

Index supplement to the prospectus, the prospectus supplement and the product supplement no. 4-I each dated April 13, 2023, and the underlying supplement no. 5-II dated March 5, 2024

Registration Statement Nos. 333-270004 and 333-270004-01  
Dated December 3, 2024  
Rule 424(b)(3)

**J.P.Morgan**

# MerQube US Tech+ Vol Advantage Index<sup>®</sup>

December 2024

**Investing in the notes involves a number of risks. See “Selected risks associated with the Index” beginning on page 11 of this document, “Risk Factors” in the prospectus supplement and the relevant product supplement and underlying supplement and “Selected Risk Considerations” in the relevant pricing supplement.**

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of the notes or passed upon the accuracy or the adequacy of this document or the accompanying pricing supplement, product supplement, underlying supplement, prospectus supplement and prospectus. Any representation to the contrary is a criminal offense.

The notes are not bank deposits, are not insured by the Federal Deposit Insurance Corporation or any other governmental agency and are not obligations of, or guaranteed by, a bank.

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## IMPORTANT INFORMATION

The information contained in this document is for discussion purposes only. Any information relating to performance contained in these materials is illustrative and no assurance is given that any indicative returns, performance or results, whether historical or hypothetical, will be achieved. All information herein is subject to change without notice, however, J.P. Morgan undertakes no duty to update this information. In the event of any inconsistency between the information presented herein and any offering document, the offering document shall govern.

## USE OF HYPOTHETICAL BACKTESTED RETURNS

Any backtested historical performance and weighting information included herein is hypothetical. The Index may not have traded in the manner shown in the hypothetical backtest included herein, and no representation is being made that the Index will achieve similar performance. There are frequently significant differences between hypothetical backtested performance and actual subsequent performance.

The results obtained from backtesting information should not be considered indicative of the actual results that might be obtained from an investment in notes referencing the Index. J.P. Morgan provides no assurance or guarantee that notes linked to the Index will operate or would have operated in the past in a manner consistent with these materials. The hypothetical historical levels presented herein have not been verified by an independent third party, and such hypothetical historical levels have inherent limitations. Alternative simulations, techniques, modeling or assumptions might produce significantly different results and prove to be more appropriate. Actual results will vary, perhaps materially, from the hypothetical backtested returns and allocations presented in this document.

**HISTORICAL AND BACKTESTED PERFORMANCE AND ALLOCATIONS ARE NOT INDICATIVE OF FUTURE RESULTS.**

In addition, the Invesco QQQ Trust<sup>SM</sup>, Series 1 (the "QQQ Fund") replaced the E-Mini Nasdaq-100 futures (the "Futures Contracts") as the underlying asset to which the MerQube US Tech+ Vol Advantage Index<sup>®</sup> (the "Index") is linked (the "Underlying Asset") on or about February 9, 2024 (the "Amendment Effective Date"). No assurance can be provided that the QQQ Fund is an appropriate substitute for the Futures Contracts. This replacement may adversely affect the performance of the Index and the value of the notes, as the QQQ Fund, subject to a notional financing cost, may perform worse, perhaps significantly worse, than the Futures Contracts. The Index lacks any operating history with the QQQ Fund as the Underlying Asset prior to the Amendment Effective Date and may perform in unanticipated ways. Investors in the notes should bear this difference in mind when evaluating the hypothetical backtested performance shown in this document.

Set forth within this document are some hypothetical backtested performance metrics for products that contain an automatic call feature. These performance metrics were calculated by aggregating the performance of a series of hypothetical products with the same term to maturity, product payout profile, automatic call features and underlier(s) as the selected product. The results generated by the product backtesting feature are not indicative of future returns for the selected product. The backtested product performance metrics do not reflect fees or expenses associated with an actual product purchased from JPMorgan.

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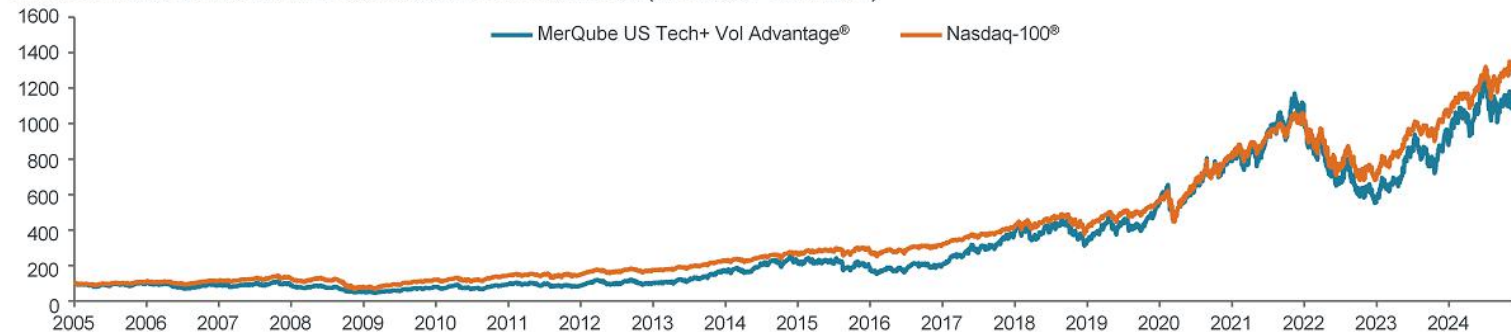
# MerQube US Tech+ Vol Advantage Index<sup>®</sup>

