

MORGAN STANLEY  
Form 424B2  
February 28, 2019

***CALCULATION OF REGISTRATION FEE***

<i>Title of Each Class of Securities Offered</i>	<i>Maximum Aggregate Amount of Registration</i>	
	<i>Offering Price</i>	<i>Fee</i>
Jump Notes with Auto-Callable Feature due 2026	\$1,000,000	\$121.20

**February 2019**

Pricing Supplement No. 1,643

Registration Statement Nos. 333-221595; 333-221595-01

Dated February 26, 2019

Filed pursuant to Rule 424(b)(2)

Morgan Stanley Finance LLC

Structured Investments

Opportunities in Equities, Bonds and Alternative Investments

Jump Notes with Auto-Callable Feature due March 3, 2026

**Based on the Value of the Morgan Stanley MAP Trend Index**

**Fully and Unconditionally Guaranteed by Morgan Stanley**

The notes are unsecured obligations of Morgan Stanley Finance LLC (“MSFL”) and are fully and unconditionally guaranteed by Morgan Stanley. The notes will pay no interest and will have the terms described in the accompanying product supplement and prospectus, as supplemented and modified by this document. The notes will be automatically redeemed if the index closing value on any annual determination date is greater than or equal to the redemption threshold level, for an early redemption payment that will increase over the term of the notes and that will correspond to a return of approximately 6.00% *per annum*, as described below. No further payments will be made on the notes once they have been redeemed, and the investor will not participate in any appreciation of the underlying index if the notes are redeemed early. At maturity, if the notes have not previously been redeemed and the final index value is greater than the initial index value, investors will receive the state principal amount *plus* 1-to-1 upside performance of the underlying index. However, if the notes are not automatically redeemed prior to maturity and the final index value is less than or equal to the initial index value, investors will receive only the stated principal amount of their investment, without any positive return on the notes.

The Morgan Stanley MAP Trend Index (the “underlying index”) was established by Morgan Stanley on March 7, 2017 and employs a rules-based quantitative strategy (the “Index Methodology”) that combines a risk-weighted approach to portfolio construction with a momentum-based, or trend-following, asset allocation methodology to construct a

notional portfolio. In addition, the strategy imposes an overall volatility-targeting feature upon the resulting portfolio. The goal of the underlying index is to seek positive return opportunities in different market environments based upon recent trends in the underlying assets. The investment assumption underlying the allocation strategy is two-fold: that historical volatility of the underlying assets can be used to risk-weight a portfolio, and that past trends are likely to continue to be a good indicator of the future performance of that portfolio

The components of the underlying index consist of (i) 20 U.S.-listed exchange traded funds (“ETFs”), representing U.S. and non-U.S. equities, fixed income securities, commodities and real estate, and (ii) the Morgan Stanley Two Year Treasury Index (collectively, the “Index Components”). The notional portfolio constructed by the Index Methodology of Index Components is referred to as the “Asset Portfolio.” The Asset Portfolio will consist of long-only positions in each Index Component, and each Index Component except for the Morgan Stanley Two Year Treasury Index is subject to a maximum exposure cap. The targeted volatility for the underlying index is 5% (the “Volatility Target”).

The underlying index is rebalanced each Strategy Business Day (the “Daily Rebalancing”). Upon each Daily Rebalancing for the underlying index, the Index Methodology uses the pre-assigned Risk Budget assigned to each ETF (as set forth under “Annex A – Morgan Stanley MAP Trend Index – Index Components”) and the volatility for each ETF to make initial base allocations. The Index Methodology then calculates a signal based on the upward or downward trend of each ETF (the “Trend Signal”). The index calculates each Trend Signal by observing two moving averages, one short-term and one long-term, over different look-back periods for each respective ETF. A Trend Signal that converges toward one indicates an upward trend and a Trend Signal that converges toward zero indicates a downward trend. Once the Trend Signal is calculated for each ETF, the previously determined base allocations are scaled by the Trend Signal by allocating more upward-trending securities to the Asset Portfolio. The magnitude of each position taken by the underlying index following the Trend Signal adjustment is then scaled to the Volatility Target based on a pro-rata volatility-scaling that seeks to achieve a balanced level of volatility in the underlying index’s exposure to each of the ETFs.

The underlying index is calculated on an excess return basis, and therefore the level reflects the weighted return of the Asset Portfolio reduced by the return on an equivalent cash investment receiving the 3-month LIBOR. The underlying index performance is further reduced by a servicing cost of 0.85% per annum calculated on a daily basis. For more information, see “Annex A—Morgan Stanley MAP Trend Index” beginning on page 29 and the “Risk Factors” beginning on page 10.

These long-dated notes are for investors who are concerned about principal risk but seek exposure to a multiple asset-linked index, who are willing to accept that the underlying index’s Volatility Target feature may reduce upside performance in bullish markets, and who are willing to forgo current income in exchange for the possibility of receiving an early redemption payment or payment at maturity greater than the stated principal amount if the underlying index closes at or above the redemption threshold level or above the initial index value, as applicable, on an annual determination date. The notes are notes issued as part of MSFL’s Series A Global Medium-Term Notes program.

**All payments are subject to our credit risk. If we default on our obligations, you could lose some or all of your investment. These notes 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.**

#### **FINAL TERMS**

**Issuer:** Morgan Stanley Finance LLC  
**Guarantor:** Morgan Stanley  
**Issue price:** \$1,000 per note (see “Commissions and issue price” below)  
**Stated principal amount:** \$1,000 per note  
\$1,000,000

**Aggregate principal amount:**

**Pricing date:** February 26, 2019

**Original issue date:** February 28, 2019 (2 business days after the pricing date)

**Maturity date:** March 3, 2026

**Interest:** None

**Underlying index:** Morgan Stanley MAP Trend Index

**Early redemption:** If, on any annual determination date (other than the final determination date), the index closing value of the underlying index is **greater than or equal to** the redemption threshold level, the notes will be automatically redeemed for the applicable early redemption payment on the related early redemption date. No further payments will be made on the notes once they have been redeemed.

**Early redemption payment:** The early redemption payment will be an amount in cash per stated principal amount (corresponding to a return of approximately 6.00% per annum) for each annual determination date, as follows:

1st determination date: \$1,060.00

2nd determination date: \$1,120.00 5th determination date: \$1,300.00

3rd determination date: \$1,180.00 6th determination date: \$1,360.00

4th determination date: \$1,240.00

**Redemption threshold level:** No further payments will be made on the notes once they have been redeemed. 226.138, which is approximately 104% of the initial index value. If the notes have not previously been redeemed, you will receive at maturity a cash payment as follows:

- If the final index value is **greater than** the initial index value:

**Payment at maturity:** \$1,000 + (\$1,000 x index percent change)

- If the final index value is **less than or equal to** the initial index value:

\$1,000

**Estimated value on the pricing date:** \$945.90 per note. See “Investment Summary” beginning on page 3.

**Commissions and issue price: Price to public Agent’s commissions<sup>(1)</sup> Proceeds to us<sup>(2)</sup>**

<b>Per note</b>	\$1,000	\$47.50	\$952.50
<b>Total</b>	\$1,000,000	\$47,500	\$952,500

Selected dealers and their financial advisors will collectively receive from the agent, MS & Co., a fixed sales commission of \$47.50 for each note they sell. See “Supplemental information regarding plan of distribution; (1) conflicts of interest.” For additional information, see “Plan of Distribution (Conflicts of Interest)” in the accompanying product supplement.

(2) See “Use of proceeds and hedging” on page 27.

**The notes involve risks not associated with an investment in ordinary debt securities. See “Risk Factors” beginning on page 10.**

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

**The notes 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 product supplement and prospectus, each of which can be accessed via the hyperlinks below. Please also see “Additional Terms of the Notes” and Additional Information About the Notes” at the end of this document.**

**As used in this document, “we,” “us” and “our” refer to Morgan Stanley or MSFL, or Morgan Stanley and MSFL collectively, as the context requires.**

**Product Supplement for Equity-Linked Notes dated November 16, 2017**

**Prospectus dated November 16,**

**2017**

Morgan Stanley Finance LLC

Jump Notes with Auto-Callable Feature due March 3, 2026

Based on the Value of the Morgan Stanley MAP Trend Index

*Terms continued from previous page:*

**Index percent change:** (final index value – initial index value) / initial index value

**Initial index value:** 217.44, which is the index closing value on the pricing date

**Final index value:** The index closing value on the final determination date  
1st determination date: February 28, 2020

2nd determination date: February 26, 2021

3rd determination date: February 28, 2022

**Determination dates:** 4th determination date: February 27, 2023

5th determination date: February 26, 2024

6th determination date: February 26, 2025

Final determination date: February 26, 2026

The determination dates are subject to postponement for non-index business days and certain market disruption events.

**Early redemption dates:** The third business day following the relevant determination date

**CUSIP:** 61768DU60

**ISIN:** US61768DU604

**Listing:** The notes will not be listed on any securities exchange.

**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.”

Morgan Stanley Finance LLC

Jump Notes with Auto-Callable Feature due March 3, 2026

Based on the Value of the Morgan Stanley MAP Trend Index

Investment Summary

Jump Notes with Auto-Callable Feature

The Jump Notes with Auto-Callable Feature due March 3, 2026 Based on the Value of the Morgan Stanley MAP Trend Index (the “notes”) provide investors:

§ an opportunity to gain exposure to the Morgan Stanley MAP Trend Index

§ the repayment of principal at maturity, subject to our credit risk

the possibility of receiving an early redemption payment or payment at maturity greater than the stated principal § amount if the underlying index closes at or above the redemption threshold level or above the initial index value, as applicable, on an annual determination date

§ no exposure to any decline of the underlying index if the notes are held to maturity

At maturity, if the notes have not previously been redeemed and the underlying index has depreciated or has not appreciated at all, you will receive the stated principal amount of \$1,000 per note, without any positive return on your investment.

All payments on the notes, including any early redemption payment and the repayment of principal at maturity, are subject to our credit risk.

**Maturity:** Approximately 7 years

**Interest:** None

**Automatic early redemption annually, beginning after one year:** If, on any annual determination date, the index closing value of the underlying index is greater than or equal to the redemption threshold level, the notes will be automatically redeemed for the early redemption payment on the related early redemption date. No further payments will be made on the notes once they have been redeemed.

· 1st determination date: February 28, 2020

- 2nd determination date: February 26, 2021
- 3rd determination date: February 28, 2022
- 4th determination date: February 27, 2023
- 5th determination date: February 26, 2024
- 6th determination date: February 26, 2025

Final determination date: February 26, 2026

**Redemption threshold level:** 104% of the initial index value

**Early redemption payment:** The early redemption payment will be an amount in cash per stated principal amount (corresponding to a return of approximately 6.00% *per annum*) for each annual determination date, as follows:

- 1<sup>st</sup> determination date: \$1,060.00
- 2<sup>nd</sup> determination date: \$1,120.00
- 3<sup>rd</sup> determination date: \$1,180.00
- 4<sup>th</sup> determination date: \$1,240.00
- 5<sup>th</sup> determination date: \$1,300.00
- 6<sup>th</sup> determination date: \$1,360.00

If the notes have not previously been redeemed, you will receive at maturity a cash payment as follows:

**Payment at maturity:**

- If the final index value is **greater than** the initial index value:  
\$1,000 + (\$1,000 x index percent change)
- If the final index value is **less than or equal to** the initial index value:  
\$1,000

## The Morgan Stanley MAP Trend Index

The Morgan Stanley MAP Trend Index has been developed by and is calculated, published and maintained by Morgan Stanley & Co. LLC. MAP stands for “Multi-Asset Portfolio.” The underlying index employs a rules-based quantitative strategy that combines a risk-weighted approach to portfolio construction with a momentum-based, or trend-following, asset allocation methodology to construct a notional portfolio. In addition, the strategy imposes an overall volatility-targeting feature upon the resulting portfolio.

