MORGAN STANLEY

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Address	1585 BROADWAY
	NEW YORK, NY, 10036
Telephone	2127614000
CIK	0000895421
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Dated December 12, 2024
Filed pursuant to Rule 424(b)(2)

Morgan Stanley Finance LLC

STRUCTURED INVESTMENTS

Opportunities in U.S. Equities

Callable Contingent Income Buffered Securities due June 22, 2027

Payments on the Securities Based on the Worst Performing of the Utilities Select Sector SPDR® Fund, the Russell 2000® Index and the Nasdaq-100® Technology Sector Index℠

Fully and Unconditionally Guaranteed by Morgan Stanley

Principal at Risk Securities

The securities offered are unsecured obligations of Morgan Stanley Finance LLC ("MSFL") and are fully and unconditionally guaranteed by Morgan Stanley. The securities have the terms described in the accompanying prospectus supplement, index supplement and prospectus, as supplemented or modified by this document. The securities do not provide for the regular payment of interest and provide a minimum payment at maturity of only 20% of the stated principal amount. The securities will pay a contingent monthly coupon **but only if** the closing level of **each of the Utilities Select Sector SPDR® Fund, the Russell 2000® Index and the Nasdaq-100® Technology Sector Index℠** on the related observation date is **at or above 70% of its respective initial level**, which we refer to as the respective coupon barrier level. If the closing level **of any underlying** is less than the coupon barrier level for such underlying on any observation date, we will pay no interest for the related monthly period. In addition, beginning on March 20, 2025, **we will redeem the securities on any quarterly redemption date** for a redemption payment equal to the sum of the stated principal amount *plus* any contingent monthly coupon otherwise due with respect to the related observation date, if and only if the output of a risk neutral valuation model on a business day, as selected by the calculation agent, that is no earlier than three business days before the observation date preceding such redemption date and no later than such observation date, based on the inputs indicated under "Call feature" below, indicates that redeeming on such date is economically rational for us as compared to not redeeming on such date. An early redemption of the securities will not automatically occur based on the performance of the underlyings. At maturity, if the securities have not previously been redeemed and if the final level of **each underlying** has appreciated, has remained unchanged or has declined by an amount less than or equal to the buffer amount of 20%, the payment at maturity will be the stated principal amount and the related contingent monthly coupon. If, however, the final level of **any underlying** has declined from its initial level by an amount greater than the buffer amount of 20%, investors will lose 1% for every 1% decline of the worst performing underlying beyond the specified buffer amount, subject to the minimum payment at maturity of 20% of the stated principal amount. **Accordingly, investors in the securities must be willing to accept the risk of losing up to 80% of the stated principal amount if any underlying declines by an amount greater than the buffer amount, and also the risk of not receiving any monthly coupons during the entire 2.5-year term of the securities.** Because payments on the securities are based on the worst performing of the underlyings, a decline of more than 30% by **any underlying** will result in few or no contingent monthly coupons and/or a loss of your investment, as applicable, even if the other underlyings have appreciated or have not declined as much. Investors will not participate in any appreciation in any underlying. The securities are for investors who are willing to risk their principal and seek an opportunity to earn interest at a potentially above-market rate and the limited protection provided by the buffer feature in exchange for the risk of receiving no monthly interest if **any underlying** closes below the coupon barrier level for such underlying on the observation dates, and the risk of an early redemption of the securities based on the output of a risk neutral valuation model. The securities are notes issued as part of MSFL's Series A Global Medium-Term Notes program.

The Nasdaq-100® Technology Sector Index℠ measures the performance of companies in the Nasdaq-100 Index® that are classified as technology according to the Industry Classification Benchmark. For more information about the Nasdaq-100 Index®, see the information set forth under "Nasdaq-100 Index®" in the accompanying index supplement. For more information about the Nasdaq-100® Technology Sector Index℠, see "Annex A — Nasdaq-100® Technology Sector Index℠" beginning on page 40.

All payments are subject to our credit risk. If we default on our obligations, you could lose some or all of your investment. These securities are not secured obligations and you will not have any security interest in, or otherwise have any access to, any underlying reference asset or assets.

SUMMARY TERMS	
Issuer:	Morgan Stanley Finance LLC
Guarantor:	Morgan Stanley
Underlyings:	Utilities Select Sector SPDR® Fund (the "XLU Shares"), Russell 2000® Index (the "RTY Index") and Nasdaq-100® Technology Sector Index℠ (the "NDXT Index"). We refer to each of the RTY Index and the NDXT Index as an underlying index.
Aggregate principal amount:	$
Stated principal amount:	$1,000 per security
Issue price:	$1,000 per security (see "Commissions and issue price" below)
Pricing date:	December 16, 2024
Original issue date:	December 19, 2024 (3 business days after the pricing date)
Maturity date:	June 22, 2027
Call feature:	Beginning on March 20, 2025, an early redemption, in whole but not in part, will occur on a redemption date if and only if the output of a risk neutral valuation model on a business day, as selected by the calculation agent, that is no earlier than three business days before the observation date preceding such redemption date and no later than such observation date (the "determination date"), taking as input: (i) prevailing reference market levels, volatilities and correlations, as applicable and in each case as of the determination date and (ii) Morgan Stanley's credit spreads as of the pricing date, indicates that redeeming on such date is economically rational for us as compared to not redeeming on such date. If we call the securities, we will give you notice no later than the observation date preceding the redemption date specified in the notice. No further payments will be made on the securities once they have been redeemed.
Contingent monthly coupon:	If, on any observation date, the closing level of **each underlying** is **greater than or equal to** its respective coupon barrier level, we will pay a contingent monthly coupon at an annual rate of at least 9.05% (corresponding to approximately $7.542 per month per security) on the related contingent coupon payment date. The actual contingent monthly coupon rate will be determined on the pricing date. If, on any observation date, the closing level **of any underlying** is **less than** the coupon barrier level for such underlying, no contingent monthly coupon will be paid with respect to that observation date. **It is possible that one or more underlyings will remain below the respective coupon barrier level(s) for extended periods of time or even throughout the entire term of the securities so that you will receive few or no contingent monthly coupons.**
Payment at maturity:	If the securities have not previously been redeemed, investors will receive on the maturity date a payment at maturity determined as follows: ● If the final level of **each** underlying is **greater than or equal to** 80% of its respective initial level, meaning that **no underlying** has decreased by an amount greater than the buffer amount of 20% from its respective initial level: the stated principal amount and the contingent monthly coupon with respect to the final observation date ● If the final level of any underlying is less than 80% of its respective initial level, meaning that any underlying has decreased by an amount greater than the buffer amount of 20% from its respective initial level: ($1,000 × performance factor of the worst performing underlying) + $200 If the final level of **each** underlying is **greater than or equal to** its respective coupon barrier level, investors will receive the contingent monthly coupon with respect to the final observation date. Under these circumstances, the payment at maturity will be less than the stated principal amount of $1,000. However, under no circumstances will the payment at maturity be less than $200 per security.
	Terms continued on the following page
Agent:	Morgan Stanley & Co. LLC ("MS & Co."), an affiliate of MSFL and a wholly owned subsidiary of Morgan Stanley. See "Supplemental information regarding plan of distribution; conflicts of interest."
Estimated value on the pricing date:	Approximately $983.80 per security, or within $25.00 of that estimate. See "Investment Overview" beginning on page 3.

Commissions and issue price:	**Price to public**(1)	**Agent's commissions and fees**(2)	**Proceeds to us**(3)
Per security	$1,000	$	$
Total	$	$	$

(1) *The securities will be sold only to investors purchasing the securities in fee-based advisory accounts.*
(2) *MS & Co. expects to sell all of the securities that it purchases from us to an unaffiliated dealer at a price of $ per security, for further sale to certain fee-based advisory accounts at the price to public of $1,000 per security. MS & Co. will not receive a sales commission with respect to the securities. See "Supplemental information regarding plan of distribution; conflicts of interest." For additional information, see "Plan of Distribution (Conflicts of Interest)" in the accompanying prospectus supplement.*
(3) *See "Use of proceeds and hedging" on page 38.*

The securities involve risks not associated with an investment in ordinary debt securities. See "Risk Factors" beginning on page 12.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this document or the accompanying prospectus supplement, index supplement and prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The securities are not deposits or savings accounts and are not insured by the Federal Deposit Insurance Corporation or any other governmental agency or instrumentality, nor are they obligations of, or guaranteed by, a bank.

You should read this document together with the related prospectus supplement, index supplement and prospectus, each of which can be accessed via the hyperlinks below. When you read the accompanying prospectus supplement and index supplement, please note that all references in such supplements to the prospectus dated November 16, 2023, or to any sections therein, should refer instead to the accompanying prospectus dated April 12, 2024 or to the corresponding sections of such prospectus, as applicable. Please also see "Additional Terms of the Securities" and "Additional Information About the Securities" at the end of this document.

References to "we," "us" and "our" refer to Morgan Stanley or MSFL, or Morgan Stanley and MSFL collectively, as the context requires.

Prospectus Supplement dated November 16, 2023 **Index Supplement dated November 16, 2023** **Prospectus dated April 12, 2024**

Callable Contingent Income Buffered Securities due June 22, 2027

Payments on the Securities Based on the Worst Performing of the Utilities Select Sector SPDR® Fund, the Russell 2000® Index and the Nasdaq-100® Technology Sector Index℠
Principal at Risk Securities

Terms continued from previous page:

Redemption payment:	The redemption payment will be an amount equal to (i) the stated principal amount *plus* (ii) any contingent monthly coupon otherwise due with respect to the related observation date.
Redemption dates:	Quarterly, on March 20, 2025, June 20, 2025, September 19, 2025, December 19, 2025, March 19, 2026, June 22, 2026, September 21, 2026, December 21, 2026 and March 19, 2027. If any such day is not a business day, the redemption payment will be made on the next succeeding business day and no adjustment will be made to any redemption payment made on that succeeding business day.
Initial level:	With respect to the XLU Shares: $, which is the closing level of such underlying on the pricing date With respect to the RTY Index: , which is the closing level of such underlying on the pricing date With respect to the NDXT Index: , which is the closing level of such underlying on the pricing date
Final level:	With respect to each underlying, the respective closing level on the final observation date
Closing level:	With respect to the XLU Shares, on any trading day, the closing price of one XLU Share on such day *multiplied by* the adjustment factor on such day With respect to each of the RTY Index and the NDXT Index, on any index business day, the respective index closing value of such underlying on such day
Worst performing underlying:	The underlying with the largest percentage decrease from the respective initial level to the respective final level
Performance factor:	With respect to each underlying, final level *divided by* the initial level
Coupon barrier level:	With respect to the XLU Shares: $, which is 70% of its initial level With respect to the RTY Index: , which is 70% of its initial level With respect to the NDXT Index: , which is 70% of its initial level
Buffer amount:	20%. As a result of the buffer amount of 20%, the value at or above which each underlying must close on the final observation date so that investors do not lose some of their investment at maturity is: With respect to the XLU Shares: $, which is 80% of its initial level With respect to the RTY Index: , which is 80% of its initial level With respect to the NDXT Index: , which is 80% of its initial level
Coupon payment dates:	Monthly, as set forth under "Observation Dates and Coupon Payment Dates" below. If any such day is not a business day, that contingent monthly coupon, if any, will be paid on the next succeeding business day and no adjustment will be made to any coupon payment made on that succeeding business day; *provided further* that the contingent monthly coupon, if any, with respect to the final observation date shall be paid on the maturity date.
Observation dates:	Monthly, as set forth under "Observation Dates and Coupon Payment Dates" below, subject to postponement for non-index business days, non-trading days, as applicable, and certain market disruption events. We also refer to June 16, 2027 as the final observation date.
Adjustment factor:	With respect to the XLU Shares, 1.0, subject to adjustment in the event of certain events affecting the XLU Shares
CUSIP / ISIN:	61777RKF9 / US61777RKF90
Listing:	The securities will not be listed on any securities exchange.

Observation Dates and Coupon Payment Dates

Observation Dates	Coupon Payment Dates
January 16, 2025	January 22, 2025
February 18, 2025	February 21, 2025
March 17, 2025	March 20, 2025
April 16, 2025	April 21, 2025
May 16, 2025	May 21, 2025
June 16, 2025	June 20, 2025
July 16, 2025	July 21, 2025
August 18, 2025	August 21, 2025
September 16, 2025	September 19, 2025
October 16, 2025	October 21, 2025
November 17, 2025	November 20, 2025
December 16, 2025	December 19, 2025
January 16, 2026	January 22, 2026
February 17, 2026	February 20, 2026
March 16, 2026	March 19, 2026
April 16, 2026	April 21, 2026
May 18, 2026	May 21, 2026
June 16, 2026	June 22, 2026
July 16, 2026	July 21, 2026
August 17, 2026	August 20, 2026
September 16, 2026	September 21, 2026
October 16, 2026	October 21, 2026
November 16, 2026	November 19, 2026
December 16, 2026	December 21, 2026
January 19, 2027	January 22, 2027
February 16, 2027	February 19, 2027

March 16, 2027	March 19, 2027
April 16, 2027	April 21, 2027
May 17, 2027	May 20, 2027
June 16, 2027 (final observation date)	June 22, 2027 (maturity date)

Investment Overview

Callable Contingent Income Buffered Securities

Principal at Risk Securities

Callable Contingent Income Buffered Securities due June 22, 2027 Payments on the Securities Based on the Worst Performing of the Utilities Select Sector SPDR® Fund, the Russell 2000® Index and the Nasdaq-100® Technology Sector Index℠ (the "securities") provide for the regular payment of interest and provide a minimum payment at maturity of only 20% of the stated principal amount. The securities will pay a contingent monthly coupon **but only if** the closing level of **each of the Utilities Select Sector SPDR® Fund, the Russell 2000® Index and the Nasdaq-100® Technology Sector Index℠** (which we refer to together as the "underlyings") is **at or above** 70% of its respective initial level, which we refer to as the respective coupon barrier level, on the related observation date. If the closing level of **any** underlying is less than the coupon barrier level for such underlying on any observation date, we will pay no coupon for the related monthly period. It is possible that the closing level of one or more underlyings will remain below the respective coupon barrier level(s) for extended periods of time or even throughout the entire term of the securities so that you will receive few or no contingent monthly coupons during the entire 2.5-year term of the securities. Even if an underlying were to be at or above the coupon barrier level for such underlying on some monthly observation dates, it may fluctuate below the coupon barrier level on others. In addition, even if one underlying were to be at or above the coupon barrier level for such underlying on all monthly observation dates, you will receive a contingent monthly coupon only with respect to the observation dates on which the other underlyings are also at or above their respective coupon barrier levels, if any. In addition, beginning on March 20, 2025, **we will redeem the securities** on any quarterly redemption date for a redemption payment equal to the sum of the stated principal amount *plus* any contingent monthly coupon otherwise due with respect to the related observation date, if and only if the output of a risk neutral valuation model on a business day, as selected by the calculation agent, that is no earlier than three business days before the observation date preceding such redemption date and no later than such observation date, based on the inputs indicated under "Call feature" on the cover page, indicates that redeeming on such date is economically rational for us as compared to not redeeming on such date. An early redemption of the securities will not automatically occur based on the performance of the underlyings. At maturity, if the securities have not been previously redeemed and if the final level of **each underlying** has appreciated, remained unchanged or declined by an amount less than or equal to the buffer amount of 20%, the payment at maturity will be the stated principal amount and the related contingent monthly coupon. If, however, the final level of **any** underlying has declined from its initial level by an amount greater than the buffer amount of 20%, investors will lose 1% for every 1% decline of the worst performing underlying beyond the specified buffer amount, subject to the minimum payment at maturity of 20% of the stated principal amount. **Accordingly, investors in the securities must be willing to accept the risk of losing up to 80% of the stated principal amount if any underlying declines by an amount greater than the buffer amount and also the risk of not receiving any monthly coupons during the entire 2.5-year term of the securities.**

Maturity:	Approximately 2.5 years, unless redeemed earlier based on the output of a risk neutral valuation model
Contingent monthly coupon:	If, on any observation date, the closing level of **each** underlying is **greater than or equal to** its respective coupon barrier level, we will pay a contingent monthly coupon at an annual rate of at least 9.05% (corresponding to approximately $7.542 per month per security) on the related contingent coupon payment date. The actual contingent monthly coupon rate will be determined on the pricing date. If, on any observation date, the closing level **of any underlying** is **less than** the coupon barrier level for such underlying, no contingent monthly coupon will be paid with respect to that observation date. **It is possible that one or more underlyings will remain below the respective coupon barrier level(s) for extended periods of time or even throughout the entire term of the securities so that you will receive few or no contingent monthly coupons.**
Early redemption:	Beginning on March 20, 2025, we will redeem the securities on any quarterly redemption date for an early redemption payment equal to the stated principal amount *plus* any contingent monthly coupon otherwise due with respect to the related observation date, if and only if the output of a risk neutral valuation model on a business day, as selected by the calculation agent, that is no earlier than three business days before the observation date preceding such redemption date and no later than such observation date, based on the inputs indicated under "Call feature" on the cover page, indicates that redeeming on such date is economically rational for us as compared to not redeeming on such date. An early redemption of the securities will not automatically occur based on the performance of the underlyings. In accordance

with the risk neutral valuation model determination noted herein, it is more likely that we will redeem the securities when it would otherwise be advantageous for you to continue to hold the securities. As such, we will be more likely to redeem the securities when the closing level of each underlying on the observation dates is at or above its respective coupon barrier level, which would otherwise result in an amount of interest payable on the securities that is greater than instruments of a comparable maturity and credit rating trading in the market. In other words, we will be more likely to redeem the securities at a time when the securities are paying an above-market coupon. If the securities are redeemed prior to maturity, you will receive no more contingent monthly coupon payments, may be forced to invest in a lower interest rate environment and may not be able to reinvest at comparable terms or returns.

