prepared in accordance with JPMS plc's policy for prevention and avoidance of conflicts of interest related to the production of Research which can be found at the following link: [J.P. Morgan EMEA - Research Independence Policy](#). U.S.: J.P. Morgan Securities LLC ("JPMS") is a member of the NYSE, FINRA, SIPC, and the NFA. JPMorgan Chase Bank, N.A. is a member of the FDIC. Material published by non-U.S. affiliates is distributed in the U.S. by JPMS who accepts responsibility for its content.

General: Additional information is available upon request. The information in this material has been obtained from sources believed to be

reliable. While all reasonable care has been taken to ensure that the facts stated in this material are accurate and that the forecasts, opinions and expectations contained herein are fair and reasonable, JPMorgan Chase & Co. or its affiliates and/or subsidiaries (collectively J.P. Morgan) make no representations or warranties whatsoever to the completeness or accuracy of the material provided, except with respect to any disclosures relative to J.P. Morgan and the Research Analyst's involvement with the issuer that is the subject of the material. Accordingly, no reliance should be placed on the accuracy, fairness or completeness of the information contained in this material. There may be certain discrepancies with data and/or limited content in this material as a result of calculations, adjustments, translations to different languages, and/or local regulatory restrictions, as applicable. These discrepancies should not impact the overall investment analysis, views and/or recommendations of the subject company(ies) that may be discussed in the material. J.P. Morgan accepts no liability whatsoever for any loss arising from any use of this material or its contents, and neither J.P. Morgan nor any of its respective directors, officers or employees, shall be in any way responsible for the contents hereof, apart from the liabilities and responsibilities that may be imposed on them by the relevant regulatory authority in the jurisdiction in question, or the regulatory regime thereunder. Opinions, forecasts or projections contained in this material represent J.P. Morgan's current opinions or judgment as of the date of the material only and are therefore subject to change without notice. Periodic updates may be provided on companies/industries based on company-specific developments or announcements, market conditions or any other publicly available information. There can be no assurance that future results or events will be consistent with any such opinions, forecasts or projections, which represent only one possible outcome. Furthermore, such opinions, forecasts or projections are subject to certain risks, uncertainties and assumptions that have not been verified, and future actual results or events could differ materially. The value of, or income from, any investments referred to in this material may fluctuate and/or be affected by changes in exchange rates. All pricing is indicative as of the close of market for the securities discussed, unless otherwise stated. Past performance is not indicative of future results. Accordingly, investors may receive back less than originally invested. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients. This material may include views on structured securities, options, futures and other derivatives. These are complex instruments, may involve a high degree of risk and may be appropriate investments only for sophisticated investors who are capable of understanding and assuming the risks involved. The recipients of this material must make their own independent decisions regarding any securities or financial instruments mentioned herein and should seek advice from such independent financial, legal, tax or other adviser as they deem necessary. J.P. Morgan may trade as a principal on the basis of the Research Analysts' views and research, and it may also engage in transactions for its own account or for its clients' accounts in a manner inconsistent with the views taken in this material, and J.P. Morgan is under no obligation to ensure that such other communication is brought to the attention of any recipient of this material. Others within J.P. Morgan, including Strategists, Sales staff and other Research Analysts, may take views that are inconsistent with those taken in this material. Employees of J.P. Morgan not involved in the preparation of this material may have investments in the securities (or derivatives of such securities) mentioned in this material and may trade them in ways different from those discussed in this material. This material is not an advertisement for or marketing of any issuer, its products or services, or its securities in any jurisdiction.

Confidentiality and Security Notice: This transmission may contain information that is privileged, confidential, legally privileged, and/or exempt from disclosure under applicable law. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, or use of the information contained herein (including any reliance thereon) is STRICTLY PROHIBITED. Although this transmission and any attachments are believed to be free of any virus or other defect that might affect any computer system into which it is received and opened, it is the responsibility of the recipient to ensure that it is virus free and no responsibility is accepted by JPMorgan Chase & Co., its subsidiaries and affiliates, as applicable, for any loss or damage arising in any way from its use. If you received this transmission in error, please immediately contact the sender and destroy the material in its entirety, whether in electronic or hard copy format. This message is subject to electronic monitoring: <https://www.jpmorgan.com/disclosures/email>

MSCI: Certain information herein ("Information") is reproduced by permission of MSCI Inc., its affiliates and information providers ("MSCI") ©2025. No reproduction or dissemination of the Information is permitted without an appropriate license. MSCI MAKES NO EXPRESS OR IMPLIED WARRANTIES (INCLUDING MERCHANTABILITY OR FITNESS) AS TO THE INFORMATION AND DISCLAIMS ALL LIABILITY TO THE EXTENT PERMITTED BY LAW. No Information constitutes investment advice, except for any applicable Information from MSCI ESG Research. Subject also to [msci.com/disclaimer](https://www.msci.com/disclaimer)

Sustainalytics: Certain information, data, analyses and opinions contained herein are reproduced by permission of Sustainalytics and: (1) includes the proprietary information of Sustainalytics; (2) may not be copied or redistributed except as specifically authorized; (3) do not constitute investment advice nor an endorsement of any product or project; (4) are provided solely for informational purposes; and (5) are not warranted to be complete, accurate or timely. Sustainalytics is not responsible for any trading decisions, damages or other losses related to it or its use. The use of the data is subject to conditions available at <https://www.sustainalytics.com/legal-disclaimers>. ©2025 Sustainalytics. All Rights Reserved.

"Other Disclosures" last revised January 01, 2025.

Copyright 2025 JPMorgan Chase & Co. All rights reserved. This material or any portion hereof may not be reprinted, sold or redistributed without the written consent of J.P. Morgan. It is strictly prohibited to use or share without prior written consent from J.P. Morgan any research material received from J.P. Morgan or an authorized third-party ("J.P. Morgan Data") in any third-party artificial intelligence ("AI") systems or models when such J.P. Morgan Data is accessible by a third-party. It is permissible to use J.P. Morgan Data for internal business purposes only in an AI system or model that protects the confidentiality of J.P. Morgan Data so as to prevent any and all access to or use of such J.P. Morgan Data by any third-party.

Completed 28 Jan 2025 01:48 PM GMT

Disseminated 28 Jan 2025 01:48 PM GMT