

# Structured Product Details

Name Buffered Accelerated Market Participation Securities linked to SPDR S&P Metals & Mining ETF **Issue Size** \$1.45 million **Issue Price** \$1,000 18 Months Term Annualized Coupon 0.00% March 29, 2011 **Pricing Date** Issue Date April 5, 2011 Valuation Date September 25, 2012 Maturity Date October 2, 2012 HSBC Issuer CDS Rate 20.74 bps 0.88% Swap Rate **Reference Asset** SPDR S&P Metals & Mining ETF's stock \$73.57 Initial Level 0.56% **Dividend Rate** Implied Volatility 34.11% Delta1 0.48 \$940.95 Fair Price at Issue **Realized Return** -22.40% CUSIP 4042K1FK4 SEC Link www.sec.gov/Archives/edgar/ data/83246/000114420411019144/ v217035 424b2.htm

Structured Products Research Report

Report Prepared On: 08/02/13

# Buffered Accelerated Market Participation Securities linked to SPDR S&P Metals & Mining ETF

# Description

HSBC issued \$1.45 million of Buffered Accelerated Market Participation Securities linked to SPDR S&P Metals & Mining ETF on April 5, 2011 at \$1,000 per note.

These notes are HSBC-branded Buffered PLUS securities that do not pay periodic coupons, but instead pay a single amount at maturity depending on the final level of SPDR S&P Metals & Mining ETF's stock.

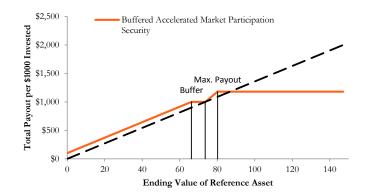
If on September 25, 2012 SPDR S&P Metals & Mining ETF's stock price is higher than \$73.57, but lower than \$80.19, the notes pay a return equal to the percentage increase in SPDR S&P Metals & Mining ETF's stock multiplied by 2.0, up to a cap of 18.00%. If on September 25, 2012 the refe is below \$73.57 but not below \$66.21, investors receive \$1,000 face value per note. If SPDR S&P Metals & Mining ETF's stock price on September 25, 2012 is lower than \$66.21, investors receive face value per note reduced by the amount the reference asset is below \$66.21 as a percent of the initial level, \$73.57.

## Valuation

This product can be valued as a combination of a note from HSBC, one short out-of-themoney put option, two long at-the-money call options, and two short out-of-the-money call options. For reasonable valuation inputs this note was worth \$940.95 when it was issued on April 5, 2011 because the value of the options investors gave HSBC plus the interest investors would have received on HSBC's straight debt was worth \$59.05 more than the options investors received from HSBC.

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 SPDR S&P Metals & Mining ETF's stock price (horizontal axis). For comparison, the dashed line shows the payoff if you invested in SPDR S&P Metals & Mining ETF's stock directly.

### **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.

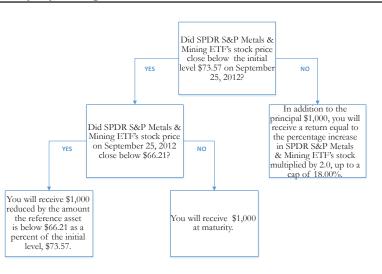
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### Principal Payback Table

SPDR S&P Metals & Mining ETF's Stock	Note Payoff
\$0.00	\$100.00
\$7.36	\$200.00
\$14.71	\$300.00
\$22.07	\$400.00
\$29.43	\$500.00
\$36.79	\$600.00
\$44.14	\$700.00
\$51.50	\$800.00
\$58.86	\$900.00
\$66.21	\$1,000.00
\$73.57	\$1,000.00
\$80.93	\$1,180.00
\$88.28	\$1,180.00
\$95.64	\$1,180.00
\$103.00	\$1,180.00
\$110.36	\$1,180.00

### Maturity Payoff Diagram

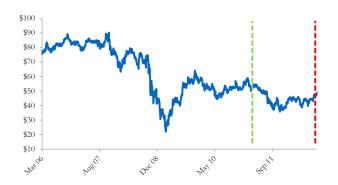


The contingent payoffs of this Buffered Accelerated Market Participation Security.

