

## Structured Product Details

Name 1	Buffered Performance Leveraged Upside Securities linked to Dow Jones Industrial Average Index	
Issue Size Issue Price Term Annualized Cou	\$7.82 million \$10 60 Months 0.00%	
Pricing Date Issue Date Valuation Date Maturity Date	August 16, 2013 August 21, 2013 August 16, 2018 August 21, 2018	
Issuer CDS Rate Swap Rate	Morgan Stanley 138.41 bps 1.74%	
Reference Asse	Average Index	
Initial Level Dividend Ra Implied Vola Delta <sup>1</sup>	=	
Fair Price at Iss	sue \$9.20	
CUSIP SEC Link	61762P468 www.sec.gov/Archives/edgar/ data/895421/000095010313004999/	

Report Prepared On: 08/26/14

# **Buffered Performance Leveraged Upside** Securities linked to Dow Jones Industrial Average Index

**Structured Products Research Report** 

## Description

Morgan Stanley issued \$7.82 million of Buffered Performance Leveraged Upside Securities linked to Dow Jones Industrial Average Index on August 21, 2013 at \$10 per note.

These notes are Morgan Stanley-branded Buffered PLUS securities that do not pay periodic coupons, but instead pay a single amount at maturity depending on the final level of the Dow Jones Industrial Average Index.

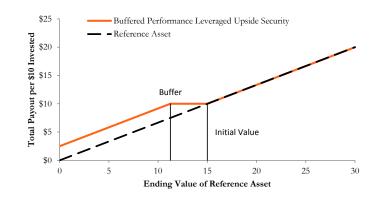
If on August 16, 2018 the Dow Jones Industrial Average Index level is higher than 15, the notes pay a return equal to the percentage increase in the Dow Jones Industrial Average Index. If on August 16, 2018 the refe is below 15 but not below 11.25, investors receive \$10 face value per note. If the Dow Jones Industrial Average Index level on August 16, 2018 is lower than 11.25, investors receive face value per note reduced by the amount the reference asset is below 11.25 as a percent of the initial level, 15.

## Valuation

This product can be valued as a combination of a note from Morgan Stanley, one short out-of-the-money put option, and one long at-the-money call option. For reasonable valuation inputs this note was worth \$9.20 when it was issued on August 21, 2013 because the value of the options investors gave Morgan Stanley plus the interest investors would have received on Morgan Stanley's straight debt was worth \$0.80 more than the options investors received from Morgan Stanley.

There is no active secondary market for most structured products. Structured products, including this note, therefore are much less liquid than simple stocks, bonds, notes and mutual funds. Investors are likely to receive less than the structured product's estimated market value if they try to sell the structured product prior to maturity. Our valuations do not incorporate this relative lack of liquidity and therefore should be considered an upper bound on the value of the structured product.

#### Payoff Curve at Maturity



The payoff diagram shows the final payoff of this note given the Dow Jones Industrial Average Index level (horizontal axis). For comparison, the dashed line shows the payoff if you invested in the Dow Jones Industrial Average Index directly.

Tim Husson, Ph.D., Senior Financial Economist, SLCG (+1) 703.890.0743

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FIND SLCG STRUCTURED PRODUCTS RESEARCH AT

TimHusson@slcg.com

3998 FAIR RIDGE DRIVE, SUITE 250, FAIRFAX, VA 22033 | MAIN (703) 246-9380 | INFO@SLCG.COM 100 WILSHIRE BLVD, SUITE 950, SANTA MONICA, CA 90401 | MAIN (310) 917-1075

### **Related Research**

#### **Research Papers:**

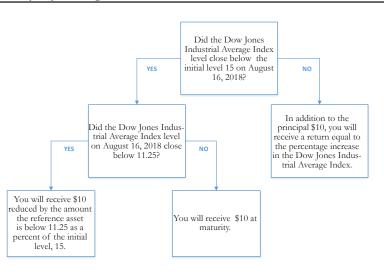
www.slcg.com/research.php

- "Are Structured Products Suitable for Retail Investors?" December 2006.
- "Structured Products in the Aftermath of Lehman Brothers," November 2009.
- "What TiVo and JP Morgan Teach Us about Re-verse Convertibles," June 2010.

#### Principal Payback Table

The Dow Jones Industrial Average Index	Note Payoff
0.00	\$2.50
1.50	\$3.50
3.00	\$4.50
4.50	\$5.50
6.00	\$6.50
7.50	\$7.50
9.00	\$8.50
10.50	\$9.50
12.00	\$10.00
13.50	\$10.00
15.00	\$10.00
16.50	\$11.00
18.00	\$12.00
19.50	\$13.00
21.00	\$14.00
22.50	\$15.00

#### Maturity Payoff Diagram

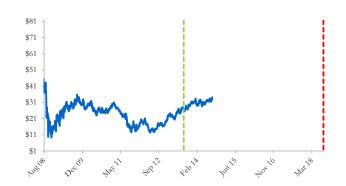


The contingent payoffs of this Buffered Performance Leveraged Upside Security.