On the other hand, we will be less likely to redeem the securities when the closing level of any underlying is below its respective coupon barrier level and/or when the final level of any underlying is expected to have declined from its respective initial level by an amount greater than the buffer amount, such that you will receive no contingent monthly coupons and/or that you will suffer a loss on your initial investment in the securities at maturity. Therefore, if we do not redeem the securities, it is more likely that you will receive few or no contingent monthly coupons and suffer a loss at maturity.

Payment at maturity: If the securities have not previously been redeemed, investors will receive on the maturity date a payment at maturity determined as follows:

- If the final level of **each** underlying is **greater than or equal to** 80% of its respective initial level, meaning that **no** underlying has decreased by an amount greater than the buffer amount of 20% from its respective initial level:

  the stated principal amount and the contingent monthly coupon with respect to the final observation date

- If the final level of **any** underlying is **less than** 80% of its respective initial level, meaning that **any** underlying has decreased by an amount greater than the buffer amount of 20% from its respective initial level:

  ($1,000 × performance factor of the worst performing underlying) + $200

  If the final level of **each** underlying is **greater than or equal to** its respective coupon barrier level, investors will receive the contingent monthly coupon with respect to the final observation date.

Under these circumstances, the payment at maturity will be less than the stated principal amount of $1,000. However, under no circumstances will the payment at maturity be less than $200 per security.

We are using this preliminary pricing supplement to solicit from you an offer to purchase the securities. You may revoke your offer to purchase the securities at any time prior to the time at which we accept such offer by notifying the relevant agent. We reserve the right to change the terms of, or reject any offer to purchase, the securities prior to their issuance. In the event of any material changes to the terms of the securities, we will notify you.

The original issue price of each security is $1,000. This price includes costs associated with issuing, selling, structuring and hedging the securities, which are borne by you, and, consequently, the estimated value of the securities on the pricing date will be less than $1,000. We estimate that the value of each security on the pricing date will be approximately $983.80, or within $25.00 of that estimate. Our estimate of the value of the securities as determined on the pricing date will be set forth in the final pricing supplement.

What goes into the estimated value on the pricing date?

In valuing the securities on the pricing date, we take into account that the securities comprise both a debt component and a performance-based component linked to the underlyings. The estimated value of the securities is determined using our own pricing and valuation models, market inputs and assumptions relating to the underlyings, instruments based on the underlyings, volatility and other factors including current and expected interest rates, as well as an interest rate related to our secondary market credit spread, which is the implied interest rate at which our conventional fixed rate debt trades in the secondary market.

What determines the economic terms of the securities?

In determining the economic terms of the securities, including the contingent monthly coupon rate, the coupon barrier levels and the buffer amount, we use an internal funding rate, which is likely to be lower than our secondary market credit spreads and therefore advantageous to us. If the issuing, selling, structuring and hedging costs borne by you were lower or if the internal funding rate were higher, one or more of the economic terms of the securities would be more favorable to you.

What is the relationship between the estimated value on the pricing date and the secondary market price of the securities?

The price at which MS & Co. purchases the securities in the secondary market, absent changes in market conditions, including those related to the underlyings, may vary from, and be lower than, the estimated value on the pricing date, because the secondary market price takes into account our secondary market credit spread as well as the bid-offer spread that MS & Co. would charge in a secondary market transaction of this type and other factors. However, because the costs associated with issuing, selling, structuring and hedging the securities are not fully deducted upon issuance, for a period of up to 6 months following the issue date, to the extent that MS & Co. may buy or sell the securities in the secondary market, absent changes in market conditions, including those related to the underlyings, and to our secondary market credit spreads, it would do so based on values higher than the estimated value. We expect that those higher values will also be reflected in your brokerage account statements.

MS & Co. may, but is not obligated to, make a market in the securities, and, if it once chooses to make a market, may cease doing so at any time.

Key Investment Rationale

The securities do not provide for the regular payment of interest and instead will pay a contingent monthly coupon **but only if** the closing level of **each** underlying is **at or above** 70% of its initial level, which we refer to as the respective coupon barrier level, on the related observation date. These securities are for investors who are willing to risk their principal and seek an opportunity to earn interest at a potentially above-market rate in exchange for the risk of receiving no monthly interest if any underlying closes below the coupon barrier level for such underlying on the observation dates, and the risk of an early redemption of the securities based on the output of a risk neutral valuation model. The following scenarios are for illustrative purposes only to demonstrate how the payment at maturity and contingent monthly coupon (if the securities have not previously been redeemed) are determined, and do not attempt to demonstrate every situation that may occur. Accordingly, the securities may or may not be redeemed based on the output of a risk neutral valuation model, the contingent monthly coupon may be payable with respect to none of, or some but not all of, the monthly periods, and investors may lose up to 80% of the stated principal amount of the securities. Investors will not participate in any appreciation in any underlying.

Scenario 1: The securities are redeemed prior to maturity.	This scenario assumes that the securities are redeemed prior to the maturity date on one of the quarterly redemption dates, starting on March 20, 2025, based on the output of a risk neutral valuation model, for the redemption payment equal to the stated principal amount *plus* any contingent monthly coupon with respect to the relevant observation date, as applicable. Prior to the early redemption, each underlying closes at or above its respective coupon barrier level on some or all of the monthly observation dates. In this scenario, investors receive the contingent monthly coupon with respect to each such observation date, but not for the monthly periods for which one or more underlyings close below the respective coupon barrier level on the related observation date. No further payments will be made on the securities once they have been redeemed.
Scenario 2: The securities are not redeemed prior to maturity, and investors receive principal back at maturity.	This scenario assumes that the securities are not redeemed on any of the quarterly redemption dates, and, as a result, investors hold the securities to maturity. During the term of the securities, each underlying closes at or above its respective coupon barrier level on some monthly observation dates, but one or more underlyings close below the respective coupon barrier level(s) for such underlying(s) on the others. Investors will receive the contingent monthly coupon for the monthly periods for which the closing level of each underlying is at or above its respective coupon barrier level on the related observation date, but not for the monthly periods for which one or more underlyings close below the respective coupon barrier level(s) on the related observation date. On the final observation date, no underlying has declined from its initial level by an amount greater than the buffer amount. At maturity, investors receive the stated principal amount and the contingent monthly coupon with respect to the final observation date.
Scenario 3: The securities are not redeemed prior to maturity, and investors suffer a loss of principal at maturity.	This scenario assumes that the securities are not redeemed on any of the quarterly redemption dates, and, as a result, investors hold the securities to maturity. During the term of the securities, one or more underlyings close below the respective coupon barrier level(s) on every monthly observation date. Since one or more underlyings close below the respective coupon barrier level(s) on every monthly observation date, investors do not receive any contingent monthly coupon. On the final observation date, one or more underlyings have declined from the respective initial level(s) by an amount greater than the buffer amount. At maturity, investors will lose 1% for every 1% decline of the worst performing underlying beyond the specified buffer amount, subject to the minimum payment at maturity of $200 per security. If the final level of each underlying is greater than or equal to its respective coupon barrier level, investors will receive the contingent monthly coupon with respect to the final observation date. Investors will lose some, and may lose up to 80%, of the stated principal amount of the securities in this scenario.

Underlyings Summary

Utilities Select Sector SPDR® Fund

The Utilities Select Sector SPDR® Fund is an exchange-traded fund managed by the Select Sector SPDR® Trust (the "Trust"), a registered investment company. The Trust consists of numerous separate investment portfolios, including the Utilities Select Sector SPDR® Fund. The Utilities Select Sector SPDR® Fund seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the Utilities Select Sector Index. It is possible that this fund may not fully replicate the performance of the Utilities Select Sector Index due to the temporary unavailability of certain securities in the secondary market or due to other extraordinary circumstances. Information provided to or filed with the Securities and Exchange Commission (the "Commission") by the Trust pursuant to the Securities Act of 1933 and the Investment Company Act of 1940 can be located by reference to Commission file numbers 333-57791 and 811-08837, respectively, through the Commission's website at www.sec.gov. In addition, information may be obtained from other publicly available sources. **Neither the issuer nor the agent makes any representation that any such publicly available information regarding the Utilities Select Sector SPDR® Fund is accurate or complete.**

Information as of market close on December 10, 2024:

Bloomberg Ticker Symbol:	XLU UP
Current Share Price:	$78.12
52 Weeks Ago:	$63.82
52 Week High (on 11/29/2024):	$82.93
52 Week Low (on 1/24/2024):	$59.95

This document relates only to the securities offered hereby and does not relate to the XLU Shares. We have derived all disclosures contained in this document regarding the Trust from the publicly available documents described above. In connection with the offering of the securities, neither we nor the agent has participated in the preparation of such documents or made any due diligence inquiry with respect to the Trust. Neither we nor the agent makes any representation that such publicly available documents or any other publicly available information regarding the Trust is accurate or complete. Furthermore, we cannot give any assurance that all events occurring prior to the date hereof (including events that would affect the accuracy or completeness of the publicly available documents described above) that would affect the trading price of the XLU Shares (and therefore the price of the XLU Shares at the time we price the securities) have been publicly disclosed. Subsequent disclosure of any such events or the disclosure of or failure to disclose material future events concerning the Trust could affect the value received with respect to the securities and therefore the value of the securities.

Neither we nor any of our affiliates makes any representation to you as to the performance of the XLU Shares.

We and/or our affiliates may presently or from time to time engage in business with the Trust. In the course of such business, we and/or our affiliates may acquire non-public information with respect to the Trust, and neither we nor any of our affiliates undertakes to disclose any such information to you. In addition, one or more of our affiliates may publish research reports with respect to the XLU Shares. The statements in the preceding two sentences are not intended to affect the rights of investors in the securities under the securities laws. As a prospective purchaser of the securities, you should undertake an independent investigation of the Trust as in your judgment is appropriate to make an informed decision with respect to an investment linked to the XLU Shares.

"Standard & Poor's®", "S&P®", "S&P 500®", "SPDR®", "Select Sector SPDR®" and "Select Sector SPDRs" are trademarks of Standard & Poor's Financial Services LLC ("S&P®"), an affiliate of S&P® Global Inc. The securities are not sponsored, endorsed, sold, or promoted by S&P®, S&P® Global Inc. or the Trust. S&P®, S&P® Global Inc. and the Trust make no representations or warranties to the owners of the securities or any member of the public regarding the advisability of investing in the securities. S&P®, S&P® Global Inc. and the Trust have no obligation or liability in connection with the operation, marketing, trading or sale of the securities.

Utilities Select Sector Index. The Utilities Select Sector Index, which is one of the Select Sector sub-indices of the S&P 500® Index, is intended to give investors an efficient, modified market capitalization-based way to track the movements of certain public companies that represent the utilities sector of the S&P 500® Index. The Utilities Select Sector Index includes component stocks in industries such as electric utilities; multi-utilities; independent power and renewable energy producers; water utilities; and gas utilities. For more information, see "S&P® Select Sector Indices—Utilities Select Sector Index" in the accompanying index supplement.

Russell 2000® Index

The Russell 2000® Index is an index calculated, published and disseminated by FTSE International Limited ("FTSE Russell"), and measures the capitalization-weighted price performance of 2,000 U.S. small-capitalization stocks listed on eligible U.S. exchanges. The Russell 2000® Index is designed to track the performance of the small-capitalization segment of the U.S. equity market. The companies included in the Russell 2000® Index are the middle 2,000 (i.e., those ranked 1,001 through 3,000) of the companies that form the Russell 3000E™ Index. The Russell 2000® Index represents approximately 7% of the U.S. equity market.

Information as of market close on December 10, 2024:

Bloomberg Ticker Symbol:	RTY
Current Index Value:	2,382.774
52 Weeks Ago:	1,883.681
52 Week High (on 11/25/2024):	2,442.031
52 Week Low (on 12/12/2023):	1,881.269

For additional information about the Russell 2000® Index, see the information set forth under "Russell Indices—Russell 2000® Index" in the accompanying index supplement. Furthermore, for additional historical information, see "Russell 2000® Index Historical Performance" below.

Nasdaq-100® Technology Sector Index℠

The Nasdaq-100® Technology Sector Index℠, which is calculated, maintained and published by The Nasdaq OMX Group, Inc. ("Nasdaq OMX"), is an equal-weighted index intended to measure the performance of Nasdaq-listed companies that are classified as technology according to the Industry Classification Benchmark.

Information as of market close on December 10, 2024:

Bloomberg Ticker Symbol:	NDXT
Current Index Value:	10,765.07
52 Weeks Ago:	9,095.48
52 Week High (on 7/10/2024):	11,224.97
52 Week Low (on 12/11/2023):	9,095.48

For additional information about the Nasdaq-100® Technology Sector Index℠, see "Annex A — Nasdaq-100® Technology Sector Index℠" below. Furthermore, for additional historical information, see "Nasdaq-100® Technology Sector Index℠ Historical Performance" below.

Hypothetical Examples

The following hypothetical examples illustrate how to determine whether a contingent monthly coupon is paid with respect to an observation date and how to calculate the payment at maturity. The following examples are for illustrative purposes only. Whether you receive a contingent monthly coupon will be determined by reference to the closing level of each underlying on each monthly observation date, and the amount you will receive at maturity will be determined by reference to the final level of each underlying on the final observation date. Any early redemption of the securities will be based on the output of a risk neutral valuation model. The actual initial level and coupon barrier level for each underlying will be determined on the pricing date. All payments on the securities are subject to our credit risk. The below examples are based on the following terms:

Hypothetical Contingent Monthly Coupon:	If, on any observation date, the closing level of **each underlying** is **greater than or equal to** its respective coupon barrier level, we will pay a contingent monthly coupon at an annual rate of 9.05% (corresponding to approximately $7.542 per month per security*) on the related contingent coupon payment date. The actual contingent monthly coupon rate will be determined on the pricing date. If, on any observation date, the closing level **of any underlying** is **less than** the coupon barrier level for such underlying, no contingent monthly coupon will be paid with respect to that observation date. **It is possible that one or more underlyings will remain below the respective coupon barrier level(s) for extended periods of time or even throughout the entire term of the securities so that you will receive few or no contingent monthly coupons.**
Call Feature:	Beginning on March 20, 2025, an early redemption, in whole but not in part, will occur on a redemption date if and only if the output of a risk neutral valuation model on a business day, as selected by the calculation agent, that is no earlier than three business days before the observation date preceding such redemption date and no later than such observation date (the “determination date”), taking as input: (i) prevailing reference market levels, volatilities and correlations, as applicable and in each case as of the determination date and (ii) Morgan Stanley’s credit spreads as of the pricing date, indicates that redeeming on such date is economically rational for us as compared to not redeeming on such date. If we call the securities, we will give you notice no later than the observation date preceding the redemption date specified in the notice. Any redemption payment will be equal to the stated principal amount *plus* any contingent monthly coupon otherwise due with respect to the related observation date. If the securities are redeemed prior to maturity, you will receive no more contingent monthly coupon payments, may be forced to invest in a lower interest rate environment and may not be able to reinvest at comparable terms or returns.
Payment at Maturity (if the securities have not been redeemed early):	If the final level of **each underlying** is **greater than or equal to** 80% of its respective initial level, meaning that **no** underlying has decreased by an amount greater than the buffer amount of 20% from its respective initial level: the stated principal amount and the contingent monthly coupon with respect to the final observation date If the final level of **any underlying** is **less than** 80% of its respective initial level, meaning that **any underlying** has decreased by an amount greater than the buffer amount of 20% from its respective initial level: ($1,000 × performance factor of the worst performing underlying) + $200 If the final level of **each** underlying is **greater than or equal to** its respective coupon barrier level, investors will receive the contingent monthly coupon with respect to the final observation date. Under these circumstances, the payment at maturity will be less than the stated principal amount of $1,000. However, under no circumstances will the payment at maturity be less than $200 per security.
Stated Principal Amount:	$1,000
Hypothetical Initial Level:	With respect to the XLU Shares: $60.00 With respect to the RTY Index: 2,000 With respect to the NDXT Index: 15,000
Hypothetical Coupon Barrier Level:	With respect to the XLU Shares: $42.00, which is 70% of the hypothetical initial level for such underlying With respect to the RTY Index: 1,400, which is 70% of the hypothetical initial level for such underlying With respect to the NDXT Index: 10,500, which is 70% of the hypothetical initial level for such underlying
Buffer Amount:	20% As a result of the buffer amount of 20%, the price at or above which each of the underlyings must close on the final observation date so that investors do not suffer a loss on their initial investment in the securities is as follows: With respect to the XLU Shares: $48.00, which is 80% of the hypothetical initial level for such underlying

With respect to the RTY Index: 1,600, which is 80% of the hypothetical initial level for such underlying
With respect to the NDXT Index: 12,000, which is 80% of the hypothetical initial level for such underlying

* The actual contingent monthly coupon will be an amount determined by the calculation agent based on the actual contingent monthly coupon rate and the number of days in the applicable payment period, calculated on a 30/360 day-count basis. The hypothetical contingent monthly coupon of $7.542 is used in these examples for ease of analysis.