## Index overview

### INDEX METHODOLOGY AND FEATURES

- The Index attempts to provide a dynamic rules-based exposure to the Underlying Asset, while targeting a level of implied volatility, with a maximum exposure to the Underlying Asset of 500% and a minimum exposure to the Underlying Asset of 0%. Since the Amendment Effective Date, the Underlying Asset has been an unfunded position in the QQQ Fund, calculated as the excess of the total return of the QQQ Fund over a notional financing cost. Prior to the Amendment Effective Date, the Underlying Asset was an unfunded rolling position in the Futures Contracts.
- The Index is an excess return index and is subject to a 6% p.a. daily deduction (even when the Index is uninvested), and the performance of the Underlying Asset is subject to a notional financing cost deducted daily.
- On each weekly Index rebalance day, the exposure to the Underlying Asset is set equal to (a) the 35% volatility target *divided by* (b) the one-week implied volatility of the QQQ Fund, subject to a maximum exposure of 500%.
  - If the implied volatility of the QQQ Fund was equal to 17.5%, the exposure to the Underlying Asset would equal 200% (or 35% / 17.5%).
  - If the implied volatility of the QQQ Fund was equal to 40%, the exposure to the Underlying Asset would equal 87.5% (or 35% / 40%).

### HYPOTHETICAL BACKTESTED HISTORICAL PERFORMANCE (JAN 2005 – NOV 2024)



Sourced: J.P. Morgan. Hypothetical backtested and actual historical performance of the Index based on the hypothetical backtested weekly closing levels of the Index from January 7, 2005 through June 21, 2021, and the actual historical performance of the Index thereafter. Actual historical performance of the Nasdaq-100 Index<sup>®</sup>. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting including a discussion of certain limitation of backtesting and simulated returns.

# MerQube US Tech+ Vol Advantage Index<sup>®</sup>

Hypothetical backtested historical monthly and annual returns

**HYPOTHETICAL BACKTESTED AND HISTORICAL MONTHLY AND ANNUAL RETURNS COMPARED WITH ANNUAL RETURNS OF THE NASDAQ-100 INDEX<sup>®</sup> (JAN 2005 – NOV 2024)**

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Nasdaq-100 <sup>®</sup>
2005	-5.28%	-2.09%	-3.95%	-9.91%	15.21%	-7.99%	15.45%	-4.17%	0.96%	-5.50%	10.42%	-4.38%	-5.19%	5.14%
2006	6.01%	-5.51%	2.13%	-1.60%	-15.16%	-2.20%	-8.41%	6.12%	6.63%	7.89%	4.93%	-6.03%	-7.92%	6.79%
2007	1.71%	-5.93%	-1.92%	9.21%	5.14%	-1.36%	-1.60%	3.62%	6.61%	10.34%	-10.67%	-2.15%	11.42%	18.67%
2008	-16.76%	-7.12%	1.14%	8.31%	6.12%	-13.69%	0.06%	-0.01%	-15.53%	-12.66%	-8.22%	0.46%	-47.20%	-41.89%
2009	-3.03%	-4.48%	7.15%	10.66%	2.83%	3.05%	10.44%	1.31%	7.10%	-6.12%	7.50%	8.00%	51.98%	53.54%
2010	-10.73%	5.64%	14.97%	2.94%	-14.37%	-9.45%	6.68%	-8.87%	19.84%	10.28%	-2.14%	7.44%	16.92%	19.22%
2011	5.09%	5.18%	-2.79%	5.15%	-3.28%	-6.73%	1.09%	-7.02%	-5.90%	7.48%	-4.30%	-1.61%	-8.77%	2.70%
2012	14.00%	11.94%	10.30%	-3.54%	-14.85%	4.21%	1.25%	10.76%	0.62%	-11.99%	1.98%	-2.99%	18.39%	16.82%
2013	3.11%	1.00%	5.85%	1.32%	8.11%	-6.53%	15.10%	-2.51%	9.98%	10.50%	8.81%	5.83%	77.22%	34.99%
2014	-5.51%	10.97%	-7.35%	-1.98%	10.71%	8.24%	2.88%	11.56%	-3.03%	0.65%	12.36%	-10.32%	28.79%	17.94%
2015	-7.51%	14.58%	-9.79%	0.69%	5.49%	-5.73%	5.72%	-17.96%	-4.47%	21.17%	-2.96%	-5.50%	-11.86%	8.43%
2016	-13.93%	-3.87%	12.09%	-7.39%	10.28%	-8.77%	17.90%	2.45%	1.59%	-4.92%	-1.96%	-1.07%	-2.22%	5.89%
2017	11.95%	15.25%	4.16%	2.96%	12.10%	-7.52%	9.42%	4.32%	-2.99%	12.47%	5.13%	-1.64%	84.72%	31.52%
2018	22.65%	-8.29%	-11.95%	-0.65%	9.50%	2.14%	4.06%	12.54%	-2.07%	-15.19%	-2.12%	-11.61%	-7.39%	-1.04%
2019	11.79%	4.92%	5.24%	13.01%	-16.43%	12.24%	1.90%	-5.97%	-0.45%	7.94%	10.26%	9.22%	62.25%	37.96%
2020	7.64%	-9.33%	-4.28%	12.28%	5.82%	4.77%	8.32%	15.09%	-6.33%	-4.30%	9.26%	6.26%	50.88%	47.58%
2021	-1.19%	-3.04%	1.32%	8.06%	-3.00%	12.03%	4.99%	8.08%	-11.79%	15.93%	2.71%	-1.49%	33.83%	26.63%
2022	-15.70%	-5.11%	4.56%	-16.54%	-1.99%	-11.35%	13.36%	-8.01%	-11.92%	3.07%	5.46%	-13.28%	-47.49%	-32.97%
2023	14.00%	-1.98%	9.08%	-0.38%	14.25%	9.11%	5.91%	-4.95%	-11.20%	-4.10%	16.79%	10.68%	67.74%	53.81%
2024	2.07%	8.22%	0.24%	-9.82%	10.37%	11.75%	-4.94%	0.31%	0.30%	-2.61%	2.90%		18.03%	24.39%