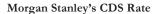
### Analysis

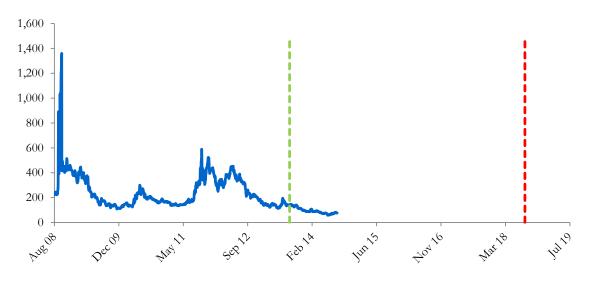
This Buffered Performance Leveraged Upside Security pays investors the increase in the Dow Jones Industrial Average Index, but if the Dow Jones Industrial Average Index, declines over the term of the note, investors will suffer losses equal to the percentage decline in the Dow Jones Industrial Average Index. In addition, investors bear the credit risk of Morgan Stanley. Investors purchasing this Buffered Performance Leveraged Upside Security effectively sell at-the-money put options to Morgan Stanley, buy at-the-money call options, and a zero-coupon note from Morgan Stanley. This Buffered Performance Leveraged Upside Security is fairly priced if and only if the market value of the options investors received from Morgan Stanley equals the market value of the options investors gave Morgan Stanley plus the interest investors would have received on Morgan Stanley's straight debt.

#### Morgan Stanley's Stock Price



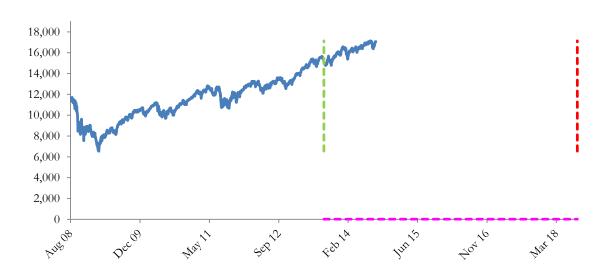
The graph above shows the adjusted closing price of the issuer Morgan Stanley for the past several years. The stock price of the issuer is an indication of the financial strength of Morgan Stanley. The adjusted price shown above incorporates any stock split, reverse stock split, etc.





Credit default swap (CDS) rates are the market price that investors require to bear credit risk of an issuer such as Morgan Stanley. CDS rates are usually given in basis points (bps). One basis point equals 0.01%. Higher CDS rates reflect higher perceived credit risk, higher required yields, and therefore lower market value of Morgan Stanley's debt, including outstanding Buffered Performance Leveraged Upside Security. Fluctuations in Morgan Stanley's CDS rate impact the market value of the notes in the secondary market.



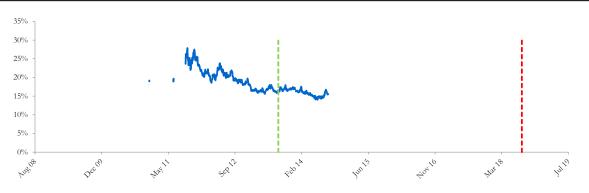


The graph above shows the historical levels of the Dow Jones Industrial Average Index for the past several years. The final payoff of this note is determined by the Dow Jones Industrial Average Index level at maturity. Higher fluctuations in the Dow Jones Industrial Average Index level correspond to a greater uncertainty in the final payout of this Buffered Performance Leveraged Upside Security.

#### **Realized Payoff**

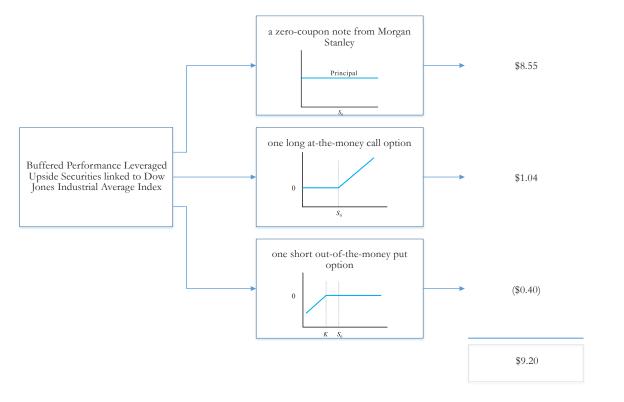
This product will mature on August 21, 2018.





The annualized implied volatility of the Dow Jones Industrial Average Index on August 16, 2013 was 16.37%, meaning that options contracts on the Dow Jones Industrial Average Index were trading at prices that reflect an expected annual volatility of 16.37%. The higher the implied volatility, the larger the expected fluctuations of the Dow Jones Industrial Average Index level and of the Note's market value during the life of the Notes.

#### Decomposition of this Buffered Performance Leveraged Upside Security



This note can be decomposed into different components, and each component can be valued separately. The chart above shows the value of each component of this Buffered Performance Leveraged Upside Security.

Delta measures the sensitivity of the price of the note to the the Dow Jones Industrial Average Index level on August 16, 2013.
CDS rates can be considered a measure of the probability that an issuer will default over a certain period of time and the likely loss given a default. The lower the CDS rate, the lower the default probability. CDS rate is given in basis points (1 basis point equals 0.01%), and is considered as a market premium, on top of the risk-free rate, that investors require to insure against a potential default.
3. Fair price evaluation is based on the Black-Scholes model of the the Dow Jones Industrial Average Index on August 16, 2013.
4. Calculated payout at maturity is only an approximation, and may differ from actual payouts at maturity.
5. Our evaluation does not include any transaction fees, broker commissions, or liquidity discounts on the notes.

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