How to determine whether a contingent monthly coupon is payable with respect to an observation date (if the securities have not been previously redeemed):

	Closing Level			Contingent Monthly Coupon
	XLU Shares	RTY Index	NDXT Index	
Hypothetical Observation Date 1	$52.00 (**at or above** coupon barrier level)	2,200 (**at or above** coupon barrier level)	14,200 (**at or above** coupon barrier level)	$7.542
Hypothetical Observation Date 2	$54.00 (**at or above** coupon barrier level)	1,920 (**at or above** coupon barrier level)	8,800 (**below** coupon barrier level)	$0
Hypothetical Observation Date 3	$25.00 (**below** coupon barrier level)	1,300 (**below** coupon barrier level)	13,800 (**at or above** coupon barrier level)	$0
Hypothetical Observation Date 4	$30.00 (**below** coupon barrier level)	1,100 (**below** coupon barrier level)	7,500 (**below** coupon barrier level)	$0

On hypothetical observation date 1, the XLU Shares, the RTY Index and the NDXT Index all close at or above their respective coupon barrier levels. Therefore, a contingent monthly coupon of $7.542 is paid on the relevant coupon payment date.

On each of the hypothetical observation dates 2 and 3, at least one underlying closes at or above its coupon barrier level but one or both of the other underlyings close below their respective coupon barrier level(s). Therefore, no contingent monthly coupon is paid on the relevant coupon payment date.

On hypothetical observation date 4, each underlying closes below its respective coupon barrier level and accordingly no contingent monthly coupon is paid on the relevant coupon payment date.

How to calculate the payment at maturity (if the securities have not been redeemed early):

	Final Level			Payment at Maturity
	XLU Shares	RTY Index	NDXT Index	
Example 1:	$60.00 (**at or above** the coupon barrier level, has not decreased by an amount greater than the buffer amount)	2,300 (**at or above** the coupon barrier level, has not decreased by an amount greater than the buffer amount)	14,200 (**at or above** the coupon barrier level, has not decreased by an amount greater than the buffer amount)	$1,007.542 (the stated principal amount *plus* the contingent monthly coupon with respect to the final observation date)
Example 2:	$53.00 (**at or above** the coupon barrier level, has not decreased by an amount greater than the buffer amount)	1,900 (**at or above** the coupon barrier level, has not decreased by an amount greater than the buffer amount)	6,000 (**below** the coupon barrier level, has decreased by an amount greater than the buffer amount)	[($1,000 × performance factor of the worst performing underlying) + $200] = [$1,000 × (6,000 / 15,000) + $200] = $600.00
Example 3:	$18.00 (**below** the coupon barrier level, has decreased by an amount greater than the buffer amount)	1,000 (**below** the coupon barrier level, has decreased by an amount greater than the buffer amount)	13,800 (**at or above** the coupon barrier level, has not decreased by an amount greater than the buffer amount)	[($1,000 × performance factor of the worst performing underlying) + $200] = [$1,000 × ($18.00 / $60.00) + $200] = $500.00
Example 4:	$45.00 (**above** the coupon barrier level, has	1,560 (**above** the coupon barrier level, has	11,700 (**above** the coupon barrier level, has decreased	[($1,000 × performance factor of the worst performing

	decreased by an amount greater than the buffer amount)	decreased by an amount greater than the buffer amount)	by an amount greater than the buffer amount)	underlying) + $200] + the contingent monthly coupon with respect to the final observation date = [$1,000 × ($45.00 / $60.00) + $200] + 7.542 = $957.542
Example 5:	$18.00 (**below** the coupon barrier level, has decreased by an amount greater than the buffer amount)	1,000 (**below** the coupon barrier level, has decreased by an amount greater than the buffer amount)	3,000 (**below** the coupon barrier level, has decreased by an amount greater than the buffer amount)	[($1,000 × performance factor of the worst performing underlying) + $200] = [$1,000 × (3,000 / 15,000) + $200] = $400.00

In example 1, the final levels of the XLU Shares, the RTY Index and the NDXT Index are at or above their coupon barrier levels and no underlying has declined from its initial level by an amount greater than the buffer amount. Therefore, investors receive at maturity the stated principal amount of the securities and the contingent monthly coupon with respect to the final observation date. However, investors do not participate in the appreciation of any underlying.

In examples 2 and 3, the final level(s) of one or two of the underlyings are at or above their respective coupon barrier level(s) and have not declined from the respective initial level(s) by an amount greater than the buffer amount, but the final level(s) of one or two underlyings are below the respective coupon barrier level(s) and have declined from the respective initial level(s) by an amount greater than the buffer amount. Therefore, investors are exposed to the downside performance of the worst performing underlying at maturity and receive at maturity an amount equal to the sum of (i) the stated principal amount *multiplied by* the performance factor of the worst performing underlying and (ii) $200.

In example 4, the final level of each underlying has declined from its initial level by an amount greater than the buffer amount. As a result, investors receive at maturity an amount equal to the sum of (i) the stated principal amount *multiplied by* the performance factor of the worst performing underlying and (ii) $200. The XLU Shares have declined 25% from its initial level to its final level, the RTY Index has declined 22% from its initial level to its final level and the NDXT Index has declined 22% from its initial level to its final level. Therefore, the payment at maturity equals the sum of (i) the stated principal amount *multiplied by* the performance factor of the XLU Shares, which is the worst performing underlying in this example, and (ii) $200. However, because the final level of each underlying is greater than or equal to its respective coupon barrier level, investors receive the contingent monthly coupon with respect to the final observation date.

In example 5, the final level of each underlying has declined from its initial level by an amount greater than the buffer amount, and each underlying closes below its respective coupon barrier level. As a result, investors receive at maturity an amount equal to the sum of (i) the stated principal amount multiplied by the performance factor of the worst performing underlying and (ii) $200. The XLU Shares have declined 70% from its initial level to its final level, the RTY Index has declined 50% from its initial level to its final level and the NDXT Index has declined 80% from its initial level to its final level. Therefore, the payment at maturity equals the sum of (i) the stated principal amount *multiplied by* the performance factor of the NDXT Index, which is the worst performing underlying in this example, and (ii) $200. Investors do not receive the contingent monthly coupon for the final observation date.

If the securities have not been redeemed prior to maturity and the final level of ANY underlying has declined from its initial level by an amount greater than the buffer amount, you will be exposed to the downside performance of the worst performing underlying at maturity, and you will lose some, and up to 80%, of your initial investment in the securities.

Risk Factors

This section describes the material risks relating to the securities. For further discussion of these and other risks, you should read the section entitled "Risk Factors" in the accompanying prospectus supplement, index supplement and prospectus. We also urge you to consult with your investment, legal, tax, accounting and other advisers in connection with your investment in the securities.

Risks Relating to an Investment in the Securities

- **The securities provide a minimum payment at maturity of only 20% of your principal.** The terms of the securities differ from those of ordinary debt securities in that they do not guarantee the full repayment of principal, and provide a minimum payment at maturity of only 20% of the stated principal amount of the securities. If the securities have not been redeemed prior to maturity and the final level of **any** underlying has declined from its initial level by an amount greater than the buffer amount of 20%, you will be exposed to the decline in the value of the worst performing underlying and will receive for each security that you hold a payment at maturity that is less than the stated principal amount of each security by an amount proportionate to the decline in the value of the worst performing underlying, plus $200 per security. **You could lose up to 80% of your investment.**

- **The securities do not provide for regular interest payments.** The terms of the securities differ from those of ordinary debt securities in that they do not provide for the regular payment of interest. The securities will pay a contingent monthly coupon only if the closing level of each underlying is at or above 70% of its respective initial level, which we refer to as the respective coupon barrier level, on the relevant observation date. If, on the other hand, the closing level of any underlying is lower than the coupon barrier level for such underlying on the relevant observation date for any interest period, we will pay no coupon on the applicable coupon payment date. It is possible that the closing level of one or more underlyings will remain below the respective coupon barrier level(s) for extended periods of time or even throughout the entire term of the securities. If you do not earn sufficient contingent monthly coupons over the term of the securities, the overall return on the securities may be less than the amount that would be paid on a conventional debt security of ours of comparable maturity.

- **The securities have early redemption risk.** The term of the securities, and thus your opportunity to earn a potentially above-market coupon if the closing level of each underlying is greater than or equal to the coupon barrier level for such underlying on monthly observation dates, will be limited if we redeem the securities based on the output of a risk neutral valuation model on any quarterly redemption date, beginning March 20, 2025. The term of your investment in the securities may be limited to as short as three months. In accordance with the risk neutral valuation model determination noted herein, it is more likely that we will redeem the securities when it would be advantageous for you to continue to hold the securities. As such, we will be more likely to redeem the securities when the closing level of each underlying on the observation dates is at or above the coupon barrier level for such underlying, which would otherwise result in an amount of interest payable on the securities that is greater than instruments of a comparable maturity and credit rating trading in the market. In other words, we will be more likely to redeem the securities at a time when the securities are paying an above-market coupon. If the securities are redeemed prior to maturity, you will receive no more contingent monthly coupon payments, may be forced to invest in a lower interest rate environment and may not be able to reinvest at comparable terms or returns.

  On the other hand, we will be less likely to redeem the securities when the closing level of any underlying is below the respective coupon barrier level and/or when the final level for any underlying is expected to have declined from its respective initial level by an amount greater than the buffer amount, such that you will receive no contingent monthly coupons and/or that you will suffer a loss on your initial investment in the securities at maturity. Therefore, if we do not redeem the securities, it is more likely that you will receive few or no contingent monthly coupons and suffer a loss at maturity.

- **The contingent monthly coupon, if any, is based only on the value of each underlying on the related monthly observation date.** Whether the contingent monthly coupon will be paid on any coupon payment date will be determined at the end of the relevant interest period, based on the closing level of each underlying on the relevant monthly observation date. As a result, you will not know whether you will receive the contingent monthly coupon on any coupon payment date until near the end of the relevant monthly period. Moreover, because the contingent monthly coupon is based solely on the value of each underlying on monthly observation dates, if the closing level of any underlying on any observation date is

below the coupon barrier level for such underlying, you will receive no coupon for the related interest period, even if the level of such underlying was at or above its respective coupon barrier level on other days during that interest period and even if the closing levels of the other underlyings were at or above their respective coupon barrier levels.

- **Investors will not participate in any appreciation in any underlying.** Investors will not participate in any appreciation in any underlying from the initial level for such underlying, and the return on the securities will be limited to the contingent monthly coupons, if any, that are paid with respect to each observation date on which the closing level of each underlying is greater than or equal to its respective coupon barrier level until the securities are redeemed or reach maturity.

- **The market price will be influenced by many unpredictable factors.** Several factors, many of which are beyond our control, will influence the value of the securities in the secondary market and the price at which MS & Co. may be willing to purchase or sell the securities in the secondary market. We expect that generally the level of interest rates available in the market and the value of each underlying on any day, including in relation to its respective coupon barrier level, will affect the value of the securities more than any other factors. Other factors that may influence the value of the securities include:

    - the volatility (frequency and magnitude of changes in value) of each underlying and of the stocks composing the share underlying index, the RTY Index and the NDXT Index,
    - whether the closing level of any underlying has been below its respective coupon barrier level on any observation date,
    - geopolitical conditions and economic, financial, political, regulatory or judicial events that affect the component stocks of the underlyings or securities markets generally and which may affect the value of each underlying,
    - dividend rates on the securities underlying the share underlying index, the RTY Index and the NDXT Index,
    - the time remaining until the securities mature,
    - interest and yield rates in the market,
    - the availability of comparable instruments,
    - the composition of the underlyings and changes in the constituent stocks of the share underlying index, the RTY Index and the NDXT Index, and
    - the occurrence of certain events affecting the XLU Shares that may or may not require an adjustment to the adjustment factor, and
    - any actual or anticipated changes in our credit ratings or credit spreads.

  Some or all of these factors will influence the price that you will receive if you sell your securities prior to maturity. In particular, if any underlying has closed near or below its coupon barrier level, the market value of the securities is expected to decrease substantially and you may have to sell your securities at a substantial discount from the stated principal amount of $1,000 per security.

  You cannot predict the future performance of any underlying based on its historical performance. The value of any underlying may decrease and be below the coupon barrier level for such underlying on each observation date so that you will receive no return on your investment, and one or all of the underlyings may decline from the respective initial level(s) by an amount greater than the buffer amount on the final observation date so that you lose some, or up to 80%, of your initial investment in the securities. There can be no assurance that the closing level of each underlying will be at or above the respective coupon barrier level on any observation date so that you will receive a coupon payment on the securities for the applicable interest period or that they will not have declined from their respective initial levels by an amount greater than the buffer amount as of the final observation date so that you do not suffer a loss on your initial investment in the securities. See “Utilities Select Sector SPDR® Fund Historical Performance,” “Russell 2000® Index Historical Performance” and “Nasdaq-100® Technology Sector Index℠ Historical Performance” below.

- **The securities are subject to our credit risk, and any actual or anticipated changes to our credit ratings or credit spreads may adversely affect the market value of the securities.** You are dependent on our ability to pay all amounts due on the securities at maturity or on any coupon payment date, and therefore you are subject to our credit risk. The securities are not guaranteed by any other entity. If we default on our obligations under the securities, your investment would be at risk and you could lose some or all of your investment. As a result, the market value of the securities prior to

maturity will be affected by changes in the market's view of our creditworthiness. Any actual or anticipated decline in our credit ratings or increase in the credit spreads charged by the market for taking our credit risk is likely to adversely affect the market value of the securities.

- **As a finance subsidiary, MSFL has no independent operations and will have no independent assets.** As a finance subsidiary, MSFL has no independent operations beyond the issuance and administration of its securities and will have no independent assets available for distributions to holders of MSFL securities if they make claims in respect of such securities in a bankruptcy, resolution or similar proceeding. Accordingly, any recoveries by such holders will be limited to those available under the related guarantee by Morgan Stanley and that guarantee will rank *pari passu* with all other unsecured, unsubordinated obligations of Morgan Stanley. Holders will have recourse only to a single claim against Morgan Stanley and its assets under the guarantee. Holders of securities issued by MSFL should accordingly assume that in any such proceedings they would not have any priority over and should be treated *pari passu* with the claims of other unsecured, unsubordinated creditors of Morgan Stanley, including holders of Morgan Stanley-issued securities.

- **Investing in the securities is not equivalent to investing in the underlyings or the stocks composing the share underlying index, the RTY Index or the NDXT Index.** Investing in the securities is not equivalent to investing in any of the underlyings or the component stocks of the share underlying index, the RTY Index or the NDXT Index. Investors in the securities will not participate in any positive performance of any underlying, and will not have voting rights or rights to receive dividends or other distributions or any other rights with respect to stocks that constitute the share underlying index, the RTY Index, or the NDXT Index.

- **The securities will not be listed on any securities exchange and secondary trading may be limited. Accordingly, you should be willing to hold your securities for the entire 2.5-year term of the securities**. The securities will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the securities. MS & Co. may, but is not obligated to, make a market in the securities and, if it once chooses to make a market, may cease doing so at any time. When it does make a market, it will generally do so for transactions of routine secondary market size at prices based on its estimate of the current value of the securities, taking into account its bid/offer spread, our credit spreads, market volatility, the notional size of the proposed sale, the cost of unwinding any related hedging positions, the time remaining to maturity and the likelihood that it will be able to resell the securities. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the securities easily. Since other broker-dealers may not participate significantly in the secondary market for the securities, the price at which you may be able to trade your securities is likely to depend on the price, if any, at which MS & Co. is willing to transact. If, at any time, MS & Co. were to cease making a market in the securities, it is likely that there would be no secondary market for the securities. Accordingly, you should be willing to hold your securities to maturity.