The goal of the underlying index is to maximize returns for a given level of risk based upon recent trends in the underlying assets. The investment assumption underlying the allocation strategy is two-fold: that historical volatility of the underlying assets can be used to risk-weight a portfolio, and that past trends are likely to continue to be a good indicator of the future performance of that portfolio.

The components of the underlying index consist of (i) 20 U.S.-listed exchange traded funds (“ETFs”), representing U.S. and non-U.S. equities, fixed income securities, commodities and real estate, and (ii) the Morgan Stanley Two Year Treasury Index. The notional portfolio constructed by the Index Methodology of Index Components is referred to as the Asset Portfolio. The Asset Portfolio will consist of long-only positions in each Index Component, and each Index Component except for the Morgan Stanley Two Year Treasury Index is subject to a maximum exposure cap. The targeted volatility for the Index is 5%.

The underlying index is calculated on an excess return basis, and therefore the level is determined by the weighted return of the Asset Portfolio reduced by the return on an equivalent cash investment receiving the 3-month LIBOR. The underlying index performance is further reduced by a servicing cost of 0.85% per annum calculated on a daily basis.

The underlying index is rebalanced each Strategy Business Day. Upon each Daily Rebalancing for the underlying index, the Index Methodology uses the pre-assigned Risk Budget assigned to each ETF and the volatility for each ETF to make initial base allocations. The Index Methodology then calculates a signal based on the upward or downward trend of each ETF. The underlying index calculates each Trend Signal by observing two moving averages, one short-term and one long-term, over different look-back periods for each respective ETF. A Trend Signal that converges toward one indicates an upward trend and a Trend Signal that converges toward zero indicates a downward trend. Once the Trend Signal is calculated for each ETF, the previously determined base allocations are scaled by the Trend Signal by allocating more upward-trending securities to the Asset Portfolio. The magnitude of each position taken by the underlying index following the Trend Signal adjustment is then scaled to the Volatility Target based on a pro-rata volatility-scaling that seeks to achieve a balanced level of volatility in the underlying index’s exposure to each of the ETFs. Once the composition of the Asset Portfolio is determined, the index value is equivalent to the sum of each Index Component’s market price less the 3-month LIBOR excess return cost and the 0.85% per annum servicing cost.



February 2019 Page 4

The original issue price of each note is \$1,000. This price includes costs associated with issuing, selling, structuring and hedging the notes, which are borne by you, and, consequently, the estimated value of the notes on the pricing date is less than \$1,000. We estimate that the value of each note on the pricing date is \$945.90.

*What goes into the estimated value on the pricing date?*

In valuing the notes on the pricing date, we take into account that the notes comprise both a debt component and a performance-based component linked to the underlying index. The estimated value of the notes is determined using our own pricing and valuation models, market inputs and assumptions relating to the underlying index, instruments based on the underlying index, 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 notes?*

In determining the economic terms of the notes, including the early redemption payment amounts and the redemption threshold level, 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 notes 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 notes?*

The price at which MS & Co. purchases the notes in the secondary market, absent changes in market conditions, including those related to the underlying index, 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 notes are not fully deducted upon issuance, for a period of up to 12 months following the issue date, to the extent that MS & Co. may buy or sell the notes in the secondary market, absent changes in market conditions, including those related to the underlying index, 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 notes, and, if it once chooses to make a market, may cease doing so at any time.

February 2019 Page 5

Key Investment Rationale

Jump Notes with Auto-Callable Feature offer investors potential returns based on the performance of the underlying index and provide for the repayment of principal at maturity. They are for investors who are concerned about principal risk but seek exposure to a multiple asset-linked index, who are willing to accept that the underlying index's volatility target feature may reduce upside performance in bullish markets, and who are willing to forgo current income in exchange for the possibility of receiving an early redemption payment or payment at maturity greater than the stated principal amount if the underlying index closes at or above the redemption threshold level or above the initial index value, as applicable, on an annual determination date.

The following scenarios are for illustrative purposes only to demonstrate how an automatic early redemption payment or the payment at maturity (if the notes have not previously been redeemed) are calculated, and do not attempt to demonstrate every situation that may occur.

- |  |  |
|--|--|
| <b>Scenario 1: The notes are redeemed prior to maturity</b>  | Starting on February 28, 2020, when the underlying index closes at or above the redemption threshold level on any annual determination date, the notes will be automatically redeemed for the applicable early redemption payment on the related early redemption date, corresponding to a return of approximately 6.00% <i>per annum</i> . Investors do not participate in any appreciation of the underlying index.                      |
| <b>Scenario 2: The notes are not redeemed prior to maturity, and investors receive a positive return at maturity</b>           | This scenario assumes that the underlying index closes below the redemption threshold level on each annual determination date. Consequently, the notes are not redeemed prior to maturity. On the final determination date, the underlying index closes above the initial index value. At maturity, investors will receive the state principal amount <i>plus</i> 1-to-1 upside performance of the underlying index.                       |
| <b>Scenario 3: The notes are not redeemed prior to maturity, and investors receive the stated principal amount at maturity</b> | This scenario assumes that the underlying index closes below the redemption threshold level on each annual determination date. Consequently, the notes are not redeemed prior to maturity. On the final determination date, the underlying index closes at or below the initial index value. At maturity, investors will receive a cash payment equal to the stated principal amount of \$1,000, without any positive return on the notes. |

Hypothetical Examples

The following hypothetical examples are for illustrative purposes only. Whether the notes are redeemed prior to maturity will be determined by reference to the index closing value of the underlying index on each annual determination date, and the payment at maturity, if the notes are not redeemed early, will be determined by reference to the index closing value on the final determination date. The actual initial index value and redemption threshold level are set forth on the cover of this document. Some numbers appearing in the examples below have been rounded for ease of analysis. All payments on the notes are subject to our credit risk. The below examples are based on the following terms:

Stated Principal Amount: \$1,000

Hypothetical Initial Index Value: 200

Hypothetical Redemption Threshold Level: 208, which is 104% of the hypothetical initial index value

Early Redemption Payment: The early redemption payment will be an amount in cash per stated principal amount (corresponding to a return of approximately 6.00% *per annum*) for each annual determination date, as follows:

- 1<sup>st</sup> determination date: \$1,060.00
- 2<sup>nd</sup> determination date: \$1,120.00    · 5<sup>th</sup> determination date: \$1,300.00
- 3<sup>rd</sup> determination date: \$1,180.00    · 6<sup>th</sup> determination date: \$1,360.00
- 4<sup>th</sup> determination date: \$1,240.00

No further payments will be made on the notes once they have been redeemed.

If the notes have not previously been redeemed, you will receive at maturity a cash payment as follows:

- If the final index value is **greater than** the initial index value:

Payment at Maturity: \$1,000 + (\$1,000 x index percent change)

- If the final index value is **less than or equal to** the initial index value:

\$1,000

**Automatic Call:**

**Example 1 — the notes are redeemed following the second determination date (which occurs in February 2021)**

Date	Index Closing Value	Payment (per note)
1 <sup>st</sup> Determination Date	200 (below the redemption threshold level, notes are not redeemed)	--
2 <sup>nd</sup> Determination Date	280 (at or above the redemption threshold level, notes are automatically redeemed)	\$1,120.00

In this example, the index closing value on the first determination date is below the redemption threshold level, and the index closing value on the second determination date is at or above the redemption threshold level. Therefore the notes are automatically redeemed on the second early redemption date. Investors will receive \$1,120.00 per note on the related early redemption date, corresponding to an annual return of approximately 6.00%. No further payments will be made on the notes once they have been redeemed, and investors do not participate in the appreciation of the underlying index.

**Payment at Maturity**

In the following examples, the index closing value on each annual determination date is less than the redemption threshold level, and, consequently, the notes are not automatically redeemed prior to, and remain outstanding until, maturity.

**Example 1 — the final index value is above the initial index value**

Date	Index Closing Value	Payment (per note)
1 <sup>st</sup> Determination Date	190 (below the redemption threshold level, notes are not redeemed)	--
2 <sup>nd</sup> Determination Date	200 (below the redemption threshold level, notes are not redeemed)	--
3 <sup>rd</sup> Determination Date	195 (below the redemption threshold level, notes are not redeemed)	--
4 <sup>th</sup> Determination Date	204 (below the redemption threshold level, notes are not redeemed)	--
5 <sup>th</sup> Determination Date	198 (below the redemption threshold level, notes are not redeemed)	--
6 <sup>th</sup> Determination Date	203 (below the redemption threshold level, notes are not redeemed)	--
		= \$1,000 + (\$1,000 x index percent change)
Final Determination Date	220 (above the initial index value)	= \$1,000 + \$100 = \$1,100
		Payment at maturity = \$1,100

In this example, the index closing value is below the redemption threshold level on each of the determination dates before the final determination date, and therefore the notes are not redeemed prior to maturity. On the final determination date, the underlying index has appreciated 10% from the hypothetical initial index value. At maturity, investors receive the stated principal amount *plus* the product of the stated principal amount *times* the index percent change. Because the underlying index has appreciated 10% from the hypothetical index value, the payment at maturity is \$1,100 per note.

**Example 2 — the final index value is at or below the initial index value**

Date	Index Closing Value	Payment (per note)
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1<sup>st</sup> Determination Date 190 (below the redemption threshold level, notes are not redeemed) --  
2<sup>nd</sup> Determination Date 200 (below the redemption threshold level, notes are not redeemed) --  
3<sup>rd</sup> Determination Date 195 (below the redemption threshold level, notes are not redeemed) --  
4<sup>th</sup> Determination Date 205 (below the redemption threshold level, notes are not redeemed) --  
5<sup>th</sup> Determination Date 198 (below the redemption threshold level, --

February 2019 Page 8



	notes are not redeemed)	
6 <sup>th</sup> Determination Date	200 (below the redemption threshold level, notes are not redeemed)	--
Final Determination Date	180 (at or below the initial index value)	Payment at maturity = \$1,000

In this example, the index closing value is below the redemption threshold level on each of the determination dates before the final determination date, and therefore the notes are not redeemed prior to maturity. On the final determination date, the final index value is at or below the initial index value, and accordingly, investors receive a payment at maturity equal to the stated principal amount of \$1,000 per note, without any positive return on the notes.

## Risk Factors

*The following is a non-exhaustive list of certain key risk factors for investors in the notes. For further discussion of these and other risks you should read the section entitled “Risk Factors” in the accompanying product supplement and the accompanying prospectus. You should also consult with your investment, legal, tax, accounting and other advisers in connection with your investment in the notes.*

**The notes do not pay interest and may not pay more than the stated principal amount at maturity.** If the notes are not redeemed prior to maturity and the index percent change is less than or equal to 0%, you will receive only the stated principal amount of \$1,000 for each note you hold at maturity. As the notes do not pay any interest, if the notes have not been automatically redeemed prior to maturity and the underlying index does not appreciate § sufficiently over the term of the notes, the overall return on the notes (the effective yield to maturity) may be less than the amount that would be paid on a conventional debt security of ours of comparable maturity. The notes have been designed for investors who are willing to forgo market floating interest rates in exchange for the possibility of receiving an early redemption payment or payment at maturity greater than the stated principal amount, based on the performance of the underlying index.

**If the notes are automatically redeemed prior to maturity, the appreciation potential of the notes is limited by the fixed early redemption payment specified for each of the first six annual determination dates.** If the notes are automatically redeemed following any annual determination date, the appreciation potential of the notes is § limited to the fixed early redemption payment specified for each such determination date. No further payments will be made on the notes once they have been redeemed, and you will not participate in any appreciation of the underlying index if the notes are redeemed early.

**The automatic early redemption feature may limit the term of your investment to as short as approximately one year. If the notes are redeemed early, you may not be able to reinvest at comparable terms or returns.** The § term of your investment in the notes may be limited to as short as approximately one year by the automatic early redemption feature of the notes. If the notes are redeemed prior to maturity, you may be forced to invest in a lower interest rate environment and may not be able to reinvest at comparable terms or returns.