Sourced: J.P. Morgan. Hypothetical backtested and actual historical performance of the Index based on the hypothetical backtested weekly closing levels of the Index from January 7, 2005 through June 21, 2021, and the actual historical performance of the Index thereafter. Actual historical performance of the Nasdaq-100 Index<sup>®</sup>. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting including a discussion of certain limitation of backtesting and simulated returns.

# MerQube US Tech+ Vol Advantage Index®

## Hypothetical backtested historical monthly and annual returns

### HYPOTHETICAL BACKTESTED AND HISTORICAL MONTHLY AND ANNUAL RETURNS COMPARED WITH MONTHLY AND ANNUAL RETURNS OF NASDAQ-100 INDEX® (JAN 2005 – NOV 2024)

Year	Index	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
2005	MQUSTVA	-5.28%	-2.09%	-3.95%	-9.91%	15.21%	-7.99%	15.45%	-4.17%	0.96%	-5.50%	10.42%	-4.38%	-5.19%
	NDX	-2.89%	-0.57%	-1.89%	-4.16%	8.58%	-3.18%	7.47%	-1.46%	1.26%	-1.40%	5.91%	-1.64%	5.14%
2006	MQUSTVA	6.01%	-5.51%	2.13%	-1.60%	-15.16%	-2.20%	-8.41%	6.12%	6.63%	7.89%	4.93%	-6.03%	-7.92%
	NDX	3.98%	-2.35%	1.98%	-0.17%	-7.12%	-0.28%	-4.18%	4.66%	4.71%	4.74%	3.39%	-1.92%	6.79%
2007	MQUSTVA	1.71%	-5.93%	-1.92%	9.21%	5.14%	-1.36%	-1.60%	3.62%	6.61%	10.34%	-10.67%	-2.15%	11.42%
	NDX	2.01%	-1.71%	0.61%	5.38%	3.24%	0.31%	-0.11%	2.93%	5.15%	7.07%	-6.69%	-0.20%	18.67%
2008	MQUSTVA	-16.76%	-7.12%	1.14%	8.31%	6.12%	-13.69%	0.06%	-0.01%	-15.53%	-12.66%	-8.22%	0.46%	-47.20%
	NDX	-11.68%	-5.22%	2.10%	7.62%	5.99%	-9.62%	0.66%	1.26%	-14.84%	-16.30%	-11.17%	2.18%	-41.89%
2009	MQUSTVA	-3.03%	-4.48%	7.15%	10.66%	2.83%	3.05%	10.44%	1.31%	7.10%	-6.12%	7.50%	8.00%	51.98%
	NDX	-2.59%	-5.36%	10.74%	12.72%	2.96%	2.90%	8.54%	1.36%	5.77%	-3.02%	6.02%	5.26%	53.54%
2010	MQUSTVA	-10.73%	5.64%	14.97%	2.94%	-14.37%	-9.45%	6.68%	-8.87%	19.84%	10.28%	-2.14%	7.44%	16.92%
	NDX	-6.41%	4.46%	7.68%	2.16%	-7.41%	-6.11%	7.18%	-5.18%	13.05%	6.33%	-0.34%	4.75%	19.22%
2011	MQUSTVA	5.09%	5.18%	-2.79%	5.15%	-3.28%	-6.73%	1.09%	-7.02%	-5.90%	7.48%	-4.30%	-1.61%	-8.77%
	NDX	2.89%	3.03%	-0.51%	2.78%	-1.31%	-2.00%	1.62%	-5.15%	-4.54%	10.33%	-2.75%	-0.76%	2.70%
2012	MQUSTVA	14.00%	11.94%	10.30%	-3.54%	-14.85%	4.21%	1.25%	10.76%	0.62%	-11.99%	1.98%	-2.99%	18.39%
	NDX	8.35%	6.29%	5.04%	-1.15%	-7.30%	3.60%	1.02%	4.91%	0.97%	-5.40%	1.13%	-0.63%	16.82%
2013	MQUSTVA	3.11%	1.00%	5.85%	1.32%	8.11%	-6.53%	15.10%	-2.51%	9.98%	10.50%	8.81%	5.83%	77.22%
	NDX	2.65%	0.26%	2.93%	2.44%	3.27%	-2.42%	6.21%	-0.53%	4.70%	4.96%	3.26%	2.99%	34.99%
2014	MQUSTVA	-5.51%	10.97%	-7.35%	-1.98%	10.71%	8.24%	2.88%	11.56%	-3.03%	0.65%	12.36%	-10.32%	28.79%
	NDX	-1.95%	4.95%	-2.72%	-0.38%	4.32%	3.01%	1.12%	4.88%	-0.81%	2.69%	4.32%	-2.34%	17.94%
2015	MQUSTVA	-7.51%	14.58%	-9.79%	0.69%	5.49%	-5.73%	5.72%	-17.96%	-4.47%	21.17%	-2.96%	-5.50%	-11.86%
	NDX	-2.07%	7.04%	-2.41%	1.86%	2.13%	-2.47%	4.37%	-6.85%	-2.19%	11.19%	0.34%	-1.53%	8.43%
2016	MQUSTVA	-13.93%	-3.87%	12.09%	-7.39%	10.28%	-8.77%	17.90%	2.45%	1.59%	-4.92%	-1.96%	-1.07%	-2.22%
	NDX	-6.84%	-1.82%	6.73%	-3.18%	4.21%	-2.35%	7.07%	0.86%	2.19%	-1.53%	0.20%	1.10%	5.89%
2017	MQUSTVA	11.95%	15.25%	4.16%	2.96%	12.10%	-7.52%	9.42%	4.32%	-2.99%	12.47%	5.13%	-1.64%	84.72%
	NDX	5.20%	4.17%	1.99%	2.71%	3.68%	-2.45%	4.13%	1.84%	-0.16%	4.50%	1.87%	0.48%	31.52%
2018	MQUSTVA	22.65%	-8.29%	-11.95%	-0.65%	9.50%	2.14%	4.06%	12.54%	-2.07%	-15.19%	-2.12%	-11.61%	-7.39%
	NDX	8.65%	-1.38%	-3.99%	0.37%	5.48%	1.05%	2.72%	5.84%	-0.35%	-8.66%	-0.26%	-9.91%	-1.04%
2019	MQUSTVA	11.79%	4.92%	5.24%	13.01%	-16.43%	12.24%	1.90%	-5.97%	-0.45%	7.94%	10.26%	9.22%	62.25%
	NDX	9.11%	2.76%	3.96%	5.46%	-8.40%	7.62%	2.32%	-2.01%	0.76%	4.31%	3.96%	3.92%	37.96%
2020	MQUSTVA	7.64%	-9.33%	-4.28%	12.28%	5.82%	4.77%	8.32%	15.09%	-6.33%	-4.30%	9.26%	6.26%	50.88%
	NDX	2.96%	-5.89%	-7.66%	15.19%	6.17%	6.29%	7.37%	11.05%	-5.72%	-3.20%	11.00%	5.05%	47.58%
2021	MQUSTVA	-1.19%	-3.04%	1.32%	8.06%	-3.00%	12.03%	4.99%	8.08%	-11.79%	15.93%	2.71%	-1.49%	33.83%
	NDX	0.29%	-0.12%	1.41%	5.88%	-1.26%	6.34%	2.78%	4.16%	-5.73%	7.90%	1.80%	1.14%	26.63%
2022	MQUSTVA	-15.70%	-5.11%	4.56%	-16.54%	-1.99%	-11.35%	13.36%	-8.01%	-11.92%	3.07%	5.46%	-13.28%	-47.49%
	NDX	-8.52%	-4.64%	4.22%	-13.37%	-1.65%	-9.00%	12.55%	-5.22%	-10.60%	3.96%	5.48%	-9.06%	-32.97%
2023	MQUSTVA	14.00%	-1.98%	9.08%	-0.38%	14.25%	9.11%	5.91%	-4.95%	-11.20%	-4.10%	16.79%	10.68%	67.74%
	NDX	10.62%	-0.49%	9.46%	0.49%	7.61%	6.49%	3.81%	-1.62%	-5.07%	-2.08%	10.67%	5.51%	53.81%
2024	MQUSTVA	2.07%	8.22%	0.24%	-9.82%	10.37%	11.75%	-4.94%	0.31%	0.30%	-2.61%	2.90%		18.03%
	NDX	1.85%	5.29%	1.17%	-4.46%	6.28%	6.18%	-1.63%	1.10%	2.48%	-0.85%	5.23%		24.39%