- **The rate we are willing to pay for securities of this type, maturity and issuance size is likely to be lower than the rate implied by our secondary market credit spreads and advantageous to us. Both the lower rate and the inclusion of costs associated with issuing, selling, structuring and hedging the securities in the original issue price reduce the economic terms of the securities, cause the estimated value of the securities to be less than the original issue price and will adversely affect secondary market prices.** Assuming no change in market conditions or any other relevant factors, the prices, if any, at which dealers, including MS & Co., may be willing to purchase the securities in secondary market transactions will likely be significantly lower than the original issue price, because secondary market prices will exclude the issuing, selling, structuring and hedging-related costs that are included in the original issue price and borne by you and because the secondary market prices will reflect our secondary market credit spreads and the bid-offer spread that any dealer would charge in a secondary market transaction of this type as well as other factors.

  The inclusion of the costs of issuing, selling, structuring and hedging the securities in the original issue price and the lower rate we are willing to pay as issuer make the economic terms of the securities less favorable to you than they otherwise would be.

  However, because the costs associated with issuing, selling, structuring and hedging the securities are not fully deducted upon issuance, for a period of up to 6 months following the issue date, to the extent that MS & Co. may buy or sell the securities in the secondary market, absent changes in market conditions, including those related to the underlyings, and to our secondary market credit spreads, it would do so based on values higher than the estimated value, and we expect that those higher values will also be reflected in your brokerage account statements.

- **The estimated value of the securities is determined by reference to our pricing and valuation models, which may differ from those of other dealers and is not a maximum or minimum secondary market price.** These pricing and valuation models are proprietary and rely in part on subjective views of certain market inputs and certain assumptions about future events, which may prove to be incorrect. As a result, because there is no market-standard way to value these types of securities, our models may yield a higher estimated value of the securities than those generated by others, including other dealers in the market, if they attempted to value the securities. In addition, the estimated value on the pricing date does not represent a minimum or maximum price at which dealers, including MS & Co., would be willing to purchase your securities in the secondary market (if any exists) at any time. The value of your securities at any time after the date of this document will vary based on many factors that cannot be predicted with accuracy, including our creditworthiness and changes in market conditions. See also "The market price will be influenced by many unpredictable factors" above.

- **Hedging and trading activity by our affiliates could potentially affect the value of the securities.** One or more of our affiliates and/or third-party dealers expect to carry out hedging activities related to the securities (and to other instruments linked to the underlyings and the share underlying index), including trading in the XLU Shares, the stocks that constitute the share underlying index, the RTY Index or the NDXT Index as well as in other instruments related to the underlyings. As a result, these entities may be unwinding or adjusting hedge positions during the term of the securities, and the hedging strategy may involve greater and more frequent dynamic adjustments to the hedge as the final observation date approaches. Some of our affiliates also trade the underlyings and other financial instruments related to the underlyings and the share underlying index on a regular basis as part of their general broker-dealer and other businesses. Any of these hedging or trading activities on or prior to the pricing date could increase the initial level of any underlying, and, therefore, could increase (i) the coupon barrier level for such underlying, which, if the securities have not been redeemed, is the value at or above which such underlying must close on the observation dates in order for you to earn a contingent monthly coupon (depending also on the performance of the other underlyings), and (ii) the level at or above which such underlying must close on the final observation date so that you are not exposed to the negative performance of the worst performing underlying at maturity (depending also on the performance of the other underlyings). Additionally, such hedging or trading activities during the term of the securities could affect the value of an underlying on the observation dates, and, accordingly, whether we pay a contingent monthly coupon on the securities and the amount of cash you receive at maturity (depending also on the performance of the other underlyings).

- **The calculation agent, which is a subsidiary of Morgan Stanley and an affiliate of MSFL, will make determinations with respect to the securities.** As calculation agent, MS & Co. will determine the initial level and coupon barrier level for each underlying, the payment at maturity, whether you receive a contingent monthly coupon on each coupon payment date and whether to make any adjustments to the adjustment factor. Moreover, certain determinations made by MS & Co., in its capacity as calculation agent, may require it to exercise discretion and make subjective judgments, such as with respect to the occurrence or non-occurrence of market disruption events and the selection of a successor index or calculation of the closing price or index closing value, as applicable, of any underlying in the event of a market disruption event or discontinuance of the share underlying index, the RTY Index or the NDXT Index. These potentially subjective determinations may affect the payout to you upon an early redemption or at maturity. For further information regarding these types of determinations, see "Additional Terms of the Securities—Additional Terms—Calculation agent," "—Market disruption event," "—Postponement of observation dates," "—Discontinuance of the XLU Shares and/or the share underlying index; alteration of method of calculation," "—Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation" and "—Alternate exchange calculation in case of an event of default" below. In addition, MS & Co. has determined the estimated value of the securities on the pricing date.

- **The U.S. federal income tax consequences of an investment in the securities are uncertain.** There is no direct legal authority as to the proper treatment of the securities for U.S. federal income tax purposes, and, therefore, significant aspects of the tax treatment of the securities are uncertain.

  Please read the discussion under "Additional Information—Tax considerations" in this document concerning the U.S. federal income tax consequences of an investment in the securities. We intend to treat a security for U.S. federal income tax purposes as a single financial contract that provides for a coupon that will be treated as gross income to you at the time received or accrued, in accordance with your regular method of tax accounting. Under this treatment, the ordinary income treatment of the coupon payments, in conjunction with the capital loss treatment of any loss recognized upon the sale, exchange or settlement of the securities, could result in adverse tax consequences to holders of the securities because the deductibility of capital losses is subject to limitations. We do not plan to request a ruling from the Internal Revenue Service

(the "IRS") regarding the tax treatment of the securities, and the IRS or a court may not agree with the tax treatment described herein. If the IRS were successful in asserting an alternative treatment for the securities, the timing and character of income or loss on the securities might differ significantly from the tax treatment described herein. For example, under one possible treatment, the IRS could seek to recharacterize the securities as debt instruments. In that event, U.S. Holders (as defined below) would be required to accrue into income original issue discount on the securities every year at a "comparable yield" determined at the time of issuance (as adjusted based on the difference, if any, between the actual and the projected amount of any contingent payments on the securities) and recognize all income and gain in respect of the securities as ordinary income. The risk that financial instruments providing for buffers, triggers or similar downside protection features, such as the securities, would be recharacterized as debt is greater than the risk of recharacterization for comparable financial instruments that do not have such features. Moreover, future legislation, Treasury regulations or IRS guidance could adversely affect the U.S. federal tax consequences of an investment in the securities, possibly retroactively.

Non-U.S. Holders (as defined below) should note that we currently intend to withhold on any coupon paid to Non-U.S. Holders generally at a rate of 30%, or at a reduced rate specified by an applicable income tax treaty under an "other income" or similar provision, and will not be required to pay any additional amounts with respect to amounts withheld.

Both U.S. and Non-U.S. Holders should consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the securities, including possible alternative treatments, as well as tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

Risks Relating to the Underlyings

- **You are exposed to the price risk of each underlying, with respect to both the contingent monthly coupons, if any, and the payment at maturity.** Your return on the securities is not linked to a basket consisting of all three underlyings. Rather, it will be contingent upon the independent performance of each underlying. Unlike an instrument with a return linked to a basket of underlying assets, in which risk is mitigated and diversified among all the components of the basket, you will be exposed to the risks related to each underlying. Poor performance by **any** underlying over the term of the securities may negatively affect your return and will not be offset or mitigated by any positive performance by the other underlyings. To receive any contingent monthly coupons, **each underlying** must close at or above its respective coupon barrier level on the applicable observation date. In addition, if **any** underlying has declined from its initial level by an amount greater than the buffer amount as of the final observation date, you will be exposed to the decline in the value of the worst performing underlying and will receive for each security that you hold a payment at maturity that is less than the stated principal amount by an amount proportionate to the decline in the value of the worst performing underlying, plus $200 per security. Accordingly, your investment is subject to the price risk of each underlying.

- **Because the securities are linked to the performance of the worst performing underlying, you are exposed to greater risks of receiving no contingent monthly coupons and sustaining a loss on your investment than if the securities were linked to just one underlying.** The risk that you will not receive any contingent monthly coupons, or that you will suffer a loss on your investment, is greater if you invest in the securities as opposed to substantially similar securities that are linked to the performance of just one underlying. With three underlyings, it is more likely that any underlying will close below its coupon barrier level on any observation date, or will decline from its initial level by an amount greater than the buffer amount as of the final observation date, than if the securities were linked to only one underlying. Therefore, it is more likely that you will not receive any contingent monthly coupons and that you will suffer a loss on your investment.

- **Investing in the securities exposes investors to risks associated with investments in securities with a concentration in the technology sector.** The stocks included in the NDXT Index are stocks of companies whose primary business is directly associated with the technology sector, including the following sub-sectors: computers and peripherals, software, diversified telecommunication services, communications equipment, semiconductors and semiconductor equipment, internet software and services, IT services, electronic equipment, instruments and components, wireless telecommunication services and office electronics. Because the value of the securities is linked to the performance of the NDXT Index, an investment in the securities exposes investors to risks associated with investments in securities with a concentration in the technology sector.

  The values of stocks of technology companies and companies that rely heavily on technology are particularly vulnerable to rapid changes in technology product cycles, rapid product obsolescence, government regulation and competition, both

domestically and internationally, including competition from foreign competitors with lower production costs. Technology companies and companies that rely heavily on technology, especially those of smaller, less-seasoned companies, tend to be more volatile than the overall market. Additionally, companies in the technology sector may face dramatic and often unpredictable changes in growth rates and competition for the services of qualified personnel. All of these factors could have an effect on the price of the NDXT Index and, therefore, on the value of the securities.

- **The antidilution adjustments the calculation agent is required to make do not cover every event that could affect the XLU Shares.** MS & Co., as calculation agent, will adjust the adjustment factor for certain events affecting the XLU Shares. However, the calculation agent will not make an adjustment for every event that could affect the XLU Shares. If an event occurs that does not require the calculation agent to adjust the adjustment factor, the market price of the securities may be materially and adversely affected.

- **Adjustments to the XLU Shares or the share underlying index could adversely affect the value of the securities.** The investment adviser to the Utilities Select Sector SPDR® Fund, SSGA Funds Management, Inc. (the "Investment Adviser"), seeks investment results that correspond generally to the price and yield performance, before fees and expenses, of the share underlying index. Pursuant to its investment strategy or otherwise, the Investment Advisor may add, delete or substitute the stocks composing the Utilities Select Sector SPDR® Fund. Any of these actions could adversely affect the price of the XLU Shares and, consequently, the value of the securities. MSCI Inc. ("MSCI") is responsible for calculating and maintaining the share underlying index. MSCI may add, delete or substitute the stocks constituting the share underlying index or make other methodological changes that could change the value of the share underlying index. MSCI may discontinue or suspend calculation or publication of the share underlying index at any time. In these circumstances, the calculation agent will have the sole discretion to substitute a successor index that is comparable to the discontinued share underlying index and is permitted to consider indices that are calculated and published by the calculation agent or any of its affiliates. Any of these actions could adversely affect the value of the XLU Shares, and consequently, the value of the securities.

- **The performance and market price of the XLU Shares, particularly during periods of market volatility, may not correlate with the performance of the share underlying index, the performance of the component securities of the share underlying index or the net asset value per share of the XLU Shares.** The XLU Shares do not fully replicate the share underlying index and may hold securities that are different than those included in the share underlying index. In addition, the performance of the XLU Shares will reflect additional transaction costs and fees that are not included in the calculation of the share underlying index. All of these factors may lead to a lack of correlation between the performance of XLU Shares and the share underlying index. In addition, corporate actions (such as mergers and spin-offs) with respect to the equity securities underlying the XLU Shares may impact the variance between the performances of XLU Shares and the share underlying index. Finally, because the shares of the XLU Shares are traded on an exchange and are subject to market supply and investor demand, the market price of one share of the XLU Shares may differ from the net asset value per share of the XLU Shares.

  In particular, during periods of market volatility, or unusual trading activity, trading in the securities underlying the XLU Shares may be disrupted or limited, or such securities may be unavailable in the secondary market. Under these circumstances, the liquidity of the XLU Shares may be adversely affected, market participants may be unable to calculate accurately the net asset value per share of the XLU Shares, and their ability to create and redeem Shares of the XLU Shares may be disrupted. Under these circumstances, the market price of shares of the XLU Shares may vary substantially from the net asset value per share of the XLU Shares or the level of the share underlying index.

  For all of the foregoing reasons, the performance of the XLU Shares may not correlate with the performance of the share underlying index, the performance of the component securities of the share underlying index or the net asset value per share of the XLU Shares. Any of these events could materially and adversely affect the price of the shares of the XLU Shares and, therefore, the value of the securities. Additionally, if market volatility or these events were to occur on the final observation date, the calculation agent would maintain discretion to determine whether such market volatility or events have caused a market disruption event to occur, and such determination may affect the payment at maturity of the securities. If the calculation agent determines that no market disruption event has taken place, the payment at maturity would be based on the published closing price per share of the XLU Shares on the final observation date, even if the XLU Shares' shares are underperforming the share underlying index or the component securities of the share underlying index and/or trading below the net asset value per share of the XLU Shares.

- **Investing in the securities exposes investors to risks associated with investments in securities with a concentration in the utilities sector.** The stocks included in the Utilities Select Sector Index and that are generally tracked by the XLU Shares are stocks of companies whose primary business is directly associated with the utilities sector. Because the value of the securities is linked to the performance of the XLU Shares, an investment in the securities exposes investors to risks associated with investments in securities with a concentration in the utilities sector.

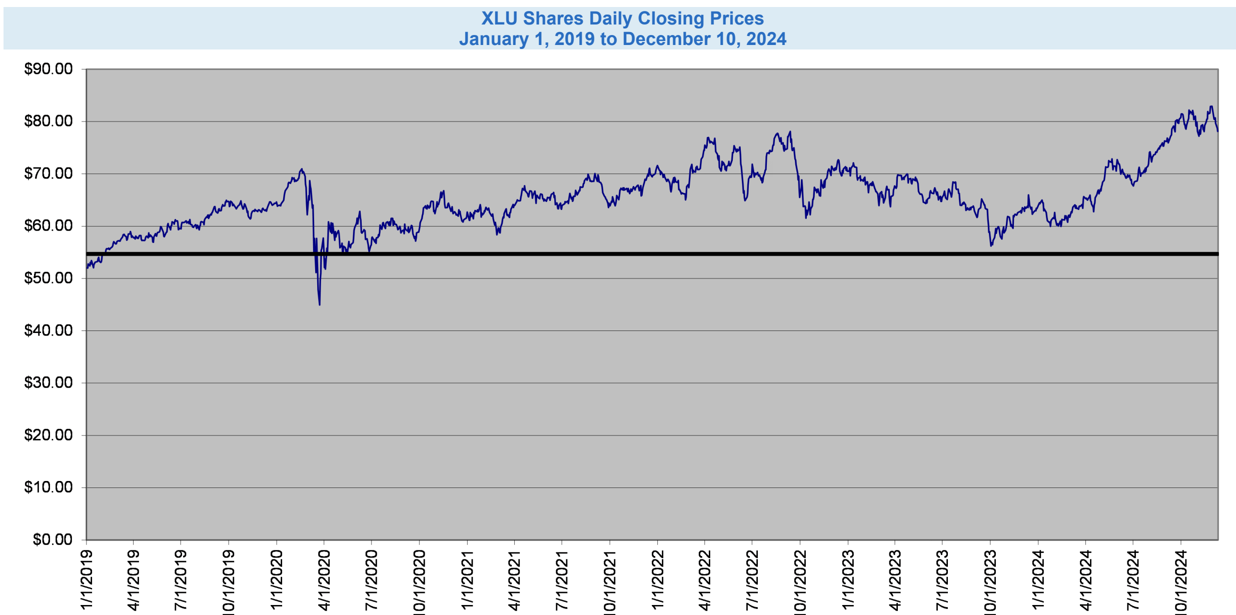
  Utility companies are affected by supply and demand, operating costs, government regulation, environmental factors, liabilities for environmental damage and general civil liabilities and rate caps or rate changes. Although rate changes of a regulated utility usually fluctuate in approximate correlation with financing costs, due to political and regulatory factors, rate changes ordinarily occur only following a delay after the changes in financing costs. This factor will tend to favorably affect a regulated utility company's earnings and dividends in times of decreasing costs, but, conversely, will tend to adversely affect earnings and dividends when costs are rising. The value of regulated utility equity securities may tend to have an inverse relationship to the movement of interest rates. Certain utility companies have experienced full or partial deregulation in recent years. These utility companies are frequently more similar to industrial companies in that they are subject to greater competition and have been permitted by regulators to diversify outside of their original geographic regions and their traditional lines of business. These opportunities may permit certain utility companies to earn more than their traditional regulated rates of return. Some companies, however, may be forced to defend their core business and may be less profitable. In addition, natural disasters, terrorist attacks, government intervention or other factors may render a utility company's equipment unusable or obsolete and negatively impact profitability. Among the risks that may affect utility companies are the following: risks of increases in fuel and other operating costs; the high cost of borrowing to finance capital construction during inflationary periods; restrictions on operations and increased costs and delays associated with compliance with environmental and nuclear safety regulations; and the difficulties involved in obtaining natural gas for resale or fuel for generating electricity at reasonable prices. Other risks include those related to the construction and operation of nuclear power plants, the effects of energy conservation and the effects of regulatory changes. The value of the securities may be subject to greater volatility and be more adversely affected by a single economic, political or regulatory occurrence affecting the utilities sector than a different investment linked to securities of a more broadly diversified group of issuers.