**The market price of the notes will be influenced by many unpredictable factors.** Several factors will influence the value of the notes in the secondary market and the price at which MS & Co. may be willing to purchase or sell the notes in the secondary market, including the value of the underlying index at any time, the volatility (frequency and magnitude of changes in value) of the underlying index, dividend rate on the exchange traded funds (“ETFs”) underlying the index, interest and yield rates in the market, time remaining until the notes mature, geopolitical § conditions and economic, financial, political, regulatory or judicial events that affect the underlying index or equities markets generally and which may affect the final index value of the underlying index and any actual or anticipated changes in our credit ratings or credit spreads. Generally, the longer the time remaining to maturity, the more the market price of the notes will be affected by the other factors described above. The value of the underlying index may be, and has recently been, volatile, and we can give you no assurance that the volatility will lessen. See “Hypothetical Retrospective and Historical Information” below. You may receive less, and possibly significantly less, than the stated principal amount per note if you try to sell your notes prior to maturity.

**The notes 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 notes.** You are dependent on our ability to pay all amounts due on the notes at maturity and therefore you are subject to our credit risk. The notes are not guaranteed by any other entity. If we default on our obligations under the notes, your investment would be at risk and you could lose some or all of your investment. As a result, the market value of the notes 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 notes.

February 2019 Page 10

**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.

**§ There are risks associated with the underlying index.**

**The level of the underlying index can go down as well as up.** There can be no assurance that the underlying index will achieve positive returns. The underlying index tracks the performance of a rules-based investment methodology that selects a hypothetical portfolio of Underlying Assets to track. The performance of the underlying index will depend on the performance of that hypothetical portfolio *minus* the sum of the 3-month LIBOR and a servicing cost § of 0.85% per annum. If the hypothetical portfolio declines in value, the index value will also decline. Even if the hypothetical portfolio increases in value, the index value will nevertheless decline if the increase in the value of the portfolio is not sufficient to overcome the deduction of the 3-month LIBOR and the servicing cost of 0.85% per annum. Accordingly, no assurance can be given that the underlying index will be successful or outperform any alternative strategy that might be employed in respect of the Index Components.

**The base allocation of ETFs in the Asset Portfolio is determined in reference to each ETF's Risk Budget and volatility.** The base allocation of each ETF in the Asset Portfolio is determined in proportion to its pre-set Risk Budget. The Risk Budget was set by the Strategy Sponsor, does not change during the life of the underlying index and there is no guarantee that the Risk Budget allocated to each ETF is the optimal allocation. A higher or lower Risk Budget could result in increased investment in an ETF that performs poorly or insufficient investment in an ETF that performs well over the life of the underlying index. The base allocations of each ETF in the Asset Portfolio are then scaled relative to the other ETFs in the Asset Portfolio according to their volatility. The base allocation of each ETF can be higher or lower than its Risk Budget (However, after the entirety of the underlying index § calculation is complete, no ETF's exposure will exceed its maximum exposure cap.) Volatility calculations based on historical volatility presume that historical volatility is an accurate indication of current volatility. However, there is a time lag associated with the volatility calculation. There is no guarantee that the volatility in the preceding period is representative of the current volatility of the ETFs. Because the underlying index calculates realized volatility over approximately a one-year period, it may be some period of time before a recent increase in the volatility of the ETFs is sufficiently reflected in the calculation of realized volatility to cause a compensating change to the base allocation in the Asset Portfolio. Moreover, there is no guarantee that the one year look-back period for volatility utilized by the underlying index produces the most accurate measure of current volatility. Accordingly, no assurance can be given that each ETF's Risk Budget and calculated volatility will result in the optimal base allocation.

**§ There are risks associated with the underlying index's momentum investment strategy.** The underlying index is constructed using what is generally known as a momentum-based investment strategy. Momentum-based investing generally seeks to capitalize on positive trends in the prices of assets. As such, the composition of the underlying index is based on the historical performance of the ETFs over both long-term and short-term periods. However, there

is no guarantee that trends existing in the preceding periods will continue in the future. A momentum-based strategy is different from a strategy that seeks long-term exposure to a notional portfolio consisting of constant components with fixed weights. The underlying index may fail to realize gains that could occur as a result of holding assets that have experienced price declines, but after which experience a sudden price spike. As a

result, if market conditions do not represent a continuation of prior observed trends, the level of the underlying index, which is rebalanced based on prior trends, may decline. Additionally, even when the values of the ETFs tracked by the underlying index are trending downwards, the underlying index will continue to be composed of those ETFs until the next rebalancing. Furthermore, the equity and alternative asset classes of ETFs in the underlying index seek to capitalize on potential counter-trends in the short term. This could potentially result in a failure to maximize return on an ETF in the equity or alternative asset classes that consistently trends upward over the life of the underlying index. In this scenario, while the Trend Signal will be 0.5 because the spot horizon is always above the long-term horizon, it will never result in a Trend Signal of 1 because the short-term horizon value from 1 Strategy Business Day prior will consistently exceed the spot horizon value from 5 Strategy Business Days prior. This will result in substantially lower returns than if one were to hold an interest in the underlying ETF itself. Alternatively, this strategy could result in over-exposure to a steadily declining ETF. The Trend Signal in these asset classes will remain at 1 and the underlying index will remain fully exposed to an ETF's decline until the ETF begins trending up and the short-term horizon exceeds the spot horizon or continues declining such that the spot horizon is below the long-term horizon. Even if the spot horizon falls below the long-term horizon, the Trend Signal will be 0.5 and the underlying index will not fully divest its position until the spot horizon of the ETF is down compared to both the long-term horizon and the short-term horizon. No assurance can be given that the investment strategy used to construct the underlying index will outperform any alternative index that might be constructed from the Index Components.

**Low volatility in the underlying index is not synonymous with low risk in an investment linked to the § underlying index.** For example, even if the volatility of the underlying index were to be in line with the Volatility Target, the index level may decrease over time, which may result in a zero return on the notes.

**While the underlying index has a Volatility Target of 5%, there can be no guarantee, even if the Asset Portfolio is rebalanced daily, that the realized volatility of the underlying index will not be less than or greater than 5%.** In fact, the historical volatility of the underlying index, based on simulated returns, has generally been between 4% and 6%. Although the underlying index aims to ensure that its realized volatility does not exceed 5%, there is no guarantee that it will successfully do so. There is a time lag associated with the underlying index's volatility control adjustments. Because realized volatility is measured over either approximately the prior month or two months for purposes of the volatility control feature, it may be some period of time before a recent increase in the volatility of the index ETFs is sufficiently reflected in the calculation of realized volatility to cause a compensating reallocation in the Asset Portfolio. During the intervening period, if the increased volatility is § associated with a significant decline in the value of the index ETFs, the underlying index may in turn experience a significant decline without the reduction in exposure to the Index ETFs that the volatility control feature is intended to trigger. Moreover, the index ETFs during the earlier part of the relevant volatility period may be different than the current index ETFs, and if the earlier index ETFs were significantly less volatile than the current index ETFs, the underlying index may be slow to adjust to significant volatility in the current index ETFs. Furthermore, the fact that the underlying index applies a 5% volatility constraint in the selection of the Asset Portfolio is no assurance that the resulting selected portfolio will not experience volatility that is significantly greater than 5% in the future. An Asset Portfolio may experience greater volatility in the future because future market conditions may differ from past market conditions.

**§ There can be no assurance that the actual volatility of the underlying index will be lower than the volatility of any or all of the Index Components.** The underlying index's exposure to each Index Component is adjusted through a volatility-scaling mechanism that seeks to target a volatility of 5% for the underlying index. However, as the volatility-scaling mechanism looks to trends that have occurred in the past to then make adjustments to future

positions, it is unlikely that the underlying index will achieve the target volatility in any Index Component for any given period of time. The actual volatility

achieved by the underlying index overall, as well as the volatility achieved for each Index Component, will likely differ – perhaps significantly – from the Volatility Target.

**The volatility target feature of the underlying index may dampen its performance in bullish markets.** The underlying index is designed to achieve a Volatility Target of 5% regardless of the direction of price movements in the market. Therefore, in bullish markets, if the realized volatility is higher than the Volatility Target, the § adjustments to the Asset Portfolio of the underlying index through Daily Rebalancing might dampen the performance of the underlying index. The selection of the Index Components, as well as the Volatility Target feature, may cause the underlying index to underperform one or more of the Index Components.

**The value of the underlying index and any instrument linked to the underlying index may increase or § decrease due to a number of factors, many of which are beyond our control.** The nature and weighting of the ETFs can vary significantly, and no assurance can be given as to the allocation of any ETF at any time.

**The future performance of the underlying index may bear little or no relation to the historical or hypothetical retrospective performance of the underlying index.** Among other things, the trading prices of the ETFs and the dividends paid on the ETFs will impact the level and the volatility of the underlying index. It is impossible to predict whether the level of the underlying index will rise or fall. The fact that a given allocation among the Asset Portfolio performed well over any look-back period does not mean that such allocation will continue to perform well in the § future. Future market conditions may differ from past market conditions, and the conditions that may have caused the favorable historical performance may no longer exist. Furthermore, by continually seeking to track the Asset Portfolio that would have been the best-performing portfolio (subject to constraints) over a look-back period, the underlying index may perpetually be too late, and it may perpetually “buy high.” By the time the underlying index hypothetically invests in a portfolio of ETFs, the ETFs in that portfolio may already have experienced significant appreciation. The underlying index may therefore perpetually make hypothetical investments in portfolios when they are expensive, which may lead to poor returns.

**The underlying index is particularly susceptible to “choppy” markets.** Past performance is particularly likely to be a poor indicator of future performance in “choppy” markets, which are characterized by short-term volatility and the § absence of consistent long-term performance trends. In such markets, strategies that use past performance as an indicator of future performance, such as that followed by the underlying index, are subject to “whipsaws,” which occur when the market reverses and does the opposite of what is indicated by past performance. The underlying index may experience significant declines in such markets.

**§ The underlying index has fixed weighting constraints.** The index applies limits to the weight that may be assigned to each ETF. These limits are fixed and may skew the allocations among the ETFs in a way that reduces the potential performance of the underlying index. For example, because of the weighting constraints, the underlying index may not allocate all of its exposure to the single ETF with the best performance over the prior six months, even if that ETF had a realized volatility of less than 5%. Instead, the weighting constraints require the underlying index to spread its exposure over all the ETFs, even if one or more of those ETFs had unfavorable returns over the relevant look-back period. Additionally, the weighting constraints mean that the underlying index must have some exposure to all of the ETFs at all times, even when there is no Asset Portfolio that would be expected to appreciate because all are in decline. The underlying index will not take a “short” position in any Index Component, even if the relevant



Index Component displays a negative performance over the relevant look-back period.

**The underlying index was established on March 7, 2017 and therefore has a very limited history.** The § performances of the underlying index and some of the component data have been retrospectively simulated for the period from September 22, 2003 to March 7, 2017. As such, performance for periods prior to the establishment of the underlying index has been retrospectively

February 2019 Page 13

simulated by Morgan Stanley & Co. LLC on a hypothetical basis. A retrospective simulation means that no actual investment which allowed a tracking of the performance of the underlying index existed at any time during the period of the retrospective simulation. The methodology and the underlying index used for the calculation and retrospective simulation of the underlying index has been developed with the advantage of hindsight. In reality, it is not possible to invest with the advantage of hindsight and therefore this historical performance is purely theoretical and may not be indicative of future performance. In addition, the Morgan Stanley Two Year Treasury Index and certain ETFs included in the Index Components existed for only a portion of the period for which Morgan Stanley & Co. LLC has calculated hypothetical retrospective values. For any period during which data for the Morgan Stanley Two Year Treasury Index or one or more ETFs did not exist, the historical simulation is based on (i) the value of the Morgan Stanley Two Year Treasury Index based on simulated historical performance and (ii) the value of each ETF's benchmark index less the relevant ETF's current expense ratio. Investors should be aware that no actual investment which allowed a tracking of the performance of the underlying index was possible at any time prior to March 7, 2017. Such data must be considered illustrative only. The historical data may not reflect future performance and no assurance can be given as to the level of the underlying index at any time. Because the Morgan Stanley Two Year Treasury Index and certain ETFs included in the Index Components existed for only a portion of the back-tested period, substitute data have been used for portions of the simulation. Wherever data for the Morgan Stanley Two Year Treasury Index or one or more ETFs did not exist, the simulation has included (i) the value of the Morgan Stanley Two Year Treasury Index based on simulated historical performance and (ii) the value of each ETF's benchmark index less the relevant current expense ratio. The ETFs (and corresponding fund inception dates) for which substitute data have been used for all periods prior to the relevant inception date are: USMV (October 20, 2011), DVY (November 7, 2003), HYG (April 11, 2007), AGG (September 26, 2003), EMB (December 19, 2007), TIP (December 5, 2003), PFF (March 30, 2007), GLD (November 18, 2004), USO (April 10, 2006), VNQ (September 29, 2004) and UUP (February 20, 2007).