Source: J.P. Morgan. Hypothetical backtested and actual historical performance of the Index based on the hypothetical backtested weekly closing levels of the Index from January 7, 2005 through June 21, 2021, and the actual historical performance of the Index thereafter. Actual historical performance of the Nasdaq-100 Index®. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting including a discussion of certain limitation of backtesting and simulated returns.

# MerQube US Tech+ Vol Advantage Index<sup>®</sup>

## Hypothetical backtested Index statistics

### HYPOTHETICAL BACKTESTED HISTORICAL PERFORMANCE (JAN 2005 – NOV 2024)

	YTD return	1Y return	3Y return (p.a.)	5Y return (p.a.)	10Y return (p.a.)	Return since Jan 2005 (p.a.)	Realized vol since Jan 2005
MerQube US Tech+ Vol Advantage Index <sup>®</sup>	18.03%	30.64%	0.80%	18.03%	16.22%	12.95%	30.13%
Nasdaq-100 Index <sup>®</sup>	24.39%	31.24%	9.06%	20.00%	17.02%	13.91%	22.05%

### HYPOTHETICAL BACKTESTED HISTORICAL STATISTICS (JAN 2005 – NOV 2024)

Min QQQ Fund 1-week implied volatility	Max QQQ Fund 1-week implied volatility	Avg. QQQ Fund 1-week implied volatility	Min MerQube US Tech+ Vol Advantage Index leverage	Max MerQube US Tech+ Vol Advantage Index leverage	Avg. MerQube US Tech+ Vol Advantage Index leverage	Realized correlation with Nasdaq-100 <sup>21</sup>
8.7%	128.5%	22.0%	27%	404%	183%	88.2%

<sup>1</sup>Defined as the correlation between daily returns of the MerQube US Tech+ Vol Advantage Index<sup>®</sup> and the daily returns of Nasdaq-100 Index<sup>®</sup> calculated using daily closing levels of the corresponding indices from January 7, 2005 through November 29, 2024. **The actual realized correlation may differ, perhaps significantly, from the hypothetical backtested realized correlation.**

Sourced: J.P. Morgan. Hypothetical backtested and actual historical performance of the Index based on the hypothetical backtested weekly closing levels of the Index from January 7, 2005 through June 21, 2021, and the actual historical performance of the Index thereafter. Actual historical performance of the Nasdaq-100 Index<sup>®</sup>. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting including a discussion of certain limitation of backtesting and simulated returns.