- **The securities are linked to the Russell 2000® Index and are subject to risks associated with small-capitalization companies**. As the Russell 2000® Index is one of the underlyings, and the Russell 2000® Index consists of stocks issued by companies with relatively small market capitalization, the securities are linked to the value of small-capitalization companies. These companies often have greater stock price volatility, lower trading volume and less liquidity than large-capitalization companies and therefore the Russell 2000® Index may be more volatile than indices that consist of stocks issued by large-capitalization companies. Stock prices of small-capitalization companies are also more vulnerable than those of large-capitalization companies to adverse business and economic developments, and the stocks of small-capitalization companies may be thinly traded. In addition, small capitalization companies are typically less well-established and less stable financially than large-capitalization companies and may depend on a small number of key personnel, making them more vulnerable to loss of personnel. Such companies tend to have smaller revenues, less diverse product lines, smaller shares of their product or service markets, fewer financial resources and less competitive strengths than large-capitalization companies and are more susceptible to adverse developments related to their products.

- **Adjustments to the RTY Index or the NDXT Index could adversely affect the value of the securities.** The publisher of each of the RTY Index and the NDXT Index may add, delete or substitute the component stocks of such underlying or make other methodological changes that could change the value of such underlying. Any of these actions could adversely affect the value of the securities. The publisher of each of the RTY Index and the NDXT Index may also discontinue or suspend calculation or publication of such underlying at any time. In these circumstances, MS & Co., as the calculation agent, will have the sole discretion to substitute a successor index that is comparable to the discontinued index. MS & Co. could have an economic interest that is different than that of investors in the securities insofar as, for example, MS & Co. is permitted to consider indices that are calculated and published by MS & Co. or any of its affiliates. If MS & Co. determines that there is no appropriate successor index on any observation date, the determination of whether a contingent monthly coupon will be payable on the securities on the applicable coupon payment date, and/or the amount payable at maturity, will be based on the value of such underlying, based on the closing prices of the stocks constituting such underlying at the time of such discontinuance, without rebalancing or substitution, computed by MS & Co. as calculation agent in accordance with the formula for calculating such underlying last in effect prior to such discontinuance, as compared to the respective coupon barrier level or initial level (taking the buffer amount into effect for the payment at maturity), as applicable (depending also on the performance of the other underlyings).

Utilities Select Sector SPDR® Fund Historical Performance

The following graph sets forth the daily closing prices of the XLU Shares for the period from January 1, 2019 through December 10, 2024. The related table sets forth the published high and low closing prices, as well as end-of-quarter closing prices, of the XLU Shares for each quarter in the same period. The closing price of the XLU Shares on December 10, 2024 was $78.12. We obtained the information in the graph and table below from Bloomberg Financial Markets, without independent verification. The XLU Shares have at times experienced periods of high volatility, and you should not take the historical closing prices of the XLU Shares as an indication of their future performance. No assurance can be given as to the level of the XLU Shares on any observation date, including the final observation date.



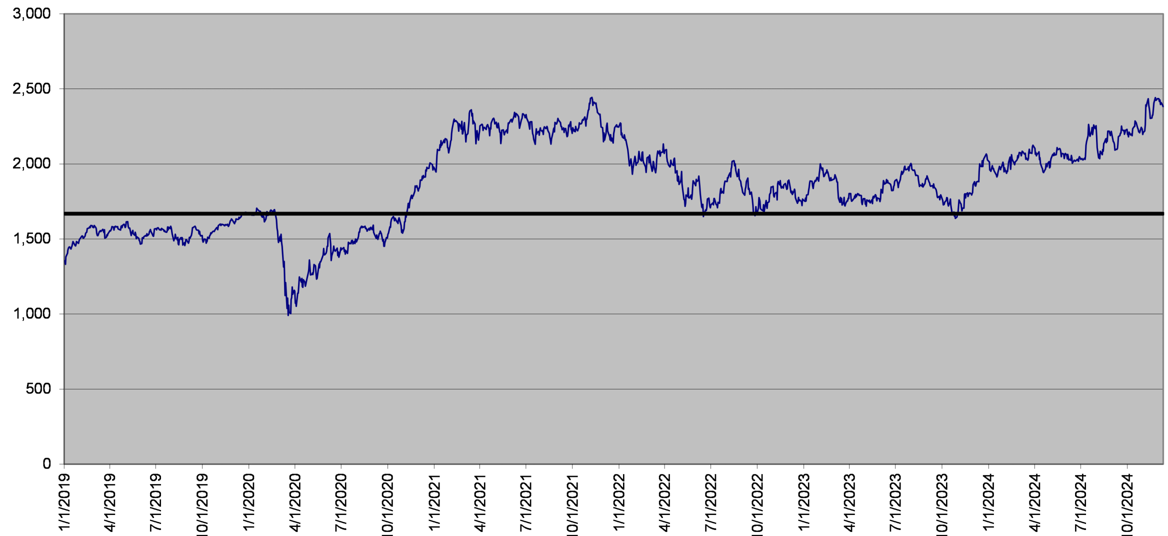
**The black solid line indicates the coupon barrier level, which is 70% of the initial level.*

Utilities Select Sector SPDR® Fund (CUSIP 81369Y886)	High ($)	Low ($)	Period End ($)
2019			
First Quarter	58.96	52.00	58.17
Second Quarter	61.24	56.94	59.63
Third Quarter	64.93	59.29	64.74
Fourth Quarter	64.82	61.37	64.62
2020			
First Quarter	70.98	44.93	55.41
Second Quarter	62.83	51.79	56.43
Third Quarter	61.49	56.70	59.38
Fourth Quarter	66.76	59.98	62.70
2021			
First Quarter	64.15	58.36	64.04
Second Quarter	67.72	63.23	63.23
Third Quarter	70.07	63.56	63.88
Fourth Quarter	71.58	63.88	71.58
2022			
First Quarter	74.54	65.03	74.46
Second Quarter	76.96	64.87	70.13
Third Quarter	78.12	65.51	65.51
Fourth Quarter	72.67	61.52	70.50
2023			
First Quarter	72.08	63.70	67.69
Second Quarter	69.97	64.34	65.44
Third Quarter	68.46	58.83	58.93
Fourth Quarter	65.96	56.19	63.33
2024			
First Quarter	65.65	59.95	65.65
Second Quarter	72.87	62.77	68.14
Third Quarter	80.78	67.67	80.78
Fourth Quarter (through December 10, 2024)	82.93	77.20	78.12

Russell 2000® Index Historical Performance

The following graph sets forth the daily closing values of the RTY Index for the period from January 1, 2019 through December 10, 2024. The related table sets forth the published high and low closing values, as well as end-of-quarter closing values, of the RTY Index for each quarter in the same period. The closing value of the RTY Index on December 10, 2024 was 2,382.774. We obtained the information in the graph and table below from Bloomberg Financial Markets, without independent verification. The RTY Index has at times experienced periods of high volatility, and you should not take the historical values of the RTY Index as an indication of its future performance. No assurance can be given as to the level of the RTY Index on any observation date, including the final observation date.

RTY Index Daily Closing Values
January 1, 2019 to December 10, 2024



**The black solid line indicates the coupon barrier level, which is 70% of the initial level.*

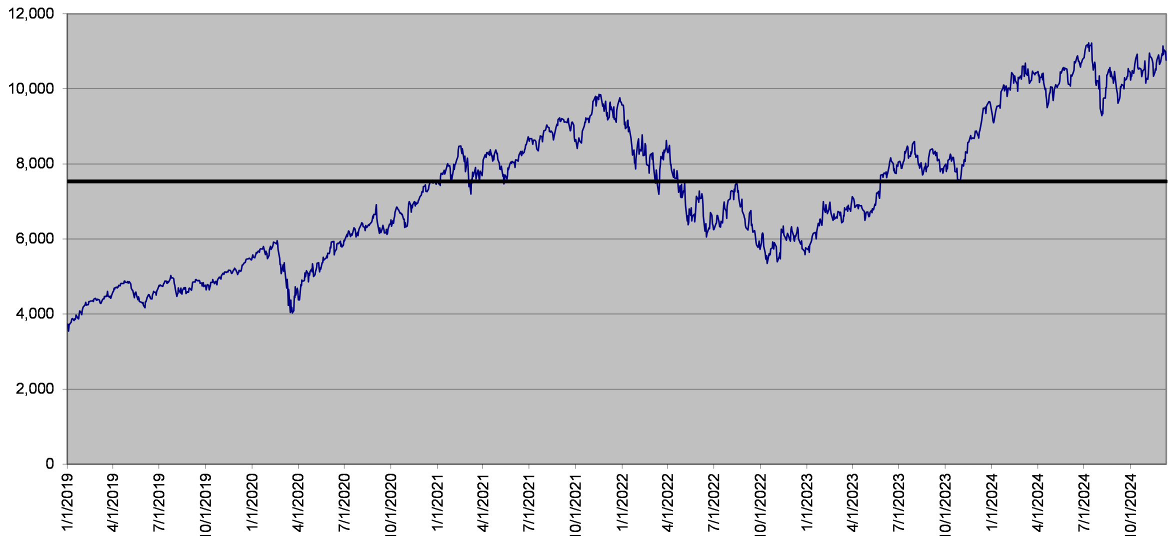
Russell 2000® Index	High	Low	Period End
2019			
First Quarter	1,590.062	1,330.831	1,539.739
Second Quarter	1,614.976	1,465.487	1,566.572
Third Quarter	1,585.599	1,456.039	1,523.373
Fourth Quarter	1,678.010	1,472.598	1,668.469
2020			
First Quarter	1,705.215	991.160	1,153.103
Second Quarter	1,536.895	1,052.053	1,441.365
Third Quarter	1,592.287	1,398.920	1,507.692
Fourth Quarter	2,007.104	1,531.202	1,974.855
2021			
First Quarter	2,360.168	1,945.914	2,220.519
Second Quarter	2,343.758	2,135.139	2,310.549
Third Quarter	2,329.359	2,130.680	2,204.372
Fourth Quarter	2,442.742	2,139.875	2,245.313
2022			
First Quarter	2,272.557	1,931.288	2,070.125
Second Quarter	2,095.440	1,649.836	1,707.990
Third Quarter	2,021.346	1,655.882	1,664.716
Fourth Quarter	1,892.839	1,682.403	1,761.246
2023			
First Quarter	2,001.221	1,720.291	1,802.484
Second Quarter	1,896.333	1,718.811	1,888.734
Third Quarter	2,003.177	1,761.609	1,785.102
Fourth Quarter	2,066.214	1,636.938	2,027.074
2024			
First Quarter	2,124.547	1,913.166	2,124.547
Second Quarter	2,109.459	1,942.958	2,047.691
Third Quarter	2,263.674	2,026.727	2,229.970
Fourth Quarter (through December 10, 2024)	2,442.031	2,180.146	2,382.774

“Russell 2000® Index” and “Russell 3000E™ Index” are trademarks of FTSE Russell. For more information, see “Russell Indices” in the accompanying index supplement.

Nasdaq-100® Technology Sector Index℠ Historical Performance

The following graph sets forth the daily closing values of the NDXT Index for the period from January 1, 2019 through December 10, 2024. The related table sets forth the published high and low closing values, as well as end-of-quarter closing values, of the NDXT Index for each quarter in the same period. The closing value of the NDXT Index on December 10, 2024 was 10,765.07. We obtained the information in the graph and table below from Bloomberg Financial Markets, without independent verification. The NDXT Index has at times experienced periods of high volatility, and you should not take the historical values of the NDXT Index as an indication of its future performance. No assurance can be given as to the level of the NDXT Index on any observation date, including the final observation date.

NDXT Index Daily Closing Values
January 1, 2019 to December 10, 2024



**The black solid line indicates the coupon barrier level, which is 70% of the initial level.*

Nasdaq-100® Technology Sector Index℠	High	Low	Period End
2019			
First Quarter	4,606.49	3,547.57	4,493.19
Second Quarter	4,880.48	4,170.02	4,660.72
Third Quarter	5,026.65	4,469.97	4,771.68
Fourth Quarter	5,492.35	4,642.53	5,457.73
2020			
First Quarter	5,954.62	4,030.77	4,606.71
Second Quarter	5,960.27	4,378.75	5,960.27
Third Quarter	6,915.12	5,948.33	6,401.73
Fourth Quarter	7,563.77	6,307.99	7,541.05
2021			
First Quarter	8,480.86	7,197.59	7,866.84
Second Quarter	8,721.40	7,468.71	8,681.21
Third Quarter	9,228.96	8,348.04	8,606.64
Fourth Quarter	9,855.42	8,413.37	9,575.39
2022			
First Quarter	9,565.42	7,193.06	8,320.06
Second Quarter	8,495.52	6,054.97	6,248.30
Third Quarter	7,489.94	5,723.83	5,723.83
Fourth Quarter	6,344.14	5,350.93	5,751.76
2023			
First Quarter	7,129.20	5,647.49	7,129.20
Second Quarter	8,164.64	6,494.21	8,048.90
Third Quarter	8,597.36	7,705.63	7,939.24
Fourth Quarter	9,661.82	7,528.82	9,587.92
2024			
First Quarter	10,686.65	9,098.91	10,420.33
Second Quarter	10,883.35	9,500.55	10,790.65
Third Quarter	11,224.97	9,288.31	10,443.26
Fourth Quarter (through December 10, 2024)	11,142.01	10,154.19	10,765.07

"Nasdaq®," "Nasdaq-100®" and "Nasdaq-100 Index®" are trademarks of Nasdaq, Inc. For more information, see "Annex A — Nasdaq-100® Technology Sector Index℠" below.

Additional Terms of the Securities

Please read this information in conjunction with the terms on the front cover of this preliminary pricing supplement.

Additional Terms:	
If the terms described herein are inconsistent with those described in the accompanying prospectus supplement, index supplement or prospectus, the terms described herein shall control.	
Day-count convention:	Interest will be computed on the basis of a 360-day year of twelve 30-day months.
Share underlying index:	The Utilities Select Sector Index
Share underlying index publisher:	S&P® Dow Jones Indices LLC, or any successor thereof
Underlying index publisher:	With respect to the RTY Index, FTSE Russell, or any successor thereof With respect to the NDXT Index, Nasdaq OMX Group, Inc., or any successor thereof
Denominations:	$1,000 per security and integral multiples thereof
Interest period:	The monthly period from and including the original issue date (in the case of the first interest period) or the previous scheduled coupon payment date, as applicable, to but excluding the following scheduled coupon payment date, with no adjustment for any postponement thereof.
Senior security or subordinated security:	Senior
Specified currency:	U.S. dollars
Record date:	One business day prior to the related scheduled coupon payment date; *provided* that any contingent monthly coupon payable at maturity shall be payable to the person to whom the payment at maturity shall be payable.
Postponement of observation dates:	The observation dates are subject to postponement due to non-index business days and non-trading days, as applicable, or certain market disruption events, as described in the following paragraph. If a market disruption event with respect to any underlying occurs on any scheduled observation date, or if any such observation date is not a trading day with respect to the XLU Shares or an index business day with respect to the RTY Index or the NDXT Index, the closing price or the index closing value, as applicable, solely for such underlying for such date will be determined on the immediately succeeding trading day or index business day, as applicable, on which no market disruption event will have occurred with respect to such affected underlying; *provided* that the closing level for any underlying will not be determined on a date later than the fifth scheduled trading day or index business day, as applicable, after the scheduled observation date and if such date is not a trading day or an index business day, as applicable, or if there is a market disruption event on such date, the calculation agent will (i) if the affected underlying is the XLU Shares, determine the closing price of the XLU Shares on such fifth trading day based on the mean, as determined by the calculation agent, of the bid prices for the XLU Shares for such date obtained from as many recognized dealers in such security, but not exceeding three, as will make such bid prices available to the calculation agent. Bids of MS & Co. or any of its affiliates may be included in the calculation of such mean, but only to the extent that any such bid is the highest of the bids obtained. If no bid prices are provided from any third-party dealers, the closing price will be determined by the calculation agent in its sole and absolute discretion (acting in good faith) taking into account any information that it deems relevant, and (ii) if the affected underlying is the RTY Index or the NDXT Index, determine the index closing value of such underlying on such date in accordance with the formula for calculating such underlying last in effect prior to the commencement of the market disruption event (or prior to the non-index business day), without rebalancing or substitution, using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, its good faith estimate of the closing price that would have prevailed but for such suspension, limitation or non-index business day) on such date of each security most recently constituting such underlying.
Postponement of coupon payment dates (including the maturity date and redemption dates):	If any scheduled coupon payment date is not a business day, that contingent monthly coupon, if any, shall be paid on the next succeeding business day; *provided* that the contingent monthly coupon, if any, with respect to the final observation date shall be paid on the maturity date; *provided further* that if, due to a market disruption event or otherwise, any observation date with respect to any underlying is postponed so that it falls less than two business days prior to the scheduled coupon payment date, maturity date or redemption date, as applicable, the coupon payment date, maturity date or redemption date, as applicable, shall be postponed to the second business day following the observation date as postponed, by which date the closing price or index closing value, as applicable, of each underlying has been determined. In any of these cases, no adjustment shall be made to any contingent monthly coupon payment, payment at maturity or redemption payment made on that postponed date.
Relevant exchange:	With respect to the share underlying index or its successor index, the RTY Index or the NDXT Index or