**As the underlying index is new and has very limited actual historical performance, any investment in the underlying index may involve greater risk than an investment in an index with longer actual historical performance and a proven track record.** All information regarding the performance of the underlying index prior to March 7, 2017 is hypothetical and back-tested, as the underlying index did not exist prior to that time. It is important to understand that hypothetical back-tested index performance information is subject to significant limitations, in addition to the fact that past performance is never a guarantee of future performance. In particular:

Morgan Stanley & Co. International plc developed the rules of the underlying index with the benefit of hindsight—that is, with the benefit of being able to evaluate how the underlying index rules would have caused the underlying index to perform had it existed during the hypothetical back-tested period.

According to Morgan Stanley & Co. International plc, for time periods prior to the launch of an Index Component and that Index Component's initial satisfaction of a minimum liquidity standard, the hypothetical back-tested data included in this note were calculated using alternative performance information derived from a related index, after deducting hypothetical fund fees, rather than the performance information for that Index Component. This alternative performance information may differ, perhaps significantly, from the manner in which the relevant Index Components would have performed during the relevant period. As a result, the hypothetical back-tested index performance information, to the extent that it utilizes this alternative performance information, may not reflect how the underlying index would have performed had it instead utilized the actual performance of the relevant Index Components.

Certain of the Index Components have changed the underlying indices that they seek to track or track underlying § indices that have made changes to their rules. As a result of these changes, the underlying indices to be tracked in the future by certain of the Index Components differ in certain

respects from the underlying indices tracked by the same Index Components during certain portions of the back-tested period. The sponsor of any Index Component or its underlying index may make additional changes in the future. The hypothetical back-tested index performance may not reflect how the underlying index would have performed had the relevant Index Components tracked the same underlying indices (with the same rules) during the full back-tested period that they will track in the future.

The hypothetical back-tested performance of the underlying index might look different if it covered a different historical period. The market conditions that existed during the historical period covered by the hypothetical § back-tested index performance information in this note are not necessarily representative of the market conditions that will exist in the future.

It is impossible to predict whether the underlying index will rise or fall. The actual future performance of the underlying index may bear little relation to the historical or hypothetical back-tested levels of the underlying index.

**The underlying index is reduced by an excess return cost.** The level of the underlying index is calculated as the excess of the weighted return of the Asset Portfolio over an equivalent cash investment receiving the 3-month LIBOR. As a result, the level of the underlying index reflects a deduction of the 3-month LIBOR that would apply to such a cash investment, and is therefore less than the return on the weighted Asset Portfolio absent such excess return cost. Changes in the 3-month LIBOR will affect the value of the underlying index. In particular, an increase in the 3-month LIBOR will negatively affect the value of the underlying index. Interest rates, especially short-term rates such as 3-month USD LIBOR, are significantly influenced by the Federal Reserve's monetary policy. Although § the Federal Reserve has maintained interest rates at relatively low levels in recent years, the Federal Reserve may change its monetary policy at any time. The Federal Reserve has recently begun to raise interest rates and may continue to do so in the future. If the Federal Reserve raises interest rates again, or if interest rates otherwise rise, the underlying index may be adversely affected. You should understand that interest rates are influenced by matters other than the Federal Reserve's monetary policy, and that interest rates may increase even if monetary policy does not change. For example, interest rates may be sensitive to perceptions about the creditworthiness of the U.S. government. In 2011, Standard & Poor's downgraded the U.S. government's credit rating. Any further downgrades in the credit rating or perceived creditworthiness of the U.S. government could increase the U.S. government's borrowing rates, which could have ripple effects that increase general interest rates, including 3-month USD LIBOR.

**The underlying index contains embedded costs.** In addition to the excess return deduction, as described in more detail under "Annex A—Morgan Stanley MAP Trend Index" below, the underlying index contains an embedded § servicing cost of 0.85% per annum, calculated on a daily basis. Such cost is deducted when calculating the level of the underlying index and will thus reduce the return of the underlying index.

§ **An investment in the notes involves risks associated with emerging markets equities and bonds, currency exchange rates and commodities.** ETFs representing foreign equities (including emerging markets equities) can constitute up to 10% of the underlying index. The underlying index can also consist of certain ETFs representing emerging markets bonds. Therefore, an investment in the notes involves risks associated with the securities markets in those foreign markets and emerging markets countries, including but not limited to risks of volatility in those markets, governmental intervention in those markets and cross-shareholdings in companies in certain countries. The

prices of securities issued in foreign markets may be affected by political, economic, financial and social factors in those countries, or global regions, including changes in government, economic and fiscal policies and currency exchange laws. In addition, because the price of an ETF representing foreign securities is generally related to the U.S. dollar value of securities underlying the index tracked by such ETF, an investment in the notes involve currency exchange rate risk with respect to each of the currencies in

which such securities trade. Exchange rate movements for a particular currency are volatile and are the result of numerous factors including the supply of, and the demand for, those currencies, as well as relevant government policy, intervention or actions, but are also influenced significantly from time to time by political or economic developments, and by macroeconomic factors and speculative actions related to the relevant region.

In addition, potential underlying index components also include ETFs representing commodities and thus investors in instruments linked to the underlying index are exposed to risks associated with commodities. Investments linked to the prices of commodities are subject to sharp fluctuations in the prices of commodities over short periods of time for a variety of factors, including: changes in supply and demand relationships; weather; climatic events; the occurrence of natural disasters; wars; political and civil upheavals; acts of terrorism; trade, fiscal, monetary, and exchange control programs; domestic and foreign political and economic events and policies; disease; pestilence; technological developments; changes in interest rates; and trading activities in commodities and related contracts. These factors may affect the prices of commodities and therefore the value of the underlying index and the notes, in varying and potentially inconsistent ways.

**Changes in the value of the Index Components may offset each other.** Because the Index Components represent a range of asset classes and geographic regions, price movements of Index Components representing different asset classes or geographic regions may not correlate with each other. At a time when the value of an Index Component § representing a particular asset class or geographic region increases, the value of other Index Components representing different asset classes or geographic regions may not increase as much or may decline. Therefore, in calculating the level of the underlying index, increases in the value of some of the Index Components may be moderated, or more than offset, by lesser increases or declines in the level of other Index Components.

**The Morgan Stanley Two Year Treasury Index can produce negative returns, which may have an adverse effect on the level of the respective Sub-Indices, and consequently, the level of the index.** The Index methodology for the Morgan Stanley Two Year Treasury Index was developed based on historical data and § conditions, and there can be no assurances that the methodology can generate positive performance in the future. Therefore, the past performance of the Morgan Stanley Two Year Treasury Index, whether actual or retrospectively calculated, is not a reliable indication of future performance. Poor performance by the Morgan Stanley Two Year Treasury Index will have a negative effect on the performance of the respective Sub-Indices, and consequently on the performance of the index.

**§ Adjustments to the underlying index could adversely affect the value of instruments linked to the underlying index.** Morgan Stanley & Co. LLC, as the Calculation Agent and the Index Sponsor, can add, delete and/or substitute the Index Components, and can make other methodological changes, including as required by certain events relating to the Index Components. For example, central banks around the world, including the Federal Reserve, have commissioned working groups of market participants with the goal of finding suitable replacements for LIBOR based on observable market transactions. In addition, the U.K. Financial Conduct Authority, which regulates LIBOR's administrator, has stated that it will not exercise its compulsion powers to require LIBOR panel banks to continue to contribute to LIBOR's publication after the end of 2021. As a result, at some point in the future, the Index Sponsor may make changes to the index's excess return calculation, which utilizes 3-month LIBOR. Any of these actions could adversely affect the value of instruments linked to the underlying index. Morgan Stanley & Co. LLC may also discontinue or suspend calculation or publication of the underlying index at any time. Morgan

Stanley & Co. LLC could have an economic interest that is different than that of investors in instruments linked to the underlying index.

**Investing in the notes is not equivalent to investing in the underlying index. Investing in the notes is not § equivalent to investing in the underlying index or its component ETFs or the Morgan Stanley Two Year Treasury Index. Investors in the notes will not have voting rights or rights to**

February 2019 Page 16

receive dividends or other distributions or any other right with respect to the component ETFs of the underlying index. See “Hypothetical Examples” above.

**Reliance on information.** Unless otherwise stated, all calculations are based on information obtained from various publicly-available sources. Morgan Stanley has relied on these sources and not independently verified the § information extracted from these sources. Morgan Stanley shall not be liable in any way for any calculations it performs in reliance on such information. The information used to undertake the Daily Rebalancings for the underlying index will be the most up-to-date information available.

§ **Research.** Morgan Stanley may issue research reports on securities that are, or may become, constituents of an Index Component or an Index Component. These reports are entirely independent of the calculation agent’s obligations hereunder. Morgan Stanley will be under no obligation to make any adjustments to the underlying index or to reflect any change in outlook by Morgan Stanley Research.

**MS & Co., which is a subsidiary of Morgan Stanley and an affiliate of MSFL, is both the calculation agent and the underlying index publisher, and will make determinations with respect to the notes and the underlying index.** As calculation agent, MS & Co. has determined the initial index value and the redemption § threshold level, will determine whether the notes will be redeemed on any early redemption date and the final index value and will calculate the amount of cash you will receive at maturity. Determinations made by MS & Co. in its capacity as calculation agent, including with respect to the occurrence or non-occurrence of market disruption events and the selection of a successor index or calculation of the alternate payment amount in the event of a discontinuance of the underlying index or a market disruption event, may adversely affect the payout to you at maturity.

MS & Co. is also the underlying index publisher and retains the final discretion as to the manner in which the underlying index is calculated and constructed. The underlying index publisher may change the methodology of the underlying index or discontinue the publication of the underlying index without prior notice, and such changes or discontinuance may affect the value of the underlying index. The underlying index publisher’s calculations and determinations in relation to the underlying index shall be binding in the absence of manifest error.

In performing its duties as the calculation agent of the notes and the underlying index publisher, MS & Co. may have interests adverse to your interests, which may affect the value of the underlying index and the value of the notes.

§ **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 notes in the original issue price reduce the economic terms of the notes, cause the estimated value of the notes 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 notes 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 notes in the original issue price and the lower rate we are willing to pay as issuer make the economic terms of the notes less favorable to you than they otherwise would be.

However, because the costs associated with issuing, selling, structuring and hedging the notes are not fully deducted upon issuance, for a period of up to 12 months following the issue date, to the extent that MS & Co. may buy or sell the notes in the secondary market, absent changes in market conditions, including those related to the underlying index, 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 notes 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 notes than those § generated by others, including other dealers in the market, if they attempted to value the notes. 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 notes in the secondary market (if any exists) at any time. The value of your notes 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 of the notes will be influenced by many unpredictable factors” above.

**Adjustments to the underlying index could adversely affect the value of the notes.** MS & Co., as the underlying index publisher, can add, delete or substitute the Index Components, and can make other methodological changes required by certain events relating to the Index Components. Any of these actions could adversely affect the value of § the notes. The underlying index publisher may also discontinue or suspend calculation or publication of the underlying index 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., in its capacity as both the calculation agent for the notes and underlying index publisher, could have an economic interest that is different than that of investors in the notes.