## 2008 hypothetical backtested Index performance and leverage comparison

HYPOTHETICAL BACKTESTED HISTORICAL LEVERAGE



HYPOTHETICAL BACKTESTED RETURNS COMPARED WITH ACTUAL RETURNS OF NASDAQ-100 INDEX®



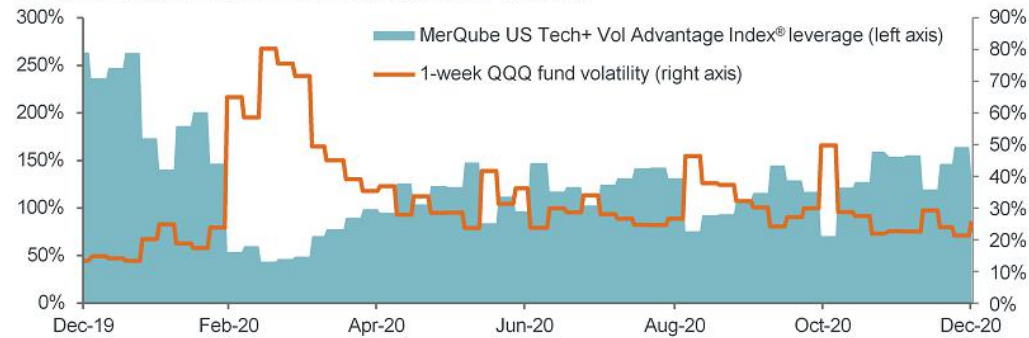
2008 HYPOTHETICAL BACKTESTED AND ACTUAL MONTHLY AND FULL YEAR RETURNS

Month	MerQube US Tech+ Vol Advantage Index®	Nasdaq-100 Index®
Jan	-16.76%	-11.68%
Feb	-7.12%	-5.22%
Mar	1.14%	2.10%
Apr	8.31%	7.62%
May	6.12%	5.99%
Jun	-13.69%	-9.62%
Jul	0.06%	0.66%
Aug	-0.01%	1.26%
Sep	-15.53%	-14.84%
Oct	-12.66%	-16.30%
Nov	-8.22%	-11.17%
Dec	0.46%	2.18%
<b>Full year</b>	<b>-47.20%</b>	<b>-41.89%</b>

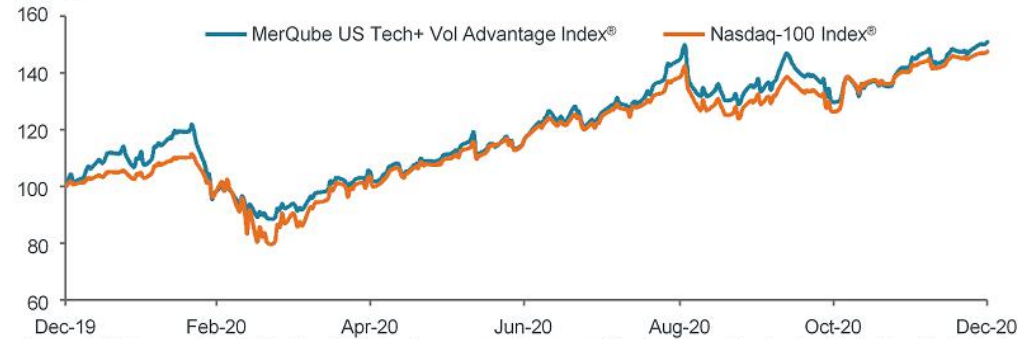
Sourced: J.P. Morgan. Hypothetical backtested performance and leverage of the Index based on the hypothetical backtested daily closing levels and hypothetical backtested weekly leverage of the Index from December 31, 2007 through December 31, 2008. Actual historical performance of the Nasdaq-100 Index®. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting including a discussion of certain limitation of backtesting and simulated returns.

## 2020 hypothetical backtested and actual Index performance and leverage comparison

**HYPOTHETICAL BACKTESTED HISTORICAL LEVERAGE**



**HYPOTHETICAL BACKTESTED RETURNS COMPARED WITH ACTUAL RETURNS OF NASDAQ-100 INDEX®**



Sourced: J.P. Morgan. Hypothetical backtested performance and leverage of the Index based on the hypothetical backtested daily closing levels and hypothetical backtested weekly leverage of the Index from December 31, 2019 through December 31, 2020. Actual historical performance of the Nasdaq-100 Index®. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting including a discussion of certain limitation of backtesting and simulated returns.

