

NOVEMBER 2024

MerQube US Tech+ Vol Advantage Index

J.P.Morgan

Hypothetical and Actual Historical Monthly and Annual Returns

Backtested Actual

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%
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%			14.71%

Please refer to the "Selected Risks" and "Disclaimer" on the following page.

Historical performance measures for the MerQube US Tech+ Vol Advantage Index (the "Index") represent hypothetical backtested performance from January 7, 2005 through June 21, 2021 and the actual performance of the Index from June 22, 2021 through October 31, 2024. Please see "Use of hypothetical backtested returns" at the end of this presentation for further information related to backtesting including a discussion of certain limitations of backtesting and simulated returns.

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.

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 the 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.
- The Index, which was established on June 22, 2021, has a limited operating history and may perform in unanticipated ways.
- 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 may be employed in respect of the underlying asset to which the Index is linked (the "Underlying Asset").
- The Index is subject to risks relating to the Invesco QQQ TrustSM, Series 1 (the "QQQ Fund"). The QQQ Fund is subject to management risk, and 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 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.

Disclaimer

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 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 E-Mini Nasdaq-100 futures (the "Futures Contracts") as the Underlying Asset on February 9, 2024. 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 February 9, 2024 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.

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

Neither MerQube, Inc. nor any of its affiliates (collectively, "MerQube") is the issuer or producer of any investment linked to the Index referenced herein and MerQube has no duties, responsibilities, or obligations to investors in such investment. The Index is a product of MerQube and has been licensed for use by JPMS ("Licensee") and its affiliates. Such index is calculated using, among other things, market data or other information ("Input Data") from one or more sources (each a "Data Provider"). MerQube[®] is a registered trademark of MerQube, Inc. These trademarks have been licensed for certain purposes by Licensee, including use by Licensee's affiliate in its capacity as the issuer of investments linked to the Index. Such investments are not sponsored, endorsed, sold or promoted by MerQube, any Data Provider, or any other third party, and none of such parties make any representation regarding the advisability of investing in such product(s) nor do they have any liability for any errors, omissions, or interruptions of the Input Data, Index or any associated data.

Copyright © 2024 JPMorgan Chase & Co. All rights reserved. For additional regulatory disclosures, please consult: www.jpmorgan.com/disclosures. Information contained on this website is not incorporated by reference in, and should not be considered part of, this document. This monthly update document replaces and supersedes all prior written materials of this type previously provided with respect to the Index.