**Investing in the notes is not equivalent to investing in the underlying index.** Investing in the notes is not § equivalent to investing in the underlying index or its component ETFs. Investors in the notes will not have voting rights or rights to receive dividends or other distributions or any other right with respect to the component ETFs of the underlying index.

**The notes will not be listed on any securities exchange and secondary trading may be limited. Accordingly, you should be willing to hold your notes for the entire 7-year term of the notes.** The notes will not be listed on any securities exchange. Therefore, there may be little or no secondary market for the notes. MS & Co. may, but is not obligated to, make a market in the notes 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 notes, 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 notes. Even if there is a secondary market, it may not provide enough liquidity to allow you to trade or sell the notes easily. Since other broker-dealers may not participate significantly in the secondary market for the notes, the price at which you may be able to trade your notes 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 notes, it is likely that there would be no secondary market for the notes. Accordingly, you should be willing to hold your notes to maturity.

**Hedging and trading activity by our affiliates could potentially adversely affect the value of the notes.** One or more of our affiliates and/or third-party dealers have carried out, and will continue to carry out, hedging activities related to the notes (and to other instruments linked to the underlying index or its component ETFs or the Morgan Stanley Two Year Treasury Index), including trading in the component ETFs and in other instruments related to the underlying index. As a result, these entities may be unwinding or adjusting hedge positions during the term of the notes, and the hedging strategy may involve greater and more frequent dynamic adjustments to the hedge as the final determination date approaches. Some of our affiliates also trade the component ETFs of the underlying index and other financial instruments related to the 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 have increased the initial index value, and, therefore, could have increased the value at or above which the underlying index must close on the determination dates so that the notes are redeemed prior to maturity for the early redemption payment, and the value above which the underlying index must close on the

final determination date (if the notes are not redeemed prior to maturity) so that you receive a positive return on the notes at maturity. Additionally, such hedging or trading activities during the term of the notes, including on the determination dates, could adversely affect the closing value of the underlying index on the determination dates, and, accordingly, whether we redeem the notes prior to maturity and the amount of cash an investor will receive at maturity.

February 2019 Page 19

## Morgan Stanley MAP Trend Index Overview

The Morgan Stanley MAP Trend Index has been developed by and is calculated, published and rebalanced by MS & Co as the “index publisher.” The index employs a rules-based quantitative strategy that combines a risk-weighted approach to portfolio construction with a momentum-based, or trend-following, asset allocation methodology to construct a notional portfolio. In addition, the strategy imposes an overall volatility-targeting feature upon the resulting portfolio. The goal of the index is to maximize returns for a given level of risk based upon recent trends in the underlying assets. The investment assumption underlying the allocation strategy is two-fold: that historical volatility of the underlying assets can be used to risk-weight a portfolio, and that past trends are likely to continue to be a good indicator of the future performance of that portfolio. The index therefore seeks to capture returns by taking risk-weighted positions indicated by such trends. For additional information about the Morgan Stanley MAP Trend Index, see the information set forth under “Annex A—Morgan Stanley MAP Trend Index” below.

## Hypothetical Retrospective and Historical Information

The inception date for the underlying index was March 7, 2017. The information regarding the underlying index prior to March 7, 2017 is a hypothetical retrospective simulation calculated by the underlying index publisher, using the same methodology as is currently employed for calculating the underlying index based on historical data. A retrospective simulation means that no actual investment which allowed a tracking of the performance of the index existed at any time during the period of the retrospective simulation. In addition, the Morgan Stanley Two Year Treasury Index and certain ETFs included in the Index Components existed for only a portion of period for which the index publisher calculates hypothetical retrospective values. For any period during which data for the Morgan Stanley Two Year Treasury Index or one or more ETFs did not exist, the historical simulation is based on (i) the value of the Morgan Stanley Two Year Treasury Index based on simulated historical performance and (ii) the value of each such ETF’s benchmark index less the relevant ETF’s current expense ratio. The ETFs (and corresponding fund inception dates) for which data have been used for all periods prior to the relevant inception date are: USMV (October 20, 2011), DVY (November 7, 2003), HYG (April 11, 2007), AGG (September 26, 2003), EMB (December 19, 2007), TIP (December 5, 2003), PFF (March 30, 2007), GLD (November 18, 2004), USO (April 10, 2006), VNQ (September 29, 2004) and UUP (February 20, 2007). Therefore, information regarding the underlying index prior to March 7, 2017 is hypothetical only and does not reflect actual historical performance. Investors should be aware that no actual investment which allowed a tracking of the performance of the underlying index was possible at any time prior to March 7, 2017. Such data must be considered illustrative only.

You should not take the historical or hypothetical retrospective values of the underlying index as an indication of its future performance.

Information as of market close on February 26, 2019:

Bloomberg Ticker Symbol: MSUSMAPT

Current Index Value: 217.44

The following graph sets forth the hypothetical retrospective and historical daily closing values of the underlying index for the period from January 1, 2004 through February 26, 2019. The related table sets forth the hypothetical retrospective and historical high and low closing values, as well as end-of-quarter closing values, of the underlying index for each quarter from January 1, 2014 through February 26, 2019. The closing value of the index on February 26, 2019 was 217.44. The underlying index was established on March 7, 2017. The information prior to March 7, 2017 is a hypothetical retrospective simulation calculated by the underlying index publisher and must be considered illustrative only.

February 2019 Page 20

## Morgan Stanley MAP Trend Index Hypothetical Retrospective and Historical Performance

## Daily Closing Values

January 1, 2004 to February 26, 2019

\*The red vertical line indicates March 7, 2017, which is the date on which the index was established.

Morgan Stanley MAP Trend Index	High	Low	Period End
<b>2014</b>			
First Quarter	193.89	186.62	191.80
Second Quarter	199.76	190.69	199.76
Third Quarter	201.97	196.45	198.27
Fourth Quarter	204.04	196.27	203.33
<b>2015</b>			
First Quarter	210.26	203.07	209.23
Second Quarter	211.32	204.98	205.38
Third Quarter	207.20	195.23	196.49
Fourth Quarter	201.26	196.34	197.35
<b>2016</b>			
First Quarter	200.51	191.80	200.51
Second Quarter	208.21	199.91	208.21
Third Quarter	212.26	208.03	211.47
Fourth Quarter	210.93	204.13	208.39
<b>2017</b>			
First Quarter	215.03	209.44	213.33
Second Quarter	219.77	213.33	217.82
Third Quarter	222.66	216.41	221.64
Fourth Quarter	224.81	220.84	223.75
<b>2018</b>			
First Quarter	227.03	216.04	218.21
Second Quarter	220.19	216.12	218.55
Third Quarter	223.76	218.74	223.29
Fourth Quarter	223.03	206.39	210.06
<b>2019</b>			
First Quarter (through February 26, 2019)	217.44	210.46	217.44

**The underlying index was established on March 7, 2017. The information prior to March 7, 2017 is a hypothetical retrospective simulation calculated by the underlying index publisher and must be considered illustrative only.**

Hypothetical Underlying Index Return

The following table shows the **hypothetical** return on the underlying index from January 1, 2004 to February 26, 2019. Because the publication of the underlying index began on March 7, 2017, the return on the underlying index shown below is retrospectively simulated. **No actual investment which allowed a tracking of the performance of the underlying index was possible at any time prior to March 7, 2017.** Because the Morgan Stanley Two Year Treasury Index and certain ETFs included in the Index Components existed for only a portion of the back-tested period, substitute data have been used for portions of the simulation.

Index Returns <sup>1</sup>																	
1/1/2004–	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	
2/26/2019																	
Returns	5.02%	8.30%	3.10%	5.04%	3.19%	2.81%	5.13%	12.77%	6.51%	7.01%	7.32%	8.57%	-2.94%	5.59%	7.39%	-6.09%	3.51%

*Data based on simulated returns from January 1, 2004 to March 7, 2017 and actual returns thereafter.*

*1 All returns except year-to-date 2019 returns are annualized.*

*2 Year-to-date 2019 returns are not annualized.*



Additional Terms of the Notes

Please read this information in conjunction with the summary terms on the front cover of this document.

**Additional Terms:**

If the terms described herein are inconsistent with those described in the accompanying product supplement or prospectus, the terms described herein shall control.

**Denominations:** \$1,000 and integral multiples thereof

**Interest:** None

**Underlying index publisher:** MS & Co. or any successor thereof

**Bull or bear notes:** Bull notes

**Call right:** The notes are not subject to an issuer discretionary call right.

**Market disruption event:** *The following provision supersedes in its entirety "Description of Equity-Linked Notes—General*

*Terms of the Notes—market disruption event" in the accompanying product supplement:*

“Market disruption event” means the occurrence or existence of any of the following events with respect to any ETF included in the underlying index, as determined by the calculation agent in its sole discretion:

(i) (a) the occurrence or existence of a suspension, absence or material limitation of trading of the ETF on the primary market for the ETF 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

(b) a breakdown or failure in the price and trade reporting systems of the primary market for the ETF as a result of which the reported trading prices for the ETF 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 ETF, if available, during the one-half hour period preceding the close of the principal trading session in the applicable market; 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, if applicable, the ETF underlying index or the ETF 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; and

(ii) a determination by the calculation agent in its sole discretion that any event described in clause (a), (b) or (c) 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 notes.

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

For the purpose of determining whether a market disruption event has occurred: (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 ETF or in futures or options contract related to the ETF underlying index or the ETF will not constitute a market disruption event, (3) a suspension of trading in futures or options contracts on the ETF underlying index or the ETF 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 ETF underlying index or the ETF 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 ETF underlying index or the ETF are traded will not include any time when such securities market is itself closed for trading under ordinary circumstances.

*The following provision supersedes in its entirety “Description of Equity-Linked Notes—General Terms of the Notes—relevant exchange” in the accompanying product supplement:*

**Relevant  
exchange:**

The primary exchange(s) or market(s) of trading for any ETF then-included in the underlying index, or any successor index.

**Postponement of  
determination  
date:** If a market disruption event with respect to the underlying index occurs on any scheduled determination date, or if any scheduled determination date is not an index business day, the index closing value for such day shall be determined on the immediately succeeding index business day

on which no market disruption event shall have occurred with respect to the underlying index; *provided* that the index closing value of the underlying index for any scheduled determination date will not be determined on a date later than the fifth scheduled index business day after such scheduled determination date, and if such date is not an index business day or if there is a market disruption event on such date, the calculation agent shall determine the index closing value of the underlying index on such date in accordance with the formula for calculating the underlying index 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 ETF most recently constituting the underlying index.

**Postponement of maturity date and early redemption dates:**

If any determination date is postponed due to a non-index business day or certain market disruption events so that it falls less than two business days prior to the relevant scheduled early redemption date or maturity date, as applicable, the early redemption date or maturity date, as applicable, will be postponed to the second business day following that determination date as postponed, and no adjustment will be made to any early redemption payment or the payment at maturity made on such postponed date.

**Discontinuance of the underlying index:**

*The following provision supersedes in its entirety “Description of Equity-Linked Notes—Discontinuance of Any Underlying Index or Basket Index; Alteration of Method of Calculation” in the accompanying product supplement:*

If the underlying index publisher discontinues publication of the underlying index and such underlying index publisher or another entity publishes a successor or substitute index that MS & Co., as the calculation agent, determines, in its sole discretion, to be comparable to the discontinued underlying index (such index being referred to herein as a “successor index”), then any subsequent index closing value 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 is to be determined, and, to the extent the index closing value of such successor index differs from the index closing value of the underlying index at the time of such substitution, proportionate adjustments will be made by the calculation agent to the initial index value and redemption threshold 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 Depository Trust Company, New York, New York (“DTC”), as holder of such notes, within three business days of such selection. We expect that such notice will be made available to you, as a beneficial owner of the relevant notes, in accordance with the standard rules and procedures of DTC and its direct and indirect participants.