**2020 HYPOTHETICAL BACKTESTED AND ACTUAL MONTHLY AND FULL YEAR RETURNS**

Month	MerQube US Tech+ Vol Advantage Index®	Nasdaq-100 Index®
Jan	7.64%	2.96%
Feb	-9.33%	-5.89%
Mar	-4.28%	-7.66%
Apr	12.28%	15.19%
May	5.82%	6.17%
Jun	4.77%	6.29%
Jul	8.32%	7.37%
Aug	15.09%	11.05%
Sep	-6.33%	-5.72%
Oct	-4.30%	-3.20%
Nov	9.26%	11.00%
Dec	6.26%	5.05%
<b>Full year</b>	<b>50.88%</b>	<b>47.58%</b>



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## Key Terms of Auto callable Contingent Interest Notes

**Contingent Interest Payment:** If the notes have not been automatically called and the closing value of the underlying (or, in case of the worst-of notes, the least performing underlying) on any Review Date is greater than or equal to the Interest Barrier, investors will receive on the applicable Interest Payment Date a Contingent Interest Payment as described in the applicable pricing supplement.

**Interest Barrier/Trigger Value:** A percentage of the Initial Value of the underlying (or, in case of the worst-of notes, as a percentage of the Initial Value of the least performing underlying).

**Average backtested note IRR:** is the average of the internal rates of return calculated individually for each hypothetical note. The internal rate of return is the annual discount rate that yields a net present value of cashflows for a hypothetical note equal to zero.

**Backtested % of times the note would have been called:** is the ratio of the number of hypothetical notes that would have been called to the total number of all hypothetical notes.

**Backtested % of times the note would have lost principal:** is the ratio of the number of hypothetical notes that would have lost some or all of its principal to the total number of all hypothetical notes.

**Average backtested loss when note would have lost principal:** is the average loss on principal calculated individually for each hypothetical note that would have lost some or all of its principal

## 3 Year Auto Callable Contingent Interest Note Offerings

### Late December advisory “best efforts” calendar

The table below contains all 3y auto callable contingent interest notes offered on the advisory “best efforts” calendar which priced on December 29, 2022. Performance figures are simulated based on the issuance of a hypothetical note with the applicable terms every business day from January 7, 2005 through November 26, 2021, being the last date on which all of the hypothetical notes that have would have been issued would have all been called or matured. Please refer to “Key Terms” on the prior page for additional information.

Underlier(s)	Worst of S&P 500®, Russell 2000®	Worst of S&P 500®, Russell 2000®, Nasdaq-100 Index®	Worst of S&P 500®, Russell 2000®, EURO STOXX 50®	MerQube US Tech+ Vol Advantage Index®
CUSIP	48133PJ53	48133PJ95	48133PJ79	48133P6F5
Maturity Date	January 2, 2026	January 2, 2026	January 2, 2026	January 2, 2026
Review Date frequency	Quarterly	Quarterly	Quarterly	Quarterly
Contingent Interest Payment frequency	Quarterly	Quarterly	Quarterly	Quarterly
Interest Barrier / Trigger Value	60%	60%	60%	60%
Trigger Event observation frequency <sup>1,2</sup>	At maturity	At maturity	At maturity	At maturity
Time to 1 <sup>st</sup> Review Date on which notes may be called <sup>3</sup>	6 months	6 months	6 months	6 months
Contingent Interest Rate	10.75%	11.25%	11.50%	14.50%
Average backtested note IRR	11.06%	11.59%	11.65%	15.00%
Backtested % of times the note would have been called	88.95%	88.95%	84.50%	95.67%
Backtested % of times the note would have lost principal	0.00%	0.00%	0.85%	0.78%
Average backtested loss when note would have lost principal	N/A	N/A	-41.97%	-49.60%

<sup>1</sup> For daily observation notes, a Trigger Event occurs if, on any day during the monitoring period (as defined in the pricing supplement), the closing value for any underlying is less than its Trigger Value. If the notes have not been automatically called (see footnote 3 below) and (i) the Final Value of any underlying is less than its Initial Value and (ii) a Trigger Event has occurred, you will lose some or all of your principal amount at maturity.

<sup>2</sup> For notes observed at maturity, if the notes have not been automatically called (see footnote 3 below) and the Final Value of any underlying is less than its Trigger Value, you will lose some or all of your principal amount at maturity.

<sup>3</sup> If the closing value of the underlying (or, in the case of worst-of notes, each underlying) on any Review Date is greater than or equal to its Initial Value, the notes will be automatically called for a cash payment, for each \$1,000 principal amount note, equal to (a) \$1,000 plus (b) the Contingent Interest Payment applicable to that Review Date.

Source: J.P. Morgan. Performance of the MerQube US Tech+ Vol Advantage Index® based on hypothetical backtested performance from January 7, 2005 through June 21, 2021, and actual performance thereafter. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS. See “Use of hypothetical backtested returns” at the front of this document. No assurances can be provided that any one of the notes contained in the table above will outperform any of the other notes.**

## 5 Year Auto Callable Contingent Interest Note Offerings

### Late December advisory “best efforts” calendar

The table below contains all 5y auto callable contingent interest notes offered on the advisory “best efforts” calendar which priced on December 29, 2022. Performance figures are simulated based on the issuance of a hypothetical note with the applicable terms every business day from January 7, 2005 through February 26, 2021, being the last date on which all of the hypothetical notes that have would have been issued would have all been called or matured. Please refer to “Key Terms” on the prior page for additional information.