	their respective successor indices, the primary exchange(s) or market(s) of trading for (i) any security then included in such index and (ii) any futures or options contracts related to such index or to any security then included in such index.
Trading day:	With respect to the XLU Shares, a day, as determined by the calculation agent, on which trading is generally conducted on the New York Stock Exchange, The Nasdaq Stock Market LLC (the "Nasdaq"), the Chicago Mercantile Exchange and the Chicago Board of Options Exchange and in the over-the-counter market for equity securities in the United States.
Business day:	Any day, other than a Saturday or Sunday, that is neither a legal holiday nor a day on which banking institutions are authorized or required by law or regulation to close in The City of New York.
Index business day:	With respect to each of the RTY Index and the NDXT Index, a day, as determined by the calculation agent, on which trading is generally conducted on each of the relevant exchange(s) for such underlying, other than a day on which trading on such exchange(s) is scheduled to close prior to the time of the posting of its regular final weekday closing price.
Closing price:	Subject to the provisions set out under "Discontinuance of the XLU Shares and/or the share underlying index; alteration of method of calculation" below, the closing price for one share of the XLU Shares (or one unit of any other security for which a closing price must be determined) on any trading day means: (i) if the XLU Shares (or any such other security) are listed on a national securities exchange (other than the Nasdaq), the last reported sale price, regular way, of the principal trading session on such day on the principal national securities exchange registered under the Securities Exchange Act of 1934, as amended, on which the XLU Shares (or any such other security) are listed, (ii) if the XLU Shares (or any such other security) are securities of the Nasdaq, the official closing price of the XLU Shares published by the Nasdaq on such day, or (iii) if the XLU Shares (or any such other security) are not listed on any national securities exchange but are included in the OTC Bulletin Board Service (the "OTC Bulletin Board") operated by the Financial Industry Regulatory Authority, Inc. ("FINRA"), the last reported sale price of the principal trading session on the OTC Bulletin Board on such day for the XLU Shares. If the XLU Shares (or any such other security) are listed on any national securities exchange but the last reported sale price or the official closing price published by such exchange, or by the Nasdaq, as applicable, is not available pursuant to the preceding sentence, then the closing price for one share of the XLU Shares (or one unit of any such other security) on any trading day will mean the last reported sale price of the principal trading session on the over-the-counter market as reported on the Nasdaq or the OTC Bulletin Board on such day. If a market disruption event (as defined below) occurs with respect to the XLU Shares (or any such other security) or the last reported sale price or the official closing price published by the Nasdaq, as applicable, for the XLU Shares (or any such other security) is not available pursuant to either of the two preceding sentences, then the closing price for any trading day will be the mean, as determined by the calculation agent, of the bid prices for the XLU Shares (or any such other security) for such trading day obtained from as many recognized dealers in such security, but not exceeding three, as will make such bid prices available to the calculation agent. Bids of MS & Co. and its successors or any of its affiliates may be included in the calculation of such mean, but only to the extent that any such bid is the highest of the bids obtained. If no bid prices are provided from any third-party dealers, such closing price will be determined by the calculation agent in its sole and absolute discretion (acting in good faith) taking into account any information that it deems relevant. The term "OTC Bulletin Board Service" will include any successor service thereto, or, if applicable, the OTC Reporting Facility operated by FINRA. See "Discontinuance of the XLU Shares and/or the share underlying index; alteration of method of calculation" below.
Index closing value:	With respect to the RTY Index, the index closing value on any index business day shall be determined by the calculation agent and shall equal the closing value of the RTY Index, or any successor index (as defined under "Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation" below), reported by Bloomberg Financial Services, or any successor reporting service the calculation agent may select, on such index business day. In certain circumstances, the index closing value for the RTY Index will be based on the alternate calculation of the RTY Index as described under "Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation" below. With respect to the NDXT Index, the index closing value on any index business day shall be determined by the calculation agent and shall equal the official closing value of the NDXT Index, or any successor index (as defined under "Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation" below), published at the regular official weekday close of trading on such index business day by the underlying index publisher for the NDXT Index, as determined by the calculation agent. In certain circumstances, the index closing value for the NDXT Index will be based on the alternate calculation of the NDXT Index as described under "Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation" below.
Market disruption event:	With respect to the XLU Shares, market disruption event means:

(i) the occurrence or existence of any of:

(a) a suspension, absence or material limitation of trading of the XLU Shares on the primary market for the XLU Shares for more than two hours of trading or during the one-half hour period preceding the close of the principal trading session in such market; or a breakdown or failure in the price and trade reporting systems of the primary market for the XLU Shares as a result of which the reported trading prices for the XLU Shares during the last one-half hour preceding the close of the principal trading session in such market are materially inaccurate; or the suspension, absence or material limitation of trading on the primary market for trading in futures or options contracts related to the XLU Shares, if available, during the one-half hour period preceding the close of the principal trading session in the applicable market, in each case as determined by the calculation agent in its sole discretion; or

(b) a suspension, absence or material limitation of trading of stocks then constituting 20 percent or more of the value of the share underlying index for the XLU Shares on the relevant exchange(s) for such securities for more than two hours of trading or during the one-half hour period preceding the close of the principal trading session on such relevant exchange(s), in each case as determined by the calculation agent in its sole discretion; or

(c) the suspension, material limitation or absence of trading on any major U.S. securities market for trading in futures or options contracts related to the share underlying index or the underlying shares for more than two hours of trading or during the one-half hour period preceding the close of the principal trading session on such market,

in each case as determined by the calculation agent in its sole discretion; and

(ii) a determination by the calculation agent in its sole discretion that any event described in clause (i) above materially interfered with our ability or the ability of any of our affiliates to unwind or adjust all or a material portion of the hedge position with respect to the securities.

For the purpose of determining whether a market disruption event exists at any time, if trading in a security included in the share underlying index is materially suspended or materially limited at that time, then the relevant percentage contribution of that security to the level of the share underlying index will be based on a comparison of (x) the portion of the level of the share underlying index attributable to that security relative to (y) the overall level of the share underlying index, in each case immediately before that suspension or limitation.

For the purpose of determining whether a market disruption event has occurred with respect to the underlying shares: (1) a limitation on the hours or number of days of trading will not constitute a market disruption event if it results from an announced change in the regular business hours of the relevant exchange or market, (2) a decision to permanently discontinue trading in the underlying shares or in the futures or options contract related to the share underlying index or the XLU Shares will not constitute a market disruption event, (3) a suspension of trading in futures or options contracts on the share underlying index or the XLU Shares by the primary securities market trading in such contracts by reason of (a) a price change exceeding limits set by such securities exchange or market, (b) an imbalance of orders relating to such contracts or (c) a disparity in bid and ask quotes relating to such contracts will constitute a suspension, absence or material limitation of trading in futures or options contracts related to the share underlying index or the XLU Shares and (4) a “suspension, absence or material limitation of trading” on any relevant exchange or on the primary market on which futures or options contracts related to the share underlying index or the XLU Shares are traded will not include any time when such securities market is itself closed for trading under ordinary circumstances. Regarding any permanent discontinuance of trading in the XLU Shares, see “Discontinuance of the XLU Shares and/or the share underlying index; alteration of method of calculation” below.

With respect to each of the RTY Index and the NDXT Index, market disruption event means:

(i) the occurrence or existence of any of:

(a) a suspension, absence or material limitation of trading of securities then constituting 20 percent or more of the value of such underlying (or a successor index) on the relevant exchange(s) for such securities for more than two hours of trading or during the one-half hour period preceding the close of the principal trading session on such relevant exchange(s), or

(b) a breakdown or failure in the price and trade reporting systems of any relevant exchange as a result of which the reported trading prices for securities then constituting 20 percent or more of the value of such underlying (or a successor index) during the last one-half hour preceding the close of the principal trading session on such relevant exchange(s) are materially inaccurate, or

(c) the suspension, material limitation or absence of trading on any major U.S. securities market for trading in futures or options contracts or exchange-traded funds related to such underlying (or a successor index) for more than two hours of trading or during the one-half hour period preceding the close of the principal trading session on such market,

in each case as determined by the calculation agent in its sole discretion; and

(ii) a determination by the calculation agent in its sole discretion that any event described in clause (i) above materially interfered with our ability or the ability of any of our affiliates to unwind or adjust all or a material portion of the hedge position with respect to the securities.

For the purpose of determining whether a market disruption event exists at any time with respect to the RTY Index or the NDXT Index, if trading in a security included in such underlying is materially suspended or materially limited at that time, then the relevant percentage contribution of that security to the value of such underlying shall be based on a comparison of (x) the portion of the value of such underlying attributable to that security relative to (y) the overall value of such underlying, in each case immediately before that suspension or limitation.

For the purpose of determining whether a market disruption event exists at any time with respect to the RTY Index or the NDXT Index: (1) a limitation on the hours or number of days of trading will not constitute a market disruption event if it results from an announced change in the regular business hours of the relevant exchange or market, (2) a decision to permanently discontinue trading in the relevant futures or options contract or exchange-traded fund will not constitute a market disruption event, (3) a suspension of trading in futures or options contracts or exchange-traded funds on such underlying by the primary securities market trading in such contracts or funds by reason of (a) a price change exceeding limits set by such securities exchange or market, (b) an imbalance of orders relating to such contracts or funds or (c) a disparity in bid and ask quotes relating to such contracts or funds will constitute a suspension, absence or material limitation of trading in futures or options contracts or exchange-traded funds related to such underlying and (4) a "suspension, absence or material limitation of trading" on any relevant exchange or on the primary market on which futures or options contracts or exchange-traded funds related to such underlying are traded will not include any time when such securities market is itself closed for trading under ordinary circumstances.

Discontinuance of the XLU Shares and/or the share underlying index; alteration of method of calculation:

If trading in the XLU Shares on every applicable national securities exchange, on the OTC Bulletin Board and in the over-the-counter market is permanently discontinued or the Utilities Select Sector SPDR® Fund is liquidated or otherwise terminated (a "discontinuance or liquidation event"), the closing price of the XLU Shares on any trading day following the discontinuance or liquidation event will be determined by the calculation agent and will be deemed to equal the product of (i) the closing value of the share underlying index for the XLU Shares (or any successor index, as described below) on such date (taking into account any material changes in the method of calculating the share underlying index following such discontinuance or liquidation event) and (ii) a fraction, the numerator of which is the closing price of the XLU Shares and the denominator of which is the closing value of the share underlying index (or any successor index, as described below), each determined as of the last day prior to the occurrence of the discontinuance or liquidation event on which a closing price was available.

If, subsequent to a discontinuance or liquidation event, the share underlying index publisher discontinues publication of the share underlying index and the share underlying index publisher or another entity (including MS & Co.) publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued the share underlying index (such index being referred to herein as a "successor index"), then any subsequent closing price for the XLU Shares on any trading day following a discontinuance or liquidation event will be determined by reference to the published value of such successor index at the regular weekday close of trading on such trading day, and, to the extent the value of the successor index differs from the value of the share underlying index at the time of such substitution, proportionate adjustments shall be made by the calculation agent for purposes of calculating payments on the securities.

Upon any selection by the calculation agent of a successor index, the calculation agent will cause written notice thereof to be furnished to the trustee, to us and to the depositary, as holder of the securities, within three business days of such selection. We expect that such notice will be made available to you, as a beneficial owner of the securities, in accordance with the standard rules and procedures of the depositary and its direct and indirect participants.

If, subsequent to a discontinuance or liquidation event, the share underlying index publisher

	discontinues publication of the share underlying index prior to, and such discontinuance is continuing on, any relevant date of calculation, and the calculation agent determines, in its sole discretion, that no successor index is available at such time, then the calculation agent will determine the closing price for the XLU Shares for such date. Such closing price will be computed by the calculation agent in accordance with the formula for and method of calculating such share underlying index last in effect prior to such discontinuance, using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, its good faith estimate of the closing price that would have prevailed but for such suspension or limitation) at the close of the principal trading session of the relevant exchange on such date of each security most recently composing the share underlying index without any rebalancing or substitution of such securities following such discontinuance.
Antidilution adjustments:	The adjustment factor with respect to the XLU Shares shall be adjusted as follows: If the XLU Shares are subject to a stock split or reverse stock split, then once such split has become effective, the adjustment factor for the XLU Shares will be adjusted by the calculation agent to equal the product of the prior adjustment factor and the number of shares issued in such stock split or reverse stock split with respect to one share of the XLU Shares. No adjustment to the adjustment factor pursuant to the paragraph above will be required unless such adjustment would require a change of at least 0.1% in the amount being adjusted as then in effect. Any number so adjusted will be rounded to the nearest one hundred-thousandth with five one-millionths being rounded upward. The calculation agent will be solely responsible for the determination and calculation of any adjustments to the adjustment factor or method of calculating the adjustment factor and of any related determinations, and its determinations and calculations with respect thereto will be conclusive in the absence of manifest error.
Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation:	If any underlying index publisher discontinues publication of the relevant underlying and such underlying index publisher or another entity (including MS & Co.) publishes a successor or substitute index that the calculation agent determines, in its sole discretion, to be comparable to the discontinued index (such index being referred to herein as the "successor index"), then any subsequent index closing value for the discontinued index will be determined by reference to the published value of such successor index at the regular weekday close of trading on any index business day that the index closing value for such underlying is to be determined, and, to the extent the index closing value of such successor index differs from the index closing value of the relevant underlying at the time of such substitution, proportionate adjustments shall be made by the calculation agent to the relevant initial level and coupon barrier level. Upon any selection by the calculation agent of a successor index, the calculation agent will cause written notice thereof to be furnished to the trustee, to us and to the depositary, as holder of the securities, within three business days of such selection. We expect that such notice will be made available to you, as a beneficial owner of the securities, in accordance with the standard rules and procedures of the depositary and its direct and indirect participants. If any underlying index publisher discontinues publication of the relevant underlying or a successor index prior to, and such discontinuance is continuing on, any relevant date of calculation and the calculation agent determines, in its sole discretion, that no successor index is available at such time, then the calculation agent will determine the index closing value for such underlying for such date. The index closing value of such underlying or such successor index will be computed by the calculation agent in accordance with the formula for and method of calculating such index last in effect prior to such discontinuance, using the closing price (or, if trading in the relevant securities has been materially suspended or materially limited, its good faith estimate of the closing price that would have prevailed but for such suspension or limitation) at the close of the principal trading session of the relevant exchange on such date of each security most recently constituting such index without any rebalancing or substitution of such securities following such discontinuance. Notwithstanding these alternative arrangements, discontinuance of the publication of an underlying may adversely affect the value of the securities. If at any time, the method of calculating any underlying or any successor index, or the value thereof, is changed in a material respect, or if any underlying or any successor index is in any other way modified so that such index does not, in the opinion of the calculation agent, fairly represent the value of such index had such changes or modifications not been made, then, from and after such time, the calculation agent will, at the close of business in New York City on each date on which the index closing value for such index is to be determined, make such calculations and adjustments as, in the good faith judgment of the calculation agent, may be necessary in order to arrive at a value of a stock