If the underlying index publisher discontinues publication of the underlying index and the calculation agent determines, in its sole discretion, that no successor index is available, then, on the date of such determination, the calculation agent will determine, in good faith and in a commercially reasonable manner, an alternative payment amount, which will equal its estimate of

the value, if any, of the investors' forgone opportunity to receive any subsequent payments on the notes, determined by reference to the calculation agent's pricing models, inputs, assumptions about future market conditions including, without limitation, the volatility of the MAP Trend Index and its components and current and expected interest rates. The alternative payment amount, if any, will be paid at maturity.

**Equity-linked notes:**

All references to "equity-linked notes" or related terms in the accompanying product supplement for equity-linked notes shall be deemed to refer to jump notes with auto-callable feature when read in conjunction with this document.

**Trustee:**

The Bank of New York Mellon

**Calculation agent:** MS & Co.

In the event that the maturity date is postponed due to postponement of the final determination 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 notes 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 Depository Trust Company (the "depository") by telephone or facsimile, confirmed by mailing such notice to the depository by first class mail, postage prepaid. Any notice that is mailed to a registered holder of the notes 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

**Issuer notice to registered note holders, the trustee and the depository:**

the actual final determination date for determining the final index value.

In the event that the notes are subject to early redemption, the issuer shall, (i) on the business day following the applicable determination date, give notice of the early redemption and the early redemption payment, including specifying the payment date of the amount due upon the early redemption, (x) to each registered holder of the notes by mailing notice of such early redemption by first class mail, postage prepaid, to such registered holder's last address as it shall appear upon the registry books, (y) 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 (z) to the depositary by telephone or facsimile confirmed by mailing such notice to the depositary by first class mail, postage prepaid and (ii) on or prior to the early redemption date, deliver the aggregate cash amount due with respect to the notes to the trustee for delivery to the depositary, as holder of the notes. Any notice that is mailed to a registered holder of the notes 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. This notice shall be given by the issuer or, at the issuer's request, by the trustee in the name and at the expense of the issuer, with any such request to be accompanied by a copy of the notice to be given.

The issuer shall, or shall cause the calculation agent to, (i) 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 payment at maturity on or prior to 10:30 a.m. (New York City time) on the business day preceding the maturity date and (ii) deliver the aggregate cash amount due with respect to the notes to the trustee for delivery to the depositary, as holder of the notes, on the maturity date.

## Additional Information About the Notes

**Additional Information:**

**Minimum ticketing size:** \$1,000 / 1 note

In the opinion of our counsel, Davis Polk & Wardwell LLP, the notes should be treated as “contingent payment debt instruments” for U.S. federal income tax purposes, as described in the section of the accompanying product supplement called “United States Federal Taxation—Tax Consequences to U.S. Holders.” Under this treatment, if you are a U.S. taxable investor, you generally will be subject to annual income tax based on the “comparable yield” (as defined in the accompanying product supplement) of the notes, adjusted upward or downward to reflect the difference, if any, between the actual and projected amount of the payments on the notes. Although it is not clear how the comparable yield should be determined for notes that may be automatically redeemed before maturity, our counsel has advised that it is reasonable to determine the comparable yield based on the stated maturity date. In addition, any gain recognized by U.S. taxable investors on the sale or exchange, or at maturity, of the notes generally will be treated as ordinary income. We have determined that the “comparable yield” for the notes is a rate of 3.7430% per annum, compounded semi-annually. Based on the comparable yield set forth above, the “projected payment schedule” for a note (assuming an issue price of \$1,000) consists of a single projected amount equal to \$ 1,296.8973 due at maturity.

**Tax considerations:**

You should read the discussion under “United States Federal Taxation” in the accompanying product supplement concerning the U.S. federal income tax consequences of an investment in the notes.

The following table states the amount of interest income (without taking into account any adjustment to reflect the difference, if any, between the actual and the projected amount of the contingent payment on a note) that will be deemed to have accrued with respect to a note for each accrual period (assuming a day count convention of 30 days per month and 360 days per year), based upon the comparable yield set forth above.

ACCRUAL PERIOD	INTEREST INCOME DEEMED TO ACCRUE DURING ACCRUAL PERIOD (PER NOTE)	TOTAL INTEREST INCOME DEEMED TO HAVE ACCRUED FROM ORIGINAL ISSUE DATE (PER NOTE) AS OF END OF ACCRUAL PERIOD
Original Issue Date through June 30, 2019	\$12.4767	\$12.4767
July 1, 2019 through December 31, 2019	\$18.9485	\$31.4252
January 1, 2020 through June 30, 2020	\$19.3031	\$50.7283
	\$19.6644	\$70.3927

July 1, 2020 through December 31, 2020 January 1, 2021 through June 30, 2021	\$20.0324	\$90.4251
July 1, 2021 through December 31, 2021 January 1, 2022 through June 30, 2022	\$20.4073	\$110.8324
July 1, 2022 through December 31, 2022 January 1, 2023 through June 30, 2023	\$20.7892	\$131.6216
July 1, 2023 through December 31, 2023 January 1, 2024 through June 30, 2024	\$21.1783	\$152.7999
July 1, 2024 through December 31, 2024 January 1, 2025 through June 30, 2025	\$21.5747	\$174.3746
July 1, 2025 through December 31, 2025 January 1, 2026 through the Maturity Date	\$21.9784	\$196.3530
	\$22.3897	\$218.7427
	\$22.8088	\$241.5515
	\$23.2356	\$264.7871
	\$23.6705	\$288.4576
	\$8.4397	\$296.8973

**The comparable yield and the projected payment schedule are not provided for any purpose other than the determination of U.S. Holders’ accruals of interest income and adjustments thereto in respect of the notes for U.S. federal income tax purposes, and we make no representation regarding the actual amount of the payments that will be made on the notes.**

If you are a non-U.S. investor, please also read the section of the accompanying product supplement called “United States Federal Taxation—Tax Consequences to Non-U.S. Holders.”

As discussed in the accompanying product supplement, Section 871(m) of the Internal Revenue Code of 1986, as amended (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 Internal Revenue Service (“IRS”) notice, Section 871(m) will not apply to securities issued before January 1, 2021 that do not have a delta of one with respect to any Underlying Security. Based on our determination that the notes do not have a delta of one with respect to any Underlying Security, our counsel is of the opinion that the notes 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 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 notes.

In addition, as discussed in the accompanying product supplement, withholding rules commonly referred to as “FATCA” apply to certain financial instruments (including the notes) with respect to payments of amounts treated as interest and to any payment of gross proceeds of a disposition (including retirement) of such an instrument. However, recently proposed regulations (the preamble to which specifies that taxpayers are permitted to rely on them pending finalization) eliminate the withholding requirement on payments of gross proceeds of a taxable disposition.

**You should consult your tax adviser regarding all aspects of the U.S. federal income tax consequences of an investment in the notes, as well as any tax consequences arising under the laws of any state, local or non-U.S. taxing jurisdiction. Moreover, neither this document nor the accompanying product supplement addresses the consequences to taxpayers subject to special tax accounting rules under Section 451(b) of the Code.**

**The discussion in the preceding paragraphs under “Tax considerations” and the discussion contained in the section entitled “United States Federal Taxation” in the accompanying product supplement, insofar as they purport to describe provisions of U.S. federal income tax laws or legal conclusions with respect thereto, constitute the full opinion of Davis Polk & Wardwell LLP regarding the material U.S. federal tax consequences of an investment in the notes.**

**Use of proceeds and hedging:**

The proceeds from the sale of the notes will be used by us for general corporate purposes. We will receive, in aggregate, \$1,000 per note issued, because, when we enter into hedging transactions in order to meet our obligations under the notes, our hedging counterparty will reimburse the cost of the agent’s commissions. The costs of the notes borne by you and described beginning on page 3 above comprise the agent’s commissions and the cost of issuing, structuring and hedging the notes.

On or prior to the pricing date, we hedged our anticipated exposure in connection with the notes by entering into hedging transactions with our affiliates and/or third party dealers. We expect our hedging counterparties to have taken positions in the component ETFs of the underlying index and in options contracts on the component ETFs. Such purchase activity could have increased the value

of the underlying index on the pricing date, and, therefore could have increased (i) the value at or above which the underlying index must close on the determination dates so that the notes are redeemed prior to maturity for the early redemption payment and (ii) the value above which the underlying index must close on the final determination date, if the notes are not redeemed prior to maturity, so that you would receive at maturity a payment that exceeds the stated principal amount of the notes. In addition, through our affiliates, we are likely to modify our hedge position throughout the term of the notes, including on the determination date, by purchasing and selling the component ETFs or positions in any other available securities or instruments that we may wish to use in connection with such hedging activities. As a result, these entities may be unwinding or adjusting hedge positions during the term of the notes, and the hedging strategy may involve greater and more frequent dynamic adjustments to the hedge as the determination date approaches. We cannot give any assurance that our hedging activities will not affect the value of the underlying index, and, therefore, adversely affect the value of the notes or the payment you will receive at maturity. For further information on our use of proceeds and hedging, see “Use of Proceeds and Hedging” in the accompanying product supplement.

Each fiduciary of a pension, profit-sharing or other employee benefit plan subject to Title I of the Employee Retirement Income Security Act of 1974, as amended (“ERISA”) (a “Plan”), should consider the fiduciary standards of ERISA in the context of the Plan’s particular circumstances before authorizing an investment in the notes. Accordingly, among other factors, the fiduciary should consider whether the investment would satisfy the prudence and diversification requirements of ERISA and would be consistent with the documents and instruments governing the Plan.

**Benefit plan  
investor  
considerations:**

In addition, we and certain of our affiliates, including MS & Co., may each be considered a “party in interest” within the meaning of ERISA, or a “disqualified person” within the meaning of the Internal Revenue Code of 1986, as amended (the “Code”), with respect to many Plans, as well as many individual retirement accounts and Keogh plans (such accounts and plans, together with other plans, accounts and arrangements subject to Section 4975 of the Code, also “Plans”). ERISA Section 406 and Code Section 4975 generally prohibit transactions between Plans and parties in interest or disqualified persons. Prohibited transactions within the meaning of ERISA or the Code would likely arise, for example, if the notes are acquired by or with the assets of a Plan with respect to which MS & Co. or any of its affiliates is a service provider or other party in

interest, unless the notes are acquired pursuant to an exemption from the “prohibited transaction” rules. A violation of these “prohibited transaction” rules could result in an excise tax or other liabilities under ERISA and/or Section 4975 of the Code for those persons, unless exemptive relief is available under an applicable statutory or administrative exemption.

The U.S. Department of Labor has issued five prohibited transaction class exemptions (“PTCEs”) that may provide exemptive relief for direct or indirect prohibited transactions resulting from the purchase or holding of the notes. Those class exemptions are PTCE 96-23 (for certain transactions determined by in-house asset managers), PTCE 95-60 (for certain transactions involving insurance company general accounts), PTCE 91-38 (for certain transactions involving bank collective investment funds), PTCE 90-1 (for certain transactions involving insurance company separate accounts) and PTCE 84-14 (for certain transactions determined by independent qualified professional asset managers). In addition, ERISA Section 408(b)(17) and Code Section 4975(d)(20) provide an exemption for the purchase and sale of securities and the related lending transactions, provided that neither the issuer of the securities nor any of its affiliates has or exercises any discretionary authority or control or renders any investment advice with respect to the assets of the Plan involved in the transaction and provided further that the Plan pays no more, and receives no less, than “adequate consideration” in connection with the transaction (the so-called “service provider” exemption). There can be no assurance that any of these class or statutory exemptions will be available with respect to transactions involving the notes.

Because we may be considered a party in interest with respect to many Plans, the notes may not be purchased, held or disposed of by any Plan, any entity whose underlying assets include “plan assets” by reason of any Plan’s investment in the entity (a “Plan Asset Entity”) or any person investing “plan assets” of any Plan, unless such purchase, holding or disposition is eligible for exemptive relief, including relief available under PTCEs 96-23, 95-60, 91-38, 90-1, 84-14 or the service provider exemption or such purchase, holding or disposition is otherwise not prohibited. Any purchaser, including any fiduciary purchasing on behalf of a Plan, transferee or holder of the notes will be deemed to have represented, in its corporate and its fiduciary capacity, by its purchase and holding of the notes that either (a) it is not a Plan or a Plan Asset Entity and is not purchasing such notes on behalf of or with “plan assets” of any Plan or with any assets of a governmental, non-U.S. or church plan that is subject to any federal, state, local or non-U.S. law that is substantially similar to the provisions of Section 406 of ERISA or Section 4975 of the Code (“Similar Law”) or (b) its purchase, holding and disposition of these notes will not constitute or result in a non-exempt prohibited transaction under Section 406 of ERISA or Section 4975 of the Code or violate any Similar Law.