Underlier(s)	Worst of S&P 500®, Russell 2000®	Worst of S&P 500®, Russell 2000®, Nasdaq-100 Index®	Worst of S&P 500®, Russell 2000®, EURO STOXX 50®	MerQube US Tech+ Vol Advantage Index®
CUSIP	48133PK44	48133PK85	48133PK69	48133P6W8
Maturity Date	January 3, 2028	January 3, 2028	January 3, 2028	January 3, 2028
Review Date frequency	Quarterly	Quarterly	Quarterly	Quarterly
Contingent Interest Payment frequency	Quarterly	Quarterly	Quarterly	Quarterly
Interest Barrier / Trigger Value	50%	50%	50%	50%
Trigger Event observation frequency <sup>1,2</sup>	At maturity	At maturity	At maturity	At maturity
Time to 1 <sup>st</sup> Review Date on which notes may be called <sup>3</sup>	1 year	1 year	1 year	1 year
Contingent Interest Rate	9.00%	9.50%	9.75%	12.25%
Average backtested note IRR	9.29%	9.83%	9.95%	12.80%
Backtested % of times the note would have been called	93.21%	93.21%	88.23%	98.91%
Backtested % of times the note would have lost principal	0.00%	0.00%	1.04%	0.00%
Average backtested loss when note would have lost principal	N/A	N/A	-51.59%	N/A

<sup>1</sup> For daily observation notes, a Trigger Event occurs if, on any day during the monitoring period (as defined in the pricing supplement), the closing value for any underlying is less than its Trigger Value. If the notes have not been automatically called (see footnote 3 below) and (i) the Final Value of any underlying is less than its Initial Value and (ii) a Trigger Event has occurred, you will lose some or all of your principal amount at maturity.

<sup>2</sup> For notes observed at maturity, if the notes have not been automatically called (see footnote 3 below) and the Final Value of any underlying is less than its Trigger Value, you will lose some or all of your principal amount at maturity.

<sup>3</sup> If the closing value of the underlying (or, in the case of worst-of notes, each underlying) on any Review Date is greater than or equal to its Initial Value, the notes will be automatically called for a cash payment, for each \$1,000 principal amount note, equal to (a) \$1,000 plus (b) the Contingent Interest Payment applicable to that Review Date.

Source: J.P. Morgan. Performance of the MerQube US Tech+ Vol Advantage Index® based on hypothetical backtested performance from January 7, 2005 through June 21, 2021, and actual performance thereafter. **PAST PERFORMANCE AND HYPOTHETICAL BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RETURNS.** See “Use of hypothetical backtested returns” at the front of this document. No assurances can be provided that any one of the notes contained in the table above will outperform any of the other notes.

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## Selected risks associated with the Index

**Our affiliate, J.P. Morgan Securities LLC (“JPMS”), worked with MerQube (the “Index Sponsor”) in developing guidelines and policies governing the composition and calculation of the Index.** One of our affiliates, JPMS, worked with the Index Sponsor in developing the guidelines and policies governing the composition and calculation of the Index. Although judgments, policies and determinations concerning the Index were made by JPMS, JPMorgan Chase & Co., as the parent company of JPMS, ultimately controls JPMS. The policies and judgments for which JPMS was responsible could have an impact, positive or negative, on the level of the Index and the value of your notes. JPMS is under no obligation to consider your interests as an investor in the notes in its role in developing the guidelines and policies governing the Index or making judgments that may affect the level of the Index.

**An affiliate of ours has a 10% ownership interest in the Index Sponsor.**

An affiliate of ours currently has a 10% equity interest in the Index Sponsor, with a right to appoint an employee of JPMS, another of our affiliates, as a member of the board of directors of the Index Sponsor. The Index Sponsor can implement policies, make judgments or enact changes to the Index methodology that could negatively affect the performance of the Index. The Index Sponsor can also alter, discontinue or suspend calculation or dissemination of the Index. Any of these actions could adversely affect the value of the notes. The Index Sponsor has no obligation to consider your interests in calculating, maintaining or revising the Index, and we, JPMS, our other affiliates and our respective employees are under no obligation to consider your interests as an investor in the notes in connection with the role of our affiliate as an owner of an equity interest in the Index Sponsor or the role of an employee of JPMS as a member of the board of directors of the Index Sponsor.

**The Index is subject to a 6.0% per annum daily deduction.** This daily fee deduction will offset any appreciation of the components of the Index, will heighten any depreciation of those components and will generally be a drag on the performance of the Index. The Index will trail the performance of an identical index without an index deduction. **The performance of the QQQ Fund is subject to a notional financing cost deducted daily.** The notional financing cost is intended to approximate the cost of maintaining a position in the QQQ Fund using borrowed funds at a rate of interest equal to the daily SOFR rate *plus* a fixed spread. The actual cost of maintaining a position in the QQQ Fund at any time may be less than the notional financing cost. The notional financing cost will offset any appreciation of the components of the Index, will heighten any depreciation of the those components and will generally be a drag on the performance of the Index. The Index will trail the performance of an identical index without such notional financing cost.

**The Index Sponsor may adjust the Index in a way that affects its level, and the Index Sponsor has no obligation to consider your interests.** The Index Sponsor is responsible for maintaining the Index. The Index Sponsor can add, delete or substitute the components of the Index, or make other methodological changes that could affect the level of the Index. The Index Sponsor has no obligation to consider your interests in calculating or revising the Index.

**The level of the index will include the deduction of a notional financing cost.** Since the Amendment Effective Date, the performance of the Underlying Asset has been subject to a notional financing cost deducted daily. The notional financing cost is intended to approximate the cost of maintaining a position in the QQQ Fund using borrowed funds at a rate of interest equal to the daily SOFR rate plus a fixed spread. The actual cost of maintaining a position in the QQQ Fund at anytime may be less than the notional financing cost. As a result of this deduction, the level of the Index will trail the value of an identically constituted synthetic portfolio that is not subject to any such deduction.