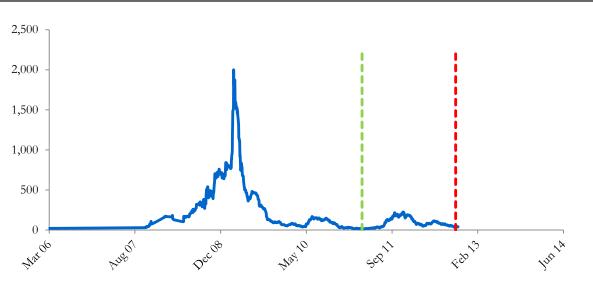
# Analysis

This Buffered Accelerated Market Participation Security pays investors the increase in SPDR S&P Metals & Mining ETF's stock multiplied by 2.0 capped at 18.00%, but if SPDR S&P Metals & Mining ETF's stock declines over the term of the note, investors will suffer losses equal to the percentage decline in SPDR S&P Metals & Mining ETF's stock. In addition, investors bear the credit risk of HSBC. Investors purchasing this Buffered Accelerated Market Participation Security effectively sell at-the-money put and out-of-the-money call options to HSBC, buy at-the-money call options, and a zero-coupon note from HSBC. This Buffered Accelerated Market Participation Security is fairly priced if and only if the market value of the options investors received from HSBC equals the market value of the options investors received from HSBC equals the market on HSBC's straight debt.

#### **HSBC's Stock Price**

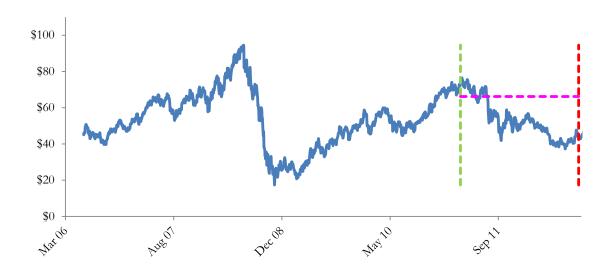


The graph above shows the adjusted closing price of the issuer HSBC for the past several years. The stock price of the issuer is an indication of the financial strength of HSBC. The adjusted price shown above incorporates any stock split, reverse stock split, etc.



## HSBC's CDS Rate

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



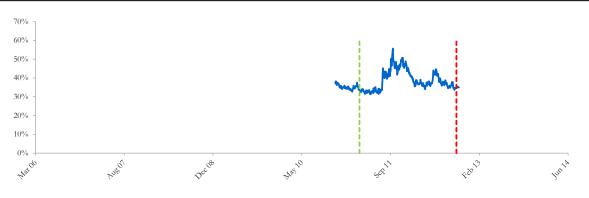
### SPDR S&P Metals & Mining ETF's Stock Price

The graph above shows the historical levels of SPDR S&P Metals & Mining ETF's stock for the past several years. The final payoff of this note is determined by SPDR S&P Metals & Mining ETF's stock price at maturity. Higher fluctuations in SPDR S&P Metals & Mining ETF's stock price correspond to a greater uncertainty in the final payout of this Buffered Accelerated Market Participation Security.

### **Realized Payoff**

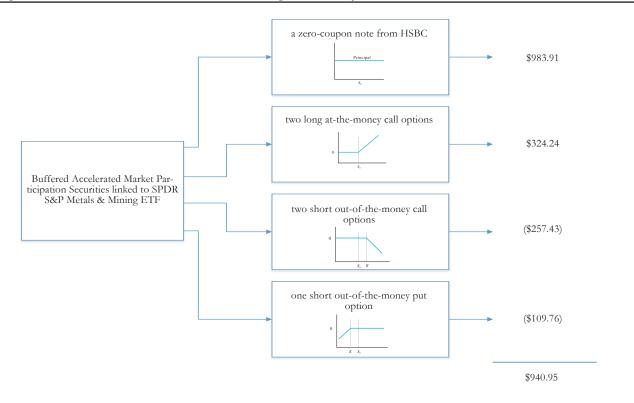
This note matured on October 2, 2012 and investors received \$684.24 per note.

### Reference Asset SPDR S&P Metals & Mining ETF's Stock's Implied Volatility



The annualized implied volatility of SPDR S&P Metals & Mining ETF's stock on March 29, 2011 was 34.11%, meaning that options contracts on SPDR S&P Metals & Mining ETF's stock were trading at prices that reflect an expected annual volatility of 34.11%. The higher the implied volatility, the larger the expected fluctuations of SPDR S&P Metals & Mining ETF's stock price and of the Note's market value during the life of the Notes.

#### Decomposition of this Buffered Accelerated Market Participation 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 Accelerated Market Participation Security.

- Delta measures the sensitivity of the price of the note to the SPDR S&P Metals & Mining ETF's stock price on March 29, 2011.
  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 SPDR S&P Metals & Mining ETF's stock on March 29, 2011.
  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.

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