Due to the complexity of these rules and the penalties that may be imposed upon persons involved in non-exempt prohibited transactions, it is particularly important that fiduciaries or other persons considering purchasing the notes on behalf of or with “plan assets” of any Plan consult with their counsel regarding the availability of exemptive relief.

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Each purchaser and holder of the notes has exclusive responsibility for ensuring that its purchase, holding and disposition of the notes do not violate the prohibited transaction rules of ERISA or the Code or any Similar Law. The sale of any notes to any Plan or plan subject to Similar Law is in no respect a representation by us or any of our affiliates or representatives that such an investment meets all relevant legal requirements with respect to investments by plans generally or any particular plan, or that such an investment is appropriate for plans generally or any particular plan. In this regard, neither this discussion nor anything provided in this document is or is intended to be investment advice directed at any potential Plan purchaser or at Plan purchasers generally and such purchasers of these notes should consult and rely on their own counsel and advisers as to whether an investment in these notes is suitable.

However, individual retirement accounts, individual retirement annuities and Keogh plans, as well as employee benefit plans that permit participants to direct the investment of their accounts, will not be permitted to purchase or hold the notes if the account, plan or annuity is for the benefit of an employee of Morgan Stanley or Morgan Stanley Wealth Management or a family member and the employee receives any compensation (such as, for example, an addition to bonus) based on the purchase of the notes by the account, plan or annuity.

### **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 notes, either directly or indirectly.

Selected dealers, which may include our affiliates, and their financial advisors will collectively receive from the agent a fixed sales commission of \$47.50 for each note they sell.

### **Supplemental information regarding plan of distribution; conflicts of interest:**

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 notes.

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. See "Plan of Distribution (Conflicts of Interest)" and "Use of Proceeds and Hedging" in the accompanying product supplement.

### **Validity of the notes:**

In the opinion of Davis Polk & Wardwell LLP, as special counsel to MSFL and Morgan Stanley, when the

notes offered by this pricing supplement have been executed and issued by MSFL, authenticated by the trustee pursuant to the MSFL Senior Debt Indenture (as defined in the accompanying prospectus) and delivered against payment as contemplated herein, such notes will be valid and binding obligations of MSFL and the related guarantee will be a valid and binding obligation of Morgan Stanley, enforceable in accordance with their terms, subject to applicable bankruptcy, insolvency and similar laws affecting creditors' rights generally, concepts of reasonableness and equitable principles of general applicability (including, without limitation, concepts of good faith, fair dealing and the lack of bad faith), *provided* that such counsel expresses no opinion as to (i) the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law on the conclusions expressed above and (ii) any provision of the MSFL Senior Debt Indenture that purports to avoid the effect of fraudulent conveyance, fraudulent transfer or similar provision of applicable law by limiting the amount of Morgan Stanley's obligation under the related guarantee. This opinion is given as of the date hereof and is limited to the laws of the State of New York, the General Corporation Law of the State of Delaware and the Delaware Limited Liability Company Act. In addition, this opinion is subject to customary assumptions about the trustee's authorization, execution and delivery of the MSFL Senior Debt Indenture and its authentication of the notes and the validity, binding nature and enforceability of the MSFL Senior Debt Indenture with respect to the trustee, all as stated in the letter of such counsel dated November 16, 2017, which is Exhibit 5-a to the Registration Statement on Form S-3 filed by Morgan Stanley on November 16, 2017.

**Contact:**

Morgan Stanley clients may contact their local Morgan Stanley branch office or our principal executive offices at 1585 Broadway, New York, New York 10036 (telephone number (866) 477-4776). All other clients may contact their local brokerage representative. Third-party distributors may contact Morgan Stanley Structured Investment Sales at (800) 233-1087.

**Where you  
can find more  
information:**

Morgan Stanley and MSFL have filed a registration statement (including a prospectus, as supplemented by the product supplement for Equity-Linked Notes) 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 product supplement for Equity-Linked Notes and any other documents relating to this offering that Morgan Stanley and MSFL have filed with the SEC for more complete information about Morgan Stanley, MSFL and this offering. You may get these documents without cost by visiting EDGAR on the SEC web site at [www.sec.gov](http://www.sec.gov). Alternatively, Morgan Stanley, MSFL, any underwriter or any dealer participating in the offering will arrange to send you the prospectus and the product supplement for Equity-Linked Notes 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](http://www.sec.gov) as follows:

[Product Supplement for Equity-Linked Notes dated November 16, 2017](#)

[Prospectus dated November 16, 2017](#)

Terms used but not defined in this document are defined in the product supplement for Equity-Linked Notes or in the prospectus.



## Annex A—Morgan Stanley MAP Trend Index

Overview

The Morgan Stanley MAP Trend Index (the “**Index**”) has been developed by and is calculated, published and maintained by Morgan Stanley & Co. LLC. MAP stands for “Multi-Asset Portfolio.” The Index was established by Morgan Stanley on March 7, 2017 and employs a rules-based quantitative strategy (the “**Index Methodology**”) that combines a risk-weighted approach to portfolio construction with a momentum-based, or trend-following, asset allocation methodology to construct a notional portfolio. In addition, the strategy imposes an overall volatility-targeting feature upon the resulting portfolio. The goal of the Index is to maximize returns for a given level of risk based upon recent trends in the underlying assets. The investment assumption underlying the allocation strategy is two-fold: that historical volatility of the underlying assets can be used to risk-weight a portfolio, and that past trends are likely to continue to be a good indicator of the future performance of that portfolio. The Index therefore seeks to capture returns by taking risk-weighted positions indicated by such trends. As the portfolio is risk-weighted based upon a pre-set allocation as modified by recent volatility, increased volatility in an underlying asset will result in reduced exposure to that asset, potentially at a time when that asset then increases in value; at the same time, lower volatility will result in higher exposure, potentially at a time when the asset starts to decline in value. In addition, as a trend-following, momentum-based index, the Index will tend to perform well when prices on the relevant ETFs are steadily trending either up or down. On the other hand, the Index will likely perform poorly when prices on the relevant ETFs do not move in a consistent manner, and, in particular, when they experience sharp reversals, in which case the Index will likely allocate to ETFs that trended upward, but that are now declining. In addition, sharp, correlated reversals in the equity markets as a whole will also have an adverse effect on the level of the Index, as any diversification benefits inherent in investing in a variety of ETFs will be lost.

The components of the Index consist of (i) 20 U.S.-listed exchange traded funds (“**ETFs**”), representing U.S. and non-U.S. equities, fixed income securities, commodities and real estate, and (ii) the Morgan Stanley Two Year Treasury Index (collectively, the “**Index Components**”). The notional portfolio constructed by the Index Methodology of Index Components is referred to as the “**Asset Portfolio**.” The Asset Portfolio will consist of long-only positions in each Index Component, and each Index Component except for the Morgan Stanley Two Year Treasury Index is subject to a maximum exposure cap. The actual number of ETFs represented in the Asset Portfolio will be determined according to the Index Methodology but will likely be less than 20 at any one time and, if all the ETFs are trending down, could be only the Morgan Stanley Two Year Treasury Index. The targeted volatility for the Index is 5% (the “**Volatility Target**”).

The Index is calculated on an excess return basis, and therefore the level is determined by the weighted return of the Asset Portfolio reduced by the return on an equivalent cash investment receiving the 3-month LIBOR. The Index performance is further reduced by a servicing cost of 0.85% per annum calculated on a daily basis.

Calculation of Pre-Signal Base Allocation for each ETF

The Index is rebalanced each Strategy Business Day (the “**Daily Rebalancing**”). Upon each Daily Rebalancing for the Index, the Index Methodology uses the pre-assigned Risk Budget assigned to each ETF which remains static throughout the life of the Index and is set forth in the table below. Based upon those pre-set Risk Budgets, the Index Methodology determines the base allocation of each ETF in the Asset Portfolio by analyzing the volatility for each ETF and the historical correlation among the components. The base allocation of ETFs will be proportional to each ETFs’ Risk Budget and the inverse of each ETF’s volatility and scaled based upon the volatility of the other ETFs to 100% exposure.<sup>1</sup> Assuming that two ETFs have the same Risk

<sup>1</sup> Look-back period for volatility for the pre-signal allocation is approximately one year.

February 2019 Page 30



Budget, this initial weighting scheme allocates more to less volatile assets and less to more volatile assets.<sup>2</sup> While the Risk Budget is used to determine proportions for the pre-signal base allocations, those pre-signal base allocations can be higher or lower than the original Risk Budget; however, after the entirety of the Index calculation is complete, no ETF's exposure will exceed its maximum exposure cap as listed in the table below.

#### Determining the Trend Signal for each ETF

The Index Methodology then calculates a signal based on the upward or downward trend of each ETF (the “**Trend Signal**”). The Index calculates each Trend Signal by observing two moving averages, one short-term and one long-term, over different look-back periods for each respective ETF.<sup>3</sup> These moving averages are calculated using a formula that considers the entirety of the look-back period but gives more weight to the recent data points than the data points further in the past. For some of the less liquid ETFs, a signal-smoothing moving average is incorporated that creates a weighted average of the Trend Signal using the prior two or three days of signal data in order to try to avoid unrepresentative signals due to that relative illiquidity.<sup>4</sup> A Trend Signal that converges toward one indicates an upward trend and a Trend Signal that converges toward zero indicates a downward trend.

The Index compares each ETF's short-term and long-term moving averages against its spot horizon to determine the Trend Signal. The Trend Signal will be 0 if the spot horizon is below both the short-term and long-term moving averages, 0.5 if the spot horizon is between the short-term and long-term moving averages or 1 if the spot horizon is above the short-term and long-term moving averages. An ETF's spot horizon value is not always its most recent price and, in the equity and alternatives asset classes, the date for determining the spot horizon is a date 4 Strategy Business Days before the short-term horizon date, which is typically the Strategy Business Day prior to the Rebalancing Date. The result of this is that the Index, in the equity and alternatives asset classes, will allocate more exposure to ETFs that are trending down in the short-term and less to ETFs that are trending up in the short-term in an effort to capitalize on possible countertrends or overreactions in the market. However, if a short-term downward trend persists and the ETF steadily declines, the Trend Signal in these asset classes will remain at 1 and therefore the Index will be fully exposed to the decline. The Trend Signal will remain at 1 until the ETF begins trending up and the short-term horizon exceeds the spot horizon or continues declining such that the spot horizon is below the long-term horizon. Even if the spot horizon falls below the long-term horizon, the Trend Signal will be 0.5 and the Index will not fully divest its position until the spot horizon of the ETF is down compared to both the long-term horizon and the short-term horizon.

#### Scaling of Allocation of ETFs According to Trend Signal

Once the Trend Signal is calculated for each ETF, the previously determined base allocations are scaled by the Trend Signal by allocating more upward-trending securities to the Asset Portfolio subject to each ETFs'

<sup>2</sup> Volatility is a market standard statistical measure of the magnitude and frequency of price changes of a financial asset over a period of time, used to express the riskiness of the asset. Note, however, that volatility does not identify the direction of the asset's price movement.

<sup>3</sup> The look-back period for each moving average is asset-class dependent. Equity ETFs have a short term period of 1 day, a long term period of 200 days and a spot horizon of 5 days. Fixed Income ETFs have a short term period of 5 days, a long term period of 20 days and a spot horizon of 1 day. Alternative ETFs have a short term period of 5 days, a long term period of 200 days and a spot horizon of 5 days.