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## Selected risks associated with the Index

**The Index may not be successful or outperform any alternative strategy that might be employed in respect of the Underlying Asset.** No assurance can be given that the investment strategy on which the Index is based will be successful or that the Index will outperform any alternative strategy that might be employed in respect of the Underlying Asset.

**The Index may not approximate its target volatility.** No assurance can be given that the Index will maintain an annualized realized volatility that approximates its target volatility of 35%. The Index's target volatility is a level of implied volatility and therefore the actual realized volatility of the Index may be greater or less than the target volatility. On each weekly Index rebalance day, the Index's exposure to the Underlying Asset is set equal to (a) the 35% implied volatility target divided by (b) the one-week implied volatility of the QQQ Fund, subject to a maximum exposure of 500%. The Index uses the implied volatility of the QQQ Fund as a proxy for the volatility of the Underlying Asset. However, there is no guarantee that the methodology used by the Index to determine the implied volatility of the QQQ Fund will be representative of the realized volatility of the QQQ Fund. The volatility of the Underlying Asset on any day may change quickly and unexpectedly and realized volatility may differ significantly from implied volatility. In general, over time, the realized volatility of the QQQ Fund has tended to be lower than its implied volatility; however, at any time that realized volatility may exceed its implied volatility, particularly during periods of market volatility. Accordingly, the actual realized annualized volatility of the Index may be greater than or less than the target volatility, which may adversely affect the level of the Index.

**The Index is subject to risks associated with the use of significant leverage.** On a weekly Index rebalance day, the Index will employ leverage to increase the exposure of the Index to the Underlying Asset if the implied volatility of the QQQ Fund is below 35%, subject to a maximum exposure of 500%. Under normal market conditions in the past, the QQQ Fund has tended to exhibit an implied volatility below 35%. Accordingly, the Index has generally employed leverage in the past, except during periods of elevated volatility. When leverage is employed, any movements in the prices of the Underlying Asset will result in greater changes in the level of the Index than if leverage were not used. In particular, the use of leverage will magnify any negative performance of the Underlying Asset, which, in turn, would negatively affect the performance of the Index. Because the Index's leverage is adjusted only on a weekly basis, in situations where a significant increase in volatility is accompanied by a significant decline in the price of the Underlying Asset, the level of the Index may decline significantly before the following Index rebalance day when the Index's exposure to the Underlying Asset would be reduced. In addition, the notional financing cost deducted daily will be magnified by any leverage provided by the Index.

**The Index may be significantly uninvested.** On a weekly Index rebalance day, the Index's exposure to the Underlying Asset will be less than 100% when the implied volatility of the QQQ Fund is above 35%. If the Index's exposure to the Underlying Asset is less than 100%, the Index will not be fully invested, and any uninvested portion will earn no return. The Index may be significantly uninvested on any given day, and will realize only a portion of any gains due to appreciation of the Underlying Asset on any such day. The 6.0% per annum deduction is deducted daily, even when the Index is not fully invested.

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## Selected risks associated with the Index

**Risks associated with non-U.S. securities.** Some of the equity securities composing the Nasdaq-100 Index® and held by the QQQ Fund are issued by non-U.S. companies. Investments in securities linked to the value of such non-U.S. equity securities involve risks associated with the home countries of the issuers of those non-U.S. equity securities.

**The QQQ Fund is subject to management risk, which is the risk that the investment strategies of the QQQ Fund's investment adviser, the implementation of which is subject to a number of constraints, may not produce the intended results.** These constraints could adversely affect the market price of the shares of the QQQ Fund and, consequently, the value of the notes.

**The performance and market value of the QQQ Fund, particularly during periods of market volatility, may not correlate with the performance of the QQQ Fund's underlying index as well as the net asset value per share.** The QQQ Fund does not fully replicate its underlying index and may hold securities different from those included in its underlying index. In addition, the performance of the QQQ Fund will reflect additional transaction costs and fees that are not included in the calculation of its underlying index. All of these factors may lead to a lack of correlation between the performance of the QQQ Fund and its underlying index. In addition, corporate actions with respect to the equity securities underlying the QQQ Fund (such as mergers and spin-offs) may impact the variance between the performances of the QQQ Fund and its underlying index. Finally, because the shares of the QQQ Fund are traded on a securities exchange and are subject to market supply and investor demand, the market value of one share of the QQQ Fund may differ from the net asset value per share of the QQQ Fund. During periods of market volatility, securities underlying the QQQ Fund may be unavailable in the secondary market, market participants may be unable to calculate accurately the net asset value per share of the QQQ Fund and the liquidity of the QQQ Fund may be adversely affected. This kind of market volatility may also disrupt the ability of market participants to create and redeem shares of the QQQ Fund. Further, market volatility may adversely affect, sometimes materially, the prices at which market participants are willing to buy and sell shares of the QQQ Fund. As a result, under these circumstances, the market value of shares of the QQQ Fund may vary substantially from the net asset value per share of the QQQ Fund.

**Hypothetical backtested data relating to the Index do not represent actual historical data and are subject to inherent limitations, and the historical and hypothetical backtested performance of the Index are not indications of its future performance. Please see "Use of hypothetical backtested returns" at the front of this document for further information related to backtesting.**

**Other key risk:**

- The Index was established on June 22, 2021, has a limited operating history and may perform in unanticipated ways.

The risks identified above are not exhaustive. You should also carefully review the related "Risk Factors" sections in the prospectus supplement and the relevant product supplement and underlying supplement and "Selected Risk Considerations" in the relevant pricing supplement.

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