	index comparable to such underlying or such successor index, as the case may be, as if such changes or modifications had not been made, and the calculation agent will calculate the index closing value with reference to such underlying or such successor index, as adjusted. Accordingly, if the method of calculating any underlying or any successor index is modified so that the value of such index is a fraction of what it would have been if it had not been modified (e.g., due to a split in such index), then the calculation agent will adjust such index in order to arrive at a value of such underlying or such successor index as if it had not been modified (e.g., as if such split had not occurred).
Alternate exchange calculation in case of an event of default:	If an event of default with respect to the securities shall have occurred and be continuing, the amount declared due and payable upon any acceleration of the securities (the "Acceleration Amount") will be an amount, determined by the calculation agent in its sole discretion, that is equal to the cost of having a qualified financial institution, of the kind and selected as described below, expressly assume all our payment and other obligations with respect to the securities as of that day and as if no default or acceleration had occurred, or to undertake other obligations providing substantially equivalent economic value to you with respect to the securities. That cost will equal: ● the lowest amount that a qualified financial institution would charge to effect this assumption or undertaking, *plus* ● the reasonable expenses, including reasonable attorneys' fees, incurred by the holders of the securities in preparing any documentation necessary for this assumption or undertaking. During the default quotation period for the securities, which we describe below, the holders of the securities and/or we may request a qualified financial institution to provide a quotation of the amount it would charge to effect this assumption or undertaking. If either party obtains a quotation, it must notify the other party in writing of the quotation. The amount referred to in the first bullet point above will equal the lowest—or, if there is only one, the only—quotation obtained, and as to which notice is so given, during the default quotation period. With respect to any quotation, however, the party not obtaining the quotation may object, on reasonable and significant grounds, to the assumption or undertaking by the qualified financial institution providing the quotation and notify the other party in writing of those grounds within two business days after the last day of the default quotation period, in which case that quotation will be disregarded in determining the Acceleration Amount. Notwithstanding the foregoing, if a voluntary or involuntary liquidation, bankruptcy or insolvency of, or any analogous proceeding is filed with respect to MSFL or Morgan Stanley, then depending on applicable bankruptcy law, your claim may be limited to an amount that could be less than the Acceleration Amount. If the maturity of the securities is accelerated because of an event of default as described above, we shall, or shall cause the calculation agent to, provide written notice to the trustee at its New York office, on which notice the trustee may conclusively rely, and to the depositary of the Acceleration Amount and the aggregate cash amount due with respect to the securities as promptly as possible and in no event later than two business days after the date of such acceleration. *Default quotation period* The default quotation period is the period beginning on the day the Acceleration Amount first becomes due and ending on the third business day after that day, unless: ● no quotation of the kind referred to above is obtained, or ● every quotation of that kind obtained is objected to within five business days after the due date as described above. If either of these two events occurs, the default quotation period will continue until the third business day after the first business day on which prompt notice of a quotation is given as described above. If that quotation is objected to as described above within five business days after that first business day, however, the default quotation period will continue as described in the prior sentence and this sentence. In any event, if the default quotation period and the subsequent two business day objection period have not ended before the final observation date, then the Acceleration Amount will equal the principal amount of the securities. *Qualified financial institutions* For the purpose of determining the Acceleration Amount at any time, a qualified financial institution

	must be a financial institution organized under the laws of any jurisdiction in the United States or Europe, which at that time has outstanding debt obligations with a stated maturity of one year or less from the date of issue and rated either: ● A-2 or higher by Standard & Poor's Ratings Services or any successor, or any other comparable rating then used by that rating agency, or ● P-2 or higher by Moody's Investors Service or any successor, or any other comparable rating then used by that rating agency.
Trustee:	The Bank of New York Mellon, a New York banking corporation
Calculation agent:	The calculation agent for the securities will be MS & Co. All determinations made by the calculation agent will be at the sole discretion of the calculation agent and will, in the absence of manifest error, be conclusive for all purposes and binding on you, the trustee and us. All calculations with respect to the contingent monthly coupon, the redemption payment and the payment at maturity shall be made by the calculation agent and shall be rounded to the nearest one hundred-thousandth, with five one-millionths rounded upward (e.g., .876545 would be rounded to .87655); all dollar amounts related to determination of the amount of cash payable per stated principal amount shall be rounded to the nearest ten-thousandth, with five one hundred-thousandths rounded upward (e.g., .76545 would be rounded up to .7655); and all dollar amounts paid on the aggregate principal amount of the securities shall be rounded to the nearest cent, with one-half cent rounded upward. Because the calculation agent is our affiliate, the economic interests of the calculation agent and its affiliates may be adverse to your interests as an investor in the securities, including with respect to certain determinations and judgments that the calculation agent must make in determining the payment that you will receive, if any, on each coupon payment date, upon early redemption or at maturity or whether a market disruption event has occurred. See "Market disruption event," "Discontinuance of the XLU Shares and/or the share underlying index; alteration of method of calculation" and "Discontinuance of the RTY Index or the NDXT Index; alteration of method of calculation." MS & Co. is obligated to carry out its duties and functions as calculation agent in good faith and using its reasonable judgment.
Issuer notices to registered security holders, the trustee and the depositary:	In the event that the maturity date is postponed due to postponement of the final observation date, the issuer shall give notice of such postponement and, once it has been determined, of the date to which the maturity date has been rescheduled (i) to each registered holder of the securities by mailing notice of such postponement by first class mail, postage prepaid, to such registered holder's last address as it shall appear upon the registry books, (ii) to the trustee by facsimile, confirmed by mailing such notice to the trustee by first class mail, postage prepaid, at its New York office and (iii) to the depositary by telephone or facsimile confirmed by mailing such notice to the depositary by first class mail, postage prepaid. Any notice that is mailed to a registered holder of the securities in the manner herein provided shall be conclusively presumed to have been duly given to such registered holder, whether or not such registered holder receives the notice. The issuer shall give such notice as promptly as possible, and in no case later than (i) with respect to notice of postponement of the maturity date, the business day immediately preceding the scheduled maturity date and (ii) with respect to notice of the date to which the maturity date has been rescheduled, the business day immediately following the final observation date as postponed. The issuer shall, or shall cause the calculation agent to, (i) provide written notice to the trustee, on which notice the trustee may conclusively rely, and to the depositary of the amount of cash to be delivered as contingent monthly coupon, if any, with respect to the securities on or prior to 10:30 a.m. (New York City time) on the business day preceding each coupon payment date, and (ii) deliver the aggregate cash amount due with respect to the applicable coupon to the trustee for delivery to the depositary, as holder of the securities, on the applicable coupon payment date. In the event that any coupon payment date is postponed due to the postponement of the relevant observation date, the issuer shall give notice of such postponement and, once it has been determined, of the date to which the applicable coupon payment date has been rescheduled (i) to each registered holder of the securities by mailing notice of such postponement by first class mail, postage prepaid, to such registered holder's last address as it shall appear upon the registry books, (ii) to the trustee by facsimile confirmed by mailing such notice to the trustee by first class mail, postage prepaid, at its New York office and (iii) to the depositary by telephone or facsimile confirmed by mailing such notice to the depositary by first class mail, postage prepaid. Any notice that is mailed to a registered holder of the securities in the manner herein provided shall be conclusively presumed to have been duly given to such registered holder, whether or not such registered holder receives the notice. The issuer shall give such notice as promptly as possible, and in no case later than (i) with respect to notice of

postponement of any coupon payment date, the business day immediately preceding the applicable scheduled coupon payment date and (ii) with respect to notice of the date to which the applicable coupon payment date has been rescheduled, the business day immediately following the applicable observation date as postponed.

The issuer shall, or shall cause the calculation agent to, (i) provide written notice to the trustee, on which notice the trustee may conclusively rely, and to the depositary of the amount of cash to be delivered with respect to the securities, on or prior to 10:30 a.m. (New York City time) on the business day preceding the redemption date or the business day preceding the maturity date, as applicable, and (ii) deliver the aggregate cash amount due with respect to the securities to the trustee for delivery to the depositary, as holder of the securities, on the redemption date or maturity date, as applicable.

Additional Information About the Securities

Additional Information:	
Book entry security or certificated security:	Book entry. The securities will be issued in the form of one or more fully registered global securities which will be deposited with, or on behalf of, the depositary and will be registered in the name of a nominee of the depositary. The depositary's nominee will be the only registered holder of the securities. Your beneficial interest in the securities will be evidenced solely by entries on the books of the securities intermediary acting on your behalf as a direct or indirect participant in the depositary. In this preliminary pricing supplement, all references to payments or notices to you will mean payments or notices to the depositary, as the registered holder of the securities, for distribution to participants in accordance with the depositary's procedures. For more information regarding the depositary and book entry notes, please read "Forms of Securities—The Depositary" and "Forms of Securities—Global Securities" in the accompanying prospectus.
Minimum ticketing size:	$1,000 / 1 security
Tax considerations:	**Prospective investors should note that the discussion under the section called "United States Federal Taxation" in the accompanying prospectus supplement does not apply to the securities issued under this document and is superseded by the following discussion.** The following is a general discussion of the material U.S. federal income tax consequences and certain estate tax consequences of the ownership and disposition of the securities. This discussion applies only to investors in the securities who: ● purchase the securities in the original offering; and ● hold the securities as capital assets within the meaning of Section 1221 of the Internal Revenue Code of 1986, as amended (the "Code"). This discussion does not describe all of the tax consequences that may be relevant to a holder in light of the holder's particular circumstances or to holders subject to special rules, such as: ● certain financial institutions; ● insurance companies; ● dealers and certain traders in securities or commodities; ● investors holding the securities as part of a "straddle," wash sale, conversion transaction, integrated transaction or constructive sale transaction; ● U.S. Holders (as defined below) whose functional currency is not the U.S. dollar; ● partnerships or other entities classified as partnerships for U.S. federal income tax purposes; ● regulated investment companies; ● real estate investment trusts; or ● tax-exempt entities, including "individual retirement accounts" or "Roth IRAs" as defined in Section 408 or 408A of the Code, respectively. If an entity that is classified as a partnership for U.S. federal income tax purposes holds the securities, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. If you are a partnership holding the securities or a partner in such a partnership, you should consult your tax adviser as to the particular U.S. federal tax consequences of holding and disposing of the securities to you. As the law applicable to the U.S. federal income taxation of instruments such as the securities is technical and complex, the discussion below necessarily represents only a general summary. The effect of any applicable state, local or non-U.S. tax laws is not discussed, nor are any alternative minimum tax consequences or consequences resulting from the Medicare tax on investment income. Moreover, the discussion below does not address the consequences to taxpayers subject to special tax accounting rules under Section 451(b) of the Code. This discussion is based on the Code, administrative pronouncements, judicial decisions and final, temporary and proposed Treasury regulations, all as of the date hereof, changes to any of which subsequent to the date

hereof may affect the tax consequences described herein. Persons considering the purchase of the securities should consult their tax advisers with regard to the application of the U.S. federal income tax laws to their particular situations as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction.

General

Due to the absence of statutory, judicial or administrative authorities that directly address the treatment of the securities or instruments that are similar to the securities for U.S. federal income tax purposes, no assurance can be given that the IRS or a court will agree with the tax treatment described herein. We intend to treat a security for U.S. federal income tax purposes as a single financial contract that provides for a coupon that will be treated as gross income to you at the time received or accrued in accordance with your regular method of tax accounting. In the opinion of our counsel, Davis Polk & Wardwell LLP, this treatment of the securities is reasonable under current law; however, there are other reasonable treatments that the IRS or a court may adopt, in which case the timing and character of any income or loss on the securities could be materially affected. Moreover, our counsel's opinion is based on market conditions as of the date of this preliminary pricing supplement and is subject to confirmation on the pricing date.

You should consult your tax adviser regarding all aspects of the U.S. federal tax consequences of an investment in the securities (including possible alternative treatments of the securities). Unless otherwise stated, the following discussion is based on the treatment of each security as described in the previous paragraph.

Tax Consequences to U.S. Holders

This section applies to you only if you are a U.S. Holder. As used herein, the term "U.S. Holder" means a beneficial owner of a security that is, for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;
- a corporation, or other entity taxable as a corporation, created or organized in or under the laws of the United States, any state thereof or the District of Columbia; or
- an estate or trust the income of which is subject to U.S. federal income taxation regardless of its source.

Tax Treatment of the Securities

Assuming the treatment of the securities as set forth above is respected, the following U.S. federal income tax consequences should result.

Tax Basis. A U.S. Holder's tax basis in the securities should equal the amount paid by the U.S. Holder to acquire the securities.

Tax Treatment of Coupon Payments. Any coupon payment on the securities should be taxable as ordinary income to a U.S. Holder at the time received or accrued, in accordance with the U.S. Holder's regular method of accounting for U.S. federal income tax purposes.

Sale, Exchange or Settlement of the Securities. Upon a sale, exchange or settlement of the securities, a U.S. Holder should recognize gain or loss equal to the difference between the amount realized on the sale, exchange or settlement and the U.S. Holder's tax basis in the securities sold, exchanged or settled. For this purpose, the amount realized does not include any coupon paid at settlement and may not include sale proceeds attributable to an accrued coupon, which may be treated in the same manner as a coupon payment. In general, any such gain or loss recognized should be short-term capital gain or loss if the U.S. Holder has held the securities for one year or less at the time of the sale, exchange or settlement, and should be long-term capital gain or loss otherwise. The ordinary income treatment of the coupon payments, in conjunction with the capital loss treatment of any loss recognized upon the sale, exchange or settlement of the securities, could result in adverse tax consequences to holders of the securities because the deductibility of capital losses is subject to limitations.

Possible Alternative Tax Treatments of an Investment in the Securities

Due to the absence of authorities that directly address the proper tax treatment of the securities, no assurance can be given that the IRS will accept, or that a court will uphold, the treatment described above. In particular, the IRS could seek to analyze the U.S. federal income tax consequences of owning the securities under Treasury regulations governing contingent payment debt instruments (the "Contingent Debt

Regulations"). If the IRS were successful in asserting that the Contingent Debt Regulations applied to the securities, the timing and character of income thereon would be significantly affected. Among other things, a U.S. Holder would be required to accrue into income original issue discount on the securities every year at a "comparable yield" determined at the time of their issuance, adjusted upward or downward to reflect the difference, if any, between the actual and the projected amount of any contingent payments on the securities. Furthermore, any gain realized by a U.S. Holder at maturity or upon a sale, exchange or other disposition of the securities would be treated as ordinary income, and any loss realized would be treated as ordinary loss to the extent of the U.S. Holder's prior accruals of original issue discount and as capital loss thereafter. The risk that financial instruments providing for buffers, triggers or similar downside protection features, such as the securities, would be recharacterized as debt is greater than the risk of recharacterization for comparable financial instruments that do not have such features.

We do not plan to request a ruling from the IRS regarding the treatment of the securities. Other alternative federal income tax treatments of the securities are possible, which, if applied, could significantly affect the timing and character of the income or loss with respect to the securities. In addition, the U.S. Treasury Department and the IRS have requested comments on various issues regarding the U.S. federal income tax treatment of "prepaid forward contracts" and similar financial instruments and have indicated that such transactions may be the subject of future regulations or other guidance. Furthermore, members of Congress have proposed legislative changes to the tax treatment of derivative contracts. Any legislation, Treasury regulations or other guidance promulgated after consideration of these issues could materially and adversely affect the tax consequences of an investment in the securities, possibly with retroactive effect. U.S. Holders should consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the securities, including possible alternative treatments and potential changes in applicable law.

Backup Withholding and Information Reporting

Backup withholding may apply in respect of payments on the securities and the payment of proceeds from a sale, exchange or other disposition of the securities, unless a U.S. Holder provides proof of an applicable exemption or a correct taxpayer identification number and otherwise complies with applicable requirements of the backup withholding rules. The amounts withheld under the backup withholding rules are not an additional tax and may be refunded, or credited against the U.S. Holder's U.S. federal income tax liability, provided that the required information is timely furnished to the IRS. In addition, information returns will be filed with the IRS in connection with payments on the securities and the payment of proceeds from a sale, exchange or other disposition of the securities, unless the U.S. Holder provides proof of an applicable exemption from the information reporting rules.

Tax Consequences to Non-U.S. Holders

This section applies to you only if you are a Non-U.S. Holder. As used herein, the term "Non-U.S. Holder" means a beneficial owner of a security that is for U.S. federal income tax purposes:

- an individual who is classified as a nonresident alien;
- a foreign corporation; or
- a foreign estate or trust.

The term "Non-U.S. Holder" does not include any of the following holders:

- a holder who is an individual present in the United States for 183 days or more in the taxable year of disposition and who is not otherwise a resident of the United States for U.S. federal income tax purposes;
- certain former citizens or residents of the United States; or
- a holder for whom income or gain in respect of the securities is effectively connected with the conduct of a trade or business in the United States.

Such holders should consult their tax advisers regarding the U.S. federal income tax consequences of an investment in the securities.

Although significant aspects of the tax treatment of each security are uncertain, we intend to withhold on any coupon paid to a Non-U.S. Holder generally at a rate of 30% or at a reduced rate specified by an applicable income tax treaty under an "other income" or similar provision. We will not be required to pay any additional amounts with respect to amounts withheld. In order to claim an exemption from, or a reduction in, the 30% withholding tax, a Non-U.S. Holder of the securities must comply with certification requirements to establish that it is not a U.S. person and is eligible for such an exemption or reduction under an applicable tax treaty. If you are a Non-U.S. Holder, you should consult your tax adviser regarding the tax treatment of the securities, including the possibility of obtaining a refund of any withholding tax and the certification requirement described above.