<sup>4</sup> As classified in the table below, Other Equity ETFs have a signal smoothing period of 2 days. Core Fixed Income ETFs have a signal smoothing period of 2 days while Other Fixed Income ETFs have a signal smoothing period of 3 days.

maximum exposure cap as outlined in the table below. The magnitude of each position taken by the Index following the Trend Signal adjustment is then scaled to the Volatility Target based on a pro-rata volatility-scaling that seeks to achieve a balanced level of volatility in the Index's exposure to each of the ETFs. The volatility of the Index is calculated by estimating the volatility of each ETF adjusted for correlations over a period of approximately 30 and 60 days. The higher volatility of the two time periods is used to scale the Index's exposure to the ETFs. ETFs with a Trend Signal of 0 on a Rebalancing Day will not be allocated any exposure and therefore will not be a part of the Asset Portfolio on that day. Any unused exposure is allocated to the Morgan Stanley Two Year Treasury Index. Because the Index is limited to 125% leverage it may not be possible to achieve the Volatility Target of 5% during periods of very low volatility. Moreover, the volatility of the Index may exceed the 5% Volatility Target in times of extreme volatility due to trading limits on the ETFs. The daily trading limit for each ETF is one-third of the maximum exposure cap. Once the composition of the Asset Portfolio is determined, the Index value is equivalent to the sum of each Index Component's market price less the 3-month LIBOR excess return cost and the 0.85% servicing cost.

Morgan Stanley MAP Trend Index – Summary

The procedure for determining the composition of the Asset Portfolio is summarized in the graphic and bullets below:

Base allocations depend on each ETF's liquidity and are proportional to the Risk Budget and the inverse of each ETF's relative historical realized volatility scaled to 100%.

All things being equal, this weighting scheme allocates more to less volatile assets and less to more volatile assets.

For each ETF, compute one short-term and one long-term moving average.

- Compare the short-term and long-term moving averages versus the ETF spot price, a Trend Signal of 100% indicates an upward trend and a Trend Signal 0% indicates a downward trend.<sup>5</sup> If applicable, the Trend Signal is smoothed over a few days for the less liquid ETFs.

Scale the base allocations by the Trend Signal for each ETF.

The maximum exposure caps on each Rebalancing Date for each Index Component are specified in the table below.

Estimate the volatility of the portfolio and scale the allocations to target a 5% volatility. Because the ETFs are subject to a maximum exposure cap and the Index is limited to 125% leverage, it may not be possible to achieve the Volatility Target of 5% during periods of very low volatility.

Allocate any unused exposure into Morgan Stanley Two Year Treasury Index.

The level of the Index is calculated on an excess return basis and is determined by the weighted return of the Asset Portfolio *reduced* by the return on an equivalent cash investment receiving the 3-month LIBOR and a servicing cost of 0.85% per annum.

<sup>5</sup> Note that because the spot horizon period is longer than the short-term horizon period for ETFs in the equity and alternative asset classes of the index, an actual upward trend in an ETF may result in a Trend Signal less than 1 and therefore the Index may divest itself of these ETFs despite recent positive movement.

February 2019 Page 33

## Index Components

The potential Index Components included in the Index and the maximum asset weightings on each Rebalancing Date for each Index Component are specified in the table below.

<b>Equities</b>	<b>Ticker</b>	<b>Maximum Exposure Cap</b>	<b>Risk Budget*</b>
<b>Core</b>			
SPDR S&P 500	SPY	25%	11%
PowerShares QQQ ETF	QQQ	25%	11%
iShares Russell 2000	IWM	25%	11%
iShares MSCI EAFE	EFA	5%	2%
iShares MSCI Emerging Markets	EEM	5%	2%
<b>Others</b>			
iShares Edge MSCI Minimum Volatility USA	USMV	5%	2%
iShares Nasdaq Biotechnology	IBB	5%	2%
iShares Select Dividend	DVY	3%	1%
<b>Fixed Income</b>			
<b>Core</b>			
iShares 20+ Year Treasury Bond	TLT	25%	11%
iShares 7-10 Year Treasury Bond	IEF	25%	11%
iShares iBoxx High Yield Corporate Bond	HYG	25%	11%
iShares iBoxx Investment Grade Corporate Bond	LQD	5%	2%
iShares Core US Aggregate Bond	AGG	5%	2%
<b>Others</b>			
iShares TIPS Bond	TIP	5%	2%
iShares JPMorgan USD Emerging Markets Bond	EMB	5%	2%
iShares US Preferred Stock	PFF	3%	1%
<b>Alternatives</b>			
SPDR Gold Shares	GLD	10%	4%
United States Oil	USO	10%	4%
Vanguard REIT ETF	VNQ	10%	4%
The PowerShares DB US Dollar Index Bullish Fund	UUP	10%	4%
<b>Risk-Off</b>			
Morgan Stanley Two Year Treasury Index	N/A	100%	N/A

\*Rounded to the nearest percentage

The ETFs make periodic filings with the Securities and Exchange Commission (“SEC”). Information provided to or filed with the SEC by each ETF pursuant to the securities laws can be located through the SEC’s website at [www.sec.gov](http://www.sec.gov). In addition, information may be obtained from other sources including, but not limited to, press releases, newspaper articles and other publicly disseminated documents. **Neither the issuer nor the agent makes any representation that such publicly available documents or any other publicly available information regarding the ETFs is accurate or complete.**

The Morgan Stanley Two Year Treasury Index has been developed by Morgan Stanley & Co. LLC (the "Sponsor") and will be calculated and rebalanced by Morgan Stanley & Co. LLC (acting in such capacity as the "Calculation Agent").

The Morgan Stanley Two Year Treasury Index is a rules-based index that seeks to capture the yield from US Treasury notes with a maturity of between two years and two years and three months by notionally purchasing futures contracts on US Treasury notes. The Morgan Stanley Two Year Treasury Index is published on Bloomberg under the ticker symbol MSUST2TR <Index>.

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## **Adjustments, Disruptions and Errors**

### **Definitions**

“Rules” means the description produced by Morgan Stanley that provides an overview of the methodology of the Strategy.



“**Strategy**” means the Morgan Stanley MAP Trend Strategy.

“**Strategy Business Day**” means a day that is not a public holiday in the New York Stock Exchange calendar or the Chicago Board of Trade calendar.

“**Strategy Calculation Agent**” is Morgan Stanley & Co. LLC.

“**Strategy Level**” means the calculation of the level of the Strategy.

“**Strategy Live Date**” is March 7, 2017

“**Strategy Sponsor**” is Morgan Stanley & Co. International plc.

### **Overview**

The Strategy is calculated on the basis of algorithmic formulas and therefore no discretion can be exercised by the Strategy Sponsor or the Strategy Calculation Agent in the calculation of the Strategy. However, on occasion, there may be situations requiring adjustments to the Strategy that are outside the scheduled adjustments and rebalances. Such adjustments might be made by Strategy Sponsor or the Strategy Calculation Agent by having recourse to discretionary decisions. Any discretion will be used in a commercially reasonable manner and exclusively in order to ensure that the Strategy continues to reflect, as closely as possible, the value of the Strategy components in the sole determination of the Strategy Sponsor.

### **Adjustment Events**

The Strategy Calculation Agent will determine whether a circumstance relating to any Index Component has a dilutive, concentrative or other effect on the theoretical value of such Index Component and, if so, will (1) make the corresponding adjustment, if any, to the Units or closing prices for such Index Component and/or any of the other provisions hereof as the Strategy Calculation Agent determines appropriate to account for that dilutive, concentrative or other effect; and (2) determine the effective date of that adjustment. As a result of the foregoing adjustments, the total number of Index Components may, on a given Strategy Business Day, increase or decrease.

### **Disruption Events**

Each of the following is a “**Disruption Event**”:

A **Material Change in the Index Components’ Methodology** occurs if the Strategy Sponsor determines that there has been a material change to the Index Components or other related indices and including hours of continuous market trading and publication of bid and ask prices or the de-listing of any of the Index Components;

An **Underlying Strategy Disruption** occurs if any dependencies needed to calculate the Trend Signal are (i) not calculated and announced by the Strategy Sponsor (regardless of whether the dependencies are calculated by a successor sponsor or not); (ii) replaced by a successor Strategy using the same or substantially the same methodology; or (iii) cancelled permanently;

A **Termination of Data License** occurs if the Strategy Sponsor determines there has been a termination, revocation or suspension of any third-party license agreement or permission pursuant to which data are supplied to compile or calculate the Strategy

A **Price Source Disruption** occurs if the Strategy Sponsor or the Strategy Calculation Agent determines that any of the source data required to calculate the Strategy are not available. This may include the published level of an ETF or data provided by a third party vendor. A Price Source Disruption may also include any permanent cancellation or prolonged suspension of any Index Component.

A **Change in Law** occurs if there has been a change in applicable law or regulation that prevents the Strategy Sponsor and/or the Strategy Calculation Agent from calculating, publishing or hedging the Strategy.

A **Hedging Disruption** occurs if the Strategy Sponsor determines that Morgan Stanley or any of its affiliates would be unable after using commercially reasonable efforts to:

acquire, establish, re-establish, substitute, maintain, unwind or dispose of any transactions or instruments deemed necessary to hedge its position in relation to any relevant transactions relating to or calculated by reference to the Strategy; or

- o realize, recover or remit the proceeds of any such transactions or instruments;

A **Force Majeure Event** occurs if the Strategy Sponsor determines that an event or circumstance has occurred that is beyond the reasonable control of the Strategy Sponsor and, as a result of which, the Strategy Sponsor or the Strategy Calculation Agent is unable to calculate, publish or take any other necessary action in relation to the Strategy. Such event or circumstance may include (without limitation) a systems failure, fire, building evacuation, natural or man-made disaster, act of state, armed conflict, act of terrorism, riot or labor disruption.

Potential Actions

February 2019 Page 36

In the event that the Strategy Sponsor determines that a Disruption Event has occurred, the Strategy Sponsor may in its discretion:

- substitute the relevant ETF with a replacement instrument, provided that such replacement is similarly representative of the existing Index Component;

- make such determinations or adjustments to the terms of the Strategy Methodology or the Index Components as it deems necessary including sourcing data from alternative providers;

- defer, or direct the Strategy Calculation Agent to defer, the availability of the Strategy until the next Strategy Business Day on which there is no Disruption Event;

- reallocate all or a portion of the Strategy exposure to cash or cash equivalents; or

- instruct the Strategy Calculation Agent to cease to calculate and make available the Strategy permanently.

#### Index Component Adjustments

Any adjustments required for Index Components will be made in accordance with the standard exchange methodology. Examples of adjustments include change of units, close price determination or change in expiration schedule or first delivery dates.

#### Increased Costs

If at any time following the Strategy Live Date, due to the adoption of or any change in any applicable law or regulation or any event outside of its control, the Strategy Sponsor determines in good faith that a party would incur an increased cost in effecting transactions in the Index Components to reflect the notional exposure to the Strategy performance, the Strategy Sponsor retains the right to make any adjustments to the strategy methodology so that the Strategy performance takes account of such increased costs.

#### Adjustment Procedures, Notification and Consultation Process

If any modification or adjustment is made to the calculation of the Strategy under the Rules, the Strategy Sponsor will make such modifications or adjustments based on market conditions and other relevant factors, as in the judgment of the Strategy Sponsor, are necessary to ensure that the Strategy continues to reflect, as closely as possible, the underlying economic interest it is designed to represent.

Wherever practicable, any adjustments to the calculation of the Strategy, other than a pre-determined rebalancing, will be announced to the relevant interested parties or investors. Such announcement will be made in a timely fashion and, when reasonably possible, prior to the date in which the changes are due to become effective.

If the Strategy Sponsor determines in its discretion that a consultation with the relevant interested parties or investors is appropriate, it will inform them of the procedures applicable to the consultation.

### **Errors**

The Strategy Sponsor reserves the right to make adjustments to the Strategy Level to correct any erroneous calculation or publication of the Strategy Level. The Strategy Sponsor will determine whether such error requires a change in the composition or calculation of the Strategy and, if so, the procedures outlined above will apply.