

## Structured Products Research Report

Report Prepared On: 05/01/13

#### **Structured Product Details**

Name PLUS linked to S&P 500 Index

Issue Size	\$27.22 million
Issue Price	\$1,000
Term	36 Months
Annualized Coupon	0.00%
Pricing Date	April 30, 2008
Issue Date	May 7, 2008
Valuation Date	April 29, 2011
Maturity Date	May 3, 2011
Issuer	Morgan Stanlay

Issuer	Morgan Stanley
CDS Rate	137.75 bps
Swap Rate	3.34%

Reference Asset the S&	<b>,</b> 500	Index
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Initial Level	1,385.59
Dividend Rate	2.16%
Implied Volatility	20.70%
Delta <sup>1</sup>	1.11

Fair Price at Issue	\$932.91
Realized Return	-0.53%

CUSIP	6174465L9
SEC Link	www.sec.gov/Archives/edgar/ data/895421/000095010308001216/
	dp09782_424b2-ps596.htm

### 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 Reverse Convertibles," June 2010.

## PLUS linked to S&P 500 Index

## Description

Morgan Stanley issued \$27.22 million of PLUS linked to S&P 500 Index on May 7, 2008 at \$1,000 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 S&P 500 Index.

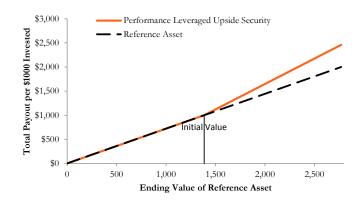
If on April 29, 2011 the S&P 500 Index level is higher than 1,385.59, the notes pay a return equal to the percentage increase in the S&P 500 Index multiplied by 1.46. If on April 29, 2011 the refe is below 1,385.59 but not below 1385.59, investors receive \$1,000 face value per note. If the S&P 500 Index level on April 29, 2011 is lower than 1385.59, investors receive face value per note reduced by the amount the reference asset is below 1385.59 as a percent of the initial level, 1,385.59.

## **Valuation**

This product can be valued as a combination of a note from Morgan Stanley, one short out-of-the-money put option, and 1.46 long at-the-money call options. For reasonable valuation inputs this note was worth \$932.91 when it was issued on May 7, 2008 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 \$67.09 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

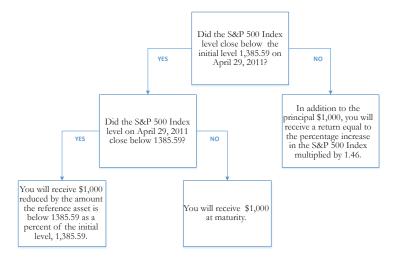


The payoff diagram shows the final payoff of this note given the S&P 500 Index level (horizontal axis). For comparison, the dashed line shows the payoff if you invested in the S&P 500 Index directly.

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#### Maturity Payoff Diagram

The S&P 500 Index	Note Payoff
0.00	\$0.00
138.56	\$100.00
277.12	\$200.00
415.68	\$300.00
554.24	\$400.00
692.80	\$500.00
831.35	\$600.00
969.91	\$700.00
1,108.47	\$800.00
1,247.03	\$900.00
1,385.59	\$1,000.00
1,524.15	\$1,146.00
1,662.71	\$1,292.00
1,801.27	\$1,438.00
1,939.83	\$1,584.00
2,078.39	\$1,730.00

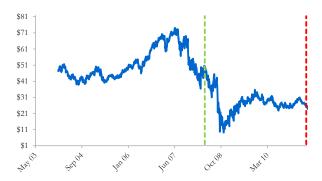


The contingent payoffs of this Performance Leveraged Upside Security.

