

MAY 2025

# MerQube US Tech+ Vol Advantage Index

J.P.Morgan

## PERFORMANCE UPDATE

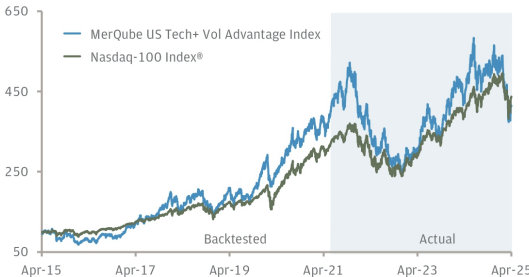
The MerQube US Tech+ Vol Advantage Index (the "Index") attempts to provide a dynamic rules-based exposure to the underlying asset to which the Index is linked (the "Underlying Asset"), while targeting a level of implied volatility, with a maximum exposure to the Underlying Asset of 500% and a minimum exposure to the Underlying Asset of 0%. Since February 9, 2024 (the "Amendment Effective Date"), the Underlying Asset has been an unfunded position in the Invesco QQQ Trust™, Series 1 (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 E-Mini Nasdaq-100 futures (the "Futures Contracts").

The Index is subject to a 6.0% per annum daily deduction, and the performance of the Underlying Asset is subject to a notional financing cost deducted daily.

The Index was established on June 22, 2021.

Levels are published on Bloomberg using the ticker MQUSTVA.

### Hypothetical and actual historical performance: Apr 2015 through Apr 2025



Please see the footnotes at the bottom of this page and "Backtesting" on the following page for information on backtested performance and proxies.

### Hypothetical and actual historical returns and volatilities: Apr 2015 through Apr 2025

	1 Year Return	3 Year Return (Annualized)	5 Year Return (Annualized)	10 Year Return (Annualized)	10 Year Volatility (Annualized)
MerQube US Tech+ Vol Advantage Index	-2.69%	7.03%	10.50%	15.69%	31.79%
Nasdaq-100 Index®	12.21%	15.04%	16.81%	16.06%	22.81%

### Historical exposure at end-of-day: Feb 2024 through Apr 2025

April 2025		March 2025		February 2025	
Period	Exposure	Period	Exposure	Period	Exposure
04/01–04/03	121.13%	03/03–03/06	127.64%	02/03–02/06	162.37%
04/04–04/10	59.39%	03/07–03/13	114.13%	02/07–02/13	175.67%
04/11–04/16	65.05%	03/14–03/20	122.97%	02/14–02/20	209.33%
04/17–04/24	103.13%	03/21–03/27	157.79%	02/21–02/27	154.90%
04/25–04/30	114.29%	03/28–03/31	121.13%	02/28	127.64%

### Hypothetical and actual historical monthly and annual returns: Jan 2016 through Apr 2025

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
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%
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%
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%
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%
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%
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%
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%
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%
2024	2.07%	8.22%	0.24%	-9.82%	10.37%	11.75%	-4.94%	0.31%	0.30%	-2.61%	2.90%	0.34%	18.44%
2025	1.60%	-5.99%	-10.94%	-3.55%									-17.96%

Historical performance measures for the Index represent hypothetical backtested performance through June 21, 2021 (labeled "Backtested" in the chart above); and actual performance from June 22, 2021 through April 30, 2025 (labeled "Actual" in the chart above).

The hypothetical backtested and historical levels presented herein have not been verified by J.P. Morgan, and hypothetical historical levels have inherent limitations. PAST PERFORMANCE AND BACKTESTED PERFORMANCE ARE NOT INDICATIVE OF FUTURE RESULTS. Please see the Disclaimer on the following page.

Investing in the notes linked to the Index involves a number of risks. See "Selected Risks" on page 2 of this document, "Risk Factors" section 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 product supplement, underlying supplement, prospectus supplement or 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.

**Selected Risks**

- Our affiliate, J.P. Morgan Securities LLC ("JPMS"), coordinated with MerQube (the "Index Sponsor") in the development of the Index.
- The level of the Index will include a 6.0% per annum daily deduction.
- The level of the Index will include the deduction of a 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 may not approximate its target volatility.
- The Index is subject to risks associated with the use of significant leverage.
- The Index may be significantly uninvested.
- An investment linked to the Index will be subject to risks associated with non-U.S. securities.
- The Index may not be successful or outperform any alternative strategy that might be employed in respect of the Underlying Asset.
- The QQQ Fund is subject to management risk.
- 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 Index, which 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 review carefully the related "Risk Factors" section 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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**Backtesting:** Hypothetical backtested performance measures have inherent limitations. Alternative modelling techniques might produce significantly different results and may prove to be more appropriate. Past performance, and especially hypothetical back-tested performance, is not indicative of future results. This type of information has inherent limitations and you should carefully consider these limitations before placing reliance on such information.

**Use of hypothetical backtested returns**

Any backtested historical performance and weighting information included herein is hypothetical. The constituent may not have traded in the manner shown in the hypothetical backtest of the Index included herein, and no representation is being made that the Index will achieve similar performance. The hypothetical historical levels presented herein have not been verified by an independent third party, and such hypothetical historical levels have inherent limitations. 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.

Hypothetical back-tested performance measures have inherent limitations. Hypothetical back-tested performance is derived by means of the retroactive application of a back-tested model that has been designed with the benefit of hindsight. Hypothetical back-tested results are neither an indicator nor a guarantee of future returns. Alternative modelling techniques might produce significantly different results and may prove to be more appropriate. A copy of the index methodology is available upon request or can be viewed on MerQube's website.

*MerQube performed the calculation of the hypothetical back-tested performance data. Neither J.P. Morgan Securities LLC (JPMS), nor any of its affiliates paid MerQube to perform these calculations. JPMS has entered into a license agreement with MerQube, Inc. that provides for an exclusive license to it and certain of its affiliated or subsidiary companies, in exchange for a fee, of the right to use the Indices, which are owned and published by MerQube, Inc. JPMS worked with MerQube in developing the guidelines and policies governing the composition and calculation of the Index. 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.*

In addition, the QQQ Fund replaced the Futures Contracts as the Underlying Asset on 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 back-tested performance shown in this document.

The 10 Year Volatility (Annualized) on the previous page is a measure of market risk, calculated as of the square root of two hundred and fifty-two (252) multiplied by the sample standard deviation of the daily logarithmic returns of each applicable index or portfolio (considering only days for which levels are available for all three) over the preceding 10 years.

Investment suitability must be determined individually for each investor, and notes linked to the Index may not be suitable for all investors. This material is not a product of J.P. Morgan Research Departments.

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