Section 871(m) Withholding Tax on Dividend Equivalents

Section 871(m) of the Code and Treasury regulations promulgated thereunder ("Section 871(m)") generally impose a 30% (or a lower applicable treaty rate) withholding tax on dividend equivalents paid or deemed paid to Non-U.S. Holders with respect to certain financial instruments linked to U.S. equities or indices that include U.S. equities (each, an "Underlying Security"). Subject to certain exceptions, Section 871(m) generally applies to securities that substantially replicate the economic performance of one or more Underlying Securities, as determined based on tests set forth in the applicable Treasury regulations (a "Specified Security"). However, pursuant to an IRS notice, Section 871(m) will not apply to securities issued before January 1, 2027 that do not have a delta of one with respect to any Underlying Security. Based on the terms of the securities and current market conditions, we expect that the securities will not have a delta of one with respect to any Underlying Security on the pricing date. However, we will provide an updated determination in the pricing supplement. Assuming that the securities do not have a delta of one with respect to any Underlying Security, our counsel is of the opinion that the securities should not be Specified Securities and, therefore, should not be subject to Section 871(m).

Our determination is not binding on the IRS, and the IRS may disagree with this determination. Section 871(m) is complex and its application may depend on your particular circumstances, including whether you enter into other transactions with respect to an Underlying Security. If Section 871(m) withholding is required, we will not be required to pay any additional amounts with respect to the amounts so withheld. You should consult your tax adviser regarding the potential application of Section 871(m) to the securities.

U.S. Federal Estate Tax

Individual Non-U.S. Holders and entities the property of which is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers) should note that, absent an applicable treaty exemption, the securities may be treated as U.S.-situs property subject to U.S. federal estate tax. Prospective investors that are non-U.S. individuals, or are entities of the type described above, should consult their tax advisers regarding the U.S. federal estate tax consequences of an investment in the securities.

Backup Withholding and Information Reporting

Information returns will be filed with the IRS in connection with any coupon payment and may be filed with the IRS in connection with the payment at maturity on the securities and the payment of proceeds from a sale, exchange or other disposition. A Non-U.S. Holder may be subject to backup withholding in respect of amounts paid to the Non-U.S. Holder, unless such Non-U.S. Holder complies with certification procedures to establish that it is not a U.S. person for U.S. federal income tax purposes or otherwise establishes an exemption. The amount of any backup withholding from a payment to a Non-U.S. Holder will be allowed as a credit against the Non-U.S. Holder's U.S. federal income tax liability and may entitle the Non-U.S. Holder to a refund, provided that the required information is timely furnished to the IRS.

FATCA

Legislation commonly referred to as "FATCA" generally imposes a withholding tax of 30% on payments to certain non-U.S. entities (including financial intermediaries) with respect to certain financial instruments, unless various U.S. information reporting and due diligence requirements have been satisfied. An intergovernmental agreement between the United States and the non-U.S. entity's jurisdiction may modify these requirements. FATCA generally applies to certain financial instruments that are treated as paying U.S.-source interest or other U.S.-source "fixed or determinable annual or periodical" income ("FDAP income"). Withholding (if applicable) applies to payments of U.S.-source FDAP income and to payments of gross proceeds of the disposition (including upon retirement) of certain financial instruments treated as providing for U.S.-source interest or dividends. Under proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization), no withholding will apply on payments of gross proceeds (other than amounts treated as FDAP income). While the treatment of the securities is unclear, you should assume that any coupon payment with respect to the securities will be subject to the FATCA rules. If withholding applies to the securities, we will not be required to pay any additional amounts with respect to amounts withheld. Both U.S. and Non-U.S. Holders should consult their tax advisers regarding the potential application of FATCA to the securities.

	The discussion in the preceding paragraphs, insofar as it purports to describe provisions of U.S. federal income tax laws or legal conclusions with respect thereto, constitutes the full opinion of Davis Polk & Wardwell LLP regarding the material U.S. federal tax consequences of an investment in the securities.
Use of proceeds and hedging:	The proceeds from the sale of the securities will be used by us for general corporate purposes. We will receive, in aggregate, $1,000 per security issued, because, when we enter into hedging transactions in order to meet our obligations under the securities, our hedging counterparty will reimburse the cost of the agent's commissions. The costs of the securities borne by you and described beginning on page 5 above comprise the agent's commissions and the cost of issuing, structuring and hedging the securities. See also "Use of Proceeds" in the accompanying prospectus. On or prior to the pricing date, we expect to hedge our anticipated exposure in connection with the securities by entering into hedging transactions with our affiliates and/or third-party dealers. We expect our hedging counterparties to take positions in the XLU Shares, in stocks constituting the share underlying index or the RTY Index or the NDXT Index and in futures and/or options contracts on the XLU Shares, the share underlying index, the RTY Index or the NDXT Index or the component stocks listed on major securities markets, or positions in any other available securities or instruments that they may wish to use in connection with such hedging. Such purchase activity could potentially increase the initial level of an underlying, and, as a result, increase (i) the coupon barrier level for such underlying, which, if the securities have not been redeemed, is the level at or above which such underlying must close on each observation date in order for you to earn a contingent monthly coupon (depending also on the performance of the other underlyings), and (ii) the level at or above which such underlying must close on the final observation date so that you are not exposed to the negative performance of the worst performing underlying at maturity (depending also on the performance of the other underlyings). These entities may be unwinding or adjusting hedge positions during the term of the securities, and the hedging strategy may involve greater and more frequent dynamic adjustments to the hedge as the final observation date approaches. Additionally, our hedging activities, as well as our other trading activities, during the term of the securities could potentially affect the value of such underlying on the observation dates, and, accordingly, whether we pay a contingent monthly coupon on the securities and the amount of cash you receive at maturity (depending also on the performance of the other underlyings).
Additional considerations:	Client accounts over which Morgan Stanley, Morgan Stanley Wealth Management or any of their respective subsidiaries have investment discretion are not permitted to purchase the securities, either directly or indirectly.
Supplemental information regarding plan of distribution; conflicts of interest:	MS & Co. expects to sell all of the securities that it purchases from us to an unaffiliated dealer at a price of $ per security, for further sale to certain fee-based advisory accounts at the price to public of $1,000 per security. MS & Co. will not receive a sales commission with respect to the securities. MS & Co. is an affiliate of MSFL and a wholly owned subsidiary of Morgan Stanley, and it and other affiliates of ours expect to make a profit by selling, structuring and, when applicable, hedging the securities. When MS & Co. prices this offering of securities, it will determine the economic terms of the securities, including the contingent monthly coupon rate, such that for each security the estimated value on the pricing date will be no lower than the minimum level described in "Investment Overview" beginning on page 3. MS & Co. will conduct this offering in compliance with the requirements of FINRA Rule 5121 of the Financial Industry Regulatory Authority, Inc., which is commonly referred to as FINRA, regarding a FINRA member firm's distribution of the securities of an affiliate and related conflicts of interest. MS & Co. or any of our other affiliates may not make sales in this offering to any discretionary account. In order to facilitate the offering of the securities, the agent may engage in transactions that stabilize, maintain or otherwise affect the price of the securities. Specifically, the agent may sell more securities than it is obligated to purchase in connection with the offering, creating a naked short position in the securities, for its own account. The agent must close out any naked short position by purchasing the securities in the open market. A naked short position is more likely to be created if the agent is concerned that there may be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering. As an additional means of facilitating the offering, the agent may bid for, and purchase, the securities or the securities underlying the underlyings in the open market to stabilize the price of the securities. Any of these activities may raise or maintain the market price of the securities above independent market levels or prevent or retard a decline in the market price of the securities. The agent is not required to engage in these activities, and may end any of these activities at any time. An affiliate of the agent has entered into a hedging transaction with us in connection with this offering of securities. See "Plan of Distribution (Conflicts of Interest)" in the accompanying prospectus supplement and "Use of Proceeds and Hedging" above.
Where you can find more information:	MSFL and Morgan Stanley have filed a registration statement (including a prospectus, as supplemented by the prospectus supplement and the index supplement) with the Securities and Exchange Commission, or

SEC, for the offering to which this communication relates. You should read the prospectus in that registration statement, the prospectus supplement, the index supplement and any other documents relating to this offering that MSFL and Morgan Stanley have filed with the SEC for more complete information about MSFL, Morgan Stanley and this offering. When you read the accompanying prospectus supplement and index supplement, please note that all references in such supplements to the prospectus dated November 16, 2023, or to any sections therein, should refer instead to the accompanying prospectus dated April 12, 2024 or to the corresponding sections of such prospectus, as applicable. You may get these documents without cost by visiting EDGAR on the SEC web site at www.sec.gov. Alternatively, MSFL, Morgan Stanley, any underwriter or any dealer participating in the offering will arrange to send you the prospectus, the prospectus supplement and the index supplement if you so request by calling toll-free 800-584-6837.

You may access these documents on the SEC web site at www.sec.gov as follows:

Prospectus Supplement dated November 16, 2023

Index Supplement dated November 16, 2023

Prospectus dated April 12, 2024

Terms used but not defined in this preliminary pricing supplement are defined in the prospectus supplement, in the index supplement or in the prospectus.

Annex A — Nasdaq-100® Technology Sector Index℠

The Nasdaq-100® Technology Sector Index℠ was developed by Nasdaq and is calculated, maintained and published by The Nasdaq OMX Group, Inc. ("Nasdaq OMX"). The underlying index is designed to measure the performance of Nasdaq-listed companies that are classified as technology according to the Industry Classification Benchmark which also meet other eligibility criteria determined by Nasdaq. The underlying index is reported by Bloomberg under the ticker symbol "NDXT." All information contained in this document regarding the Nasdaq-100® Technology Sector Index℠ has been derived from publicly available information, without independent verification.

The Nasdaq-100® Technology Sector Index℠ is calculated under an equal-weighted methodology. On February 22, 2006, the Nasdaq-100® Technology Sector Index℠ began with a base of 1,000.00. To be eligible for inclusion in the Nasdaq-100® Technology Sector Index℠, a security and its issuer must meet the following criteria:

- the security must be included in the Nasdaq-100 Index®
- the issuer of the security's primary U.S. listing must be exclusively on the Nasdaq Global Select Market or the Nasdaq Global Market;
- the issuer of the security must be classified as Technology according to the Industry Classification Benchmark ("ICB");
- if the issuer of the security is organized under the laws of a jurisdiction outside the United States, then that security must have listed options on a registered options market in the United States or be eligible for listed-options trading on a registered options market in the United States;
- the issuer of the security generally may not currently be in bankruptcy proceedings;
- each security must have a minimum average daily trading volume of 200,000 shares (measured over the three calendar months ending with the month that includes the reconstitution reference date);
- the issuer of the security generally may not have entered into a definitive agreement or other arrangement that would make it ineligible for index inclusion and where the transaction is imminent as determined by the Nasdaq Index Management Committee; and
- the security must have traded for at least three full calendar months, not including the month of initial listing, on an eligible exchange, which includes Nasdaq (Nasdaq Global Select Market, Nasdaq Global Market, or Nasdaq Capital Market), NYSE, NYSE American, or CBOE BZX. Eligibility is determined as of the constituent selection reference date and includes that month. A security that was added as a result of a spin-off will be exempt from the seasoning requirement.

Index Calculation.

The Nasdaq-100® Technology Sector Index℠ is calculated without regard to ordinary dividends however it does reflect special dividends. The formula is as follows:

$$PR_t = \frac{\textit{Index Market Value}_t}{\textit{PR Index Divisor}_t}$$

where:

$$\textit{Index Market Value}_t = \sum_{i=1}^{n} q_{i,t} \times p_{i,t}$$

and:

$$\textit{PR Index Divisor}_t = \frac{\textit{SOD Index Market Value}_t}{PR_{t-1}}$$

"Index Security" shall mean a security that has been selected for membership in the Nasdaq-100® Technology Sector Index℠, having met all applicable eligibility requirements.

n = Number of Index Securities in the Nasdaq-100® Technology Sector Index℠.

q_i = Number of shares of Index Security i applied in the Nasdaq-100® Technology Sector Index℠. The number of shares can be based on any number of items which would be identified in each specific Index Methodology including total shares outstanding (TSO), application of free float, dividend yield, modification due to foreign ownership restrictions, modification due to capping etc. This can also be referred to as Index Shares.

p_i = Price in quote currency of Index Security i. Depending on the time of the calculation, the price can be either of the following:

(1) The Start of Day (SOD) price which is the previous index calculation day's (t-1) closing price for Index Security i adjusted for corporate action(s) occurring prior to market open on date t, if any, for the SOD calculation only;

(2) The intraday price which reflects the current trading price received from the Index Exchange during the index calculation day;

(3) The End of Day (EOD) price refers to the Last Sale Price; or

(4) The Volume Weighted Average Price (VWAP)

t = current index calculation day

$t - 1$ = previous index calculation day

Index Calendar.

The securities composing the Nasdaq-100® Technology Sector Index℠ are selected once annually each December. Securities currently within the Nasdaq-100® Technology Sector Index℠ must meet the eligibility criteria using market data through the end of October that year and total shares outstanding as of the end of November that year. Index reconstitutions are announced in early December and become effective after the close of trading on the third Friday in December.

The index is rebalanced on a quarterly basis in March, June, September and December. The index rebalance uses the Last Sale Price ("LSP") of all Index securities as of the third Friday (February, May, August, and November, respectively). Index rebalance changes are announced in early March, June, September and December, and changes become effective after the close of trading on the third Friday in March, June, September and December.

Index Maintenance.

Deletion Policy. If at any time other than an index reconstitution, a component of the Nasdaq-100® Technology Sector Index℠ is removed from the Nasdaq-100 Index® for any reason, it is also removed from the Nasdaq-100® Technology Sector Index℠ at the same time.

This may include:

- listing on an ineligible index exchange;
- a security is not classified under the Technology Subsector according to the ICB;
- merger, acquisition, or other major corporate event that would otherwise adversely impact the integrity of the Index;
- if a company is organized as a REIT;
- if the issuer has an adjusted market capitalization below 0.10% of the aggregate adjusted market capitalization of the Nasdaq-100 Index® for two consecutive month-ends; or
- if a security that was added to the Nasdaq-100 Index® as the result of a spin-off event has an adjusted market capitalization below 0.10% of the aggregate adjusted market capitalization of the Nasdaq-100 Index® at the end of its second day of regular way trading as a Nasdaq-100 Index® member.

In the case of mergers and acquisitions, the effective date for the removal of an Index issuer or security will be largely event-based, with the goal to remove the issuer or security as soon as completion of the acquisition or merger has been deemed highly probable. Notable events include, but are not limited to, completion of various regulatory reviews, the conclusion of material lawsuits and/or shareholder and board approvals.

Securities that are added as a result of a spin-off may be deleted as soon as practicable after being added to the index. This may occur when Nasdaq determines that a security is ineligible for inclusion because of reasons such as ineligible exchange, security type, or industry. Securities that are added as a result of a spin-off may be maintained in the index until a later date and then removed, for example if a spin-off security has liquidity or market capitalization characteristics that diverge materially from the security eligibility criteria and could affect the integrity of the index.

Replacement Policy. When a component of the Nasdaq-100 Index® that is classified as Technology according to ICB is removed from the Nasdaq-100 Index®, it is also removed from the Nasdaq-100® Technology Sector Index℠. As such, if the replacement company being added to the Nasdaq-100 Index® is classified as Technology according to ICB, it is added to the Nasdaq-100® Technology Sector Index℠ and will assume the weight of the removed company on the Index effective date.

When a component of the Nasdaq-100 Index® that is not classified as Technology according to ICB is removed and the replacement company being added to the Nasdaq-100 Index® is classified as Technology according to ICB, the replacement company is considered for addition to the Nasdaq-100® Technology Sector Index℠ at the next quarterly Rebalance.

When a component of the Nasdaq-100 Index® that is classified as Technology according to ICB is removed from the Nasdaq-100 Index® and the replacement company being added to the Nasdaq-100 Index® is not classified as Technology according to ICB, the company is removed from the Nasdaq-100® Technology Sector Index℠ and the divisor of the Nasdaq-100® Technology Sector Index℠ is adjusted to ensure Index continuity.

Additions Policy. If a security is added to the Nasdaq-100 Index® for any reason, it may be added to the Nasdaq-100® Technology Sector Index℠ at the same time.

Corporate Actions. In the periods between scheduled index reconstitution and rebalancing events, individual Index securities may be the subject to a variety of corporate actions and events that require maintenance and adjustments to the Nasdaq-100® Technology Sector Index℠.

The securities are not sponsored, endorsed, sold or promoted by Nasdaq (including its affiliates) (Nasdaq, with its affiliates, are referred to as the "Corporations"). The Corporations have not passed on the legality or suitability of, or the accuracy or adequacy of descriptions and disclosures relating to, the securities. The Corporations make no representation or warranty, express or implied, to the holders of the securities or any member of the public regarding the advisability of investing in securities generally or in the securities particularly, or the ability of the Nasdaq-100 Index® to track general stock market performance. The Nasdaq-100 Index® is determined, composed and calculated by Nasdaq without regard to us or the securities. Nasdaq has no obligation to take our needs or the needs of the owners of the securities into consideration in determining, composing or calculating the Nasdaq-100 Index®. The Corporations are not responsible for and have not participated in the determination of the timing, prices, or quantities of the securities to be issued or in the determination or calculation of the equation by which the securities are to be converted into cash. The Corporations have no liability in connection with the administration, marketing or trading of the securities.

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