# **Analysis**

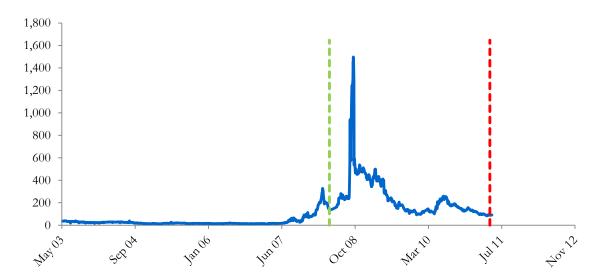
This Performance Leveraged Upside Security pays investors the increase in the S&P 500 Index multiplied by 1.46, but if the S&P 500 Index declines over the term of the note, investors will suffer losses equal to the percentage decline in the S&P 500 Index. In addition, investors bear the credit risk of Morgan Stanley. Investors purchasing this 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 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



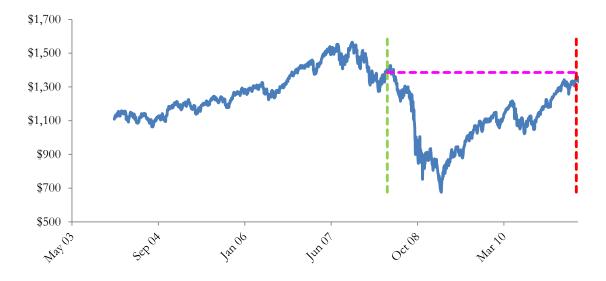
The graph above shows the adjusted closing price of the issuer Morgan Stanley for the past several years. The stock price of the issuer is an indication of the financial strength of Morgan Stanley. The adjusted price shown above incorporates any stock split, reverse stock split, etc.

### Morgan Stanley's CDS Rate



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 Performance Leveraged Upside Security. Fluctuations in Morgan Stanley's CDS rate impact the market value of the notes in the secondary market.

#### The S&P 500 Index Level

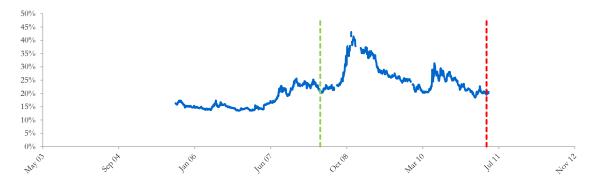


The graph above shows the historical levels of the S&P 500 Index for the past several years. The final payoff of this note is determined by the S&P 500 Index level at maturity. Higher fluctuations in the S&P 500 Index level correspond to a greater uncertainty in the final payout of this Performance Leveraged Upside Security.

#### Realized Payoff

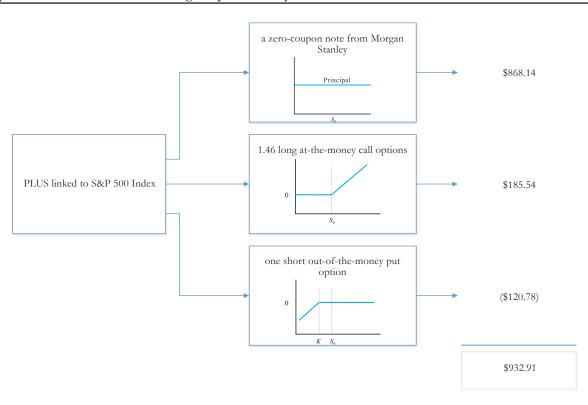
This note matured on May 3, 2011 and investors received \$984.14 per note.

#### Reference Asset The S&P 500 Index's Implied Volatility



The annualized implied volatility of the S&P 500 Index on April 30, 2008 was 20.70%, meaning that options contracts on the S&P 500 Index were trading at prices that reflect an expected annual volatility of 20.70%. The higher the implied volatility, the larger the expected fluctuations of the S&P 500 Index level and of the Note's market value during the life of the Notes.

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

- Delta measures the sensitivity of the price of the note to the the S&P 500 Index level on April 30, 2008.
  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.
  Fair price evaluation is based on the Black-Scholes model of the the S&P 500 Index on April 30, 2008.
  Calculated payout at maturity is only an approximation, and may differ from actual payouts at maturity.
  Our evaluation does not include any transaction fees, broker commissions, or liquidity discounts on the notes.