

## Structured Product Details

Name Trigger Yield Optimization Notes linked to Las Vegas Sands Corp.	
Issue Size	\$17.54 million
Issue Price	\$45.97
Term	12 Months
Annualized Coupon	11.00%
Pricing Date	April 21, 2011
Issue Date	April 29, 2011
Valuation Date	April 23, 2012
Maturity Date	April 30, 2012
Issuer	HSBC
CDS Rate	18.71 bps
Swap Rate	0.76%
Reference Asset Initial Level Trigger Price Conversion Price Dividend Rate Implied Volatility Delta <sup>1</sup>	Las Vegas Sands Corp.'s stock \$45.97 \$29.88 \$45.97 0.00% 7 47.95% 0.36
Fair Price at Issue	\$44.80
Realized Return	11.57%
CUSIP SEC Link	40433C858 www.sec.gov/Archives/edgar/ data/83246/000114420411023859/ v219594_424b2.htm

Structured Products Research Report

Report Prepared On: 04/29/13

# Trigger Yield Optimization Notes linked to Las Vegas Sands Corp.

# Description

HSBC issued \$17.54 million of Trigger Yield Optimization Notes linked to Las Vegas Sands Corp. on April 29, 2011 at \$45.97 per note.

These notes are HSBC-branded single observation reverse convertibles. Single observation reverse convertibles pay periodic interest coupons and at maturity convert into shares of the reference security if the price of the reference security at the notes' maturity is below the trigger price determined when the notes were issued.

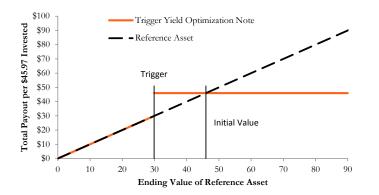
These 12-month notes pay monthly coupons at an annualized rate of 11.00%. In addition to the monthly coupons, on April 30, 2012 investors will receive the market value of one share of Las Vegas Sands Corp.'s stock if on April 23, 2012 Las Vegas Sands Corp.'s stock closes below \$29.88 (65% of Las Vegas Sands Corp.'s stock price on April 21, 2011). Otherwise, investors will receive the \$45.97 face value per note.

# Valuation

This HSBC single observation reverse convertible linked to Las Vegas Sands Corp.'s stock can be valued as a combination of a note from HSBC and a short European out-of-themoney cash-or-nothing binary put option, and a short European out-of-the-money put option on Las Vegas Sands Corp.'s stock. For reasonable valuation inputs this note was worth \$44.80 per \$45.97 when it was issued on April 29, 2011 because investors were effectively being paid only \$4.63 for giving HSBC options which were worth \$5.80.

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 Las Vegas Sands Corp.'s stock price (horizontal axis). For comparison, the dashed line shows the payoff if you invested in Las Vegas Sands Corp.'s stock directly.

Mike Yan, Ph.D., Senior Financial Economist, SLCG (+1) 703.539.6780 MikeYan@slcg.com

FIND SLCG STRUCTURED PRODUCTS RESEARCH AT www.SLCG.com

© 2012 SECURITIES LITIGATION & CONSULTING GROUP. ALL RIGHTS RESERVED. 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 Reverse Convertibles," June 2010.

### Principal Payback Table

Las Vegas Sands Corp.'s Stock	Note Payoff
\$0.00	\$0.00
\$4.60	\$4.60
\$9.19	\$9.19
\$13.79	\$13.79
<b>\$</b> 18.39	\$18.39
\$22.99	\$22.99
\$27.58	\$27.58
\$32.18	\$45.97
\$36.78	\$45.97
\$41.37	\$45.97
\$45.97	\$45.97
\$50.57	\$45.97
\$55.16	\$45.97
\$59.76	\$45.97
\$64.36	\$45.97
\$68.96	\$45.97

#### Maturity Payoff Diagram



The contingent payoffs of this Trigger Yield Optimization Note.

## Analysis

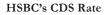
This single observation reverse convertible's 11.00% coupon rate is higher than the yield HSBC paid on its straight debt but, in addition to HSBC's credit risk, investors bear the risk that they will receive shares of Las Vegas Sands Corp.'s stock when those shares are worth substantially less than the face value of the note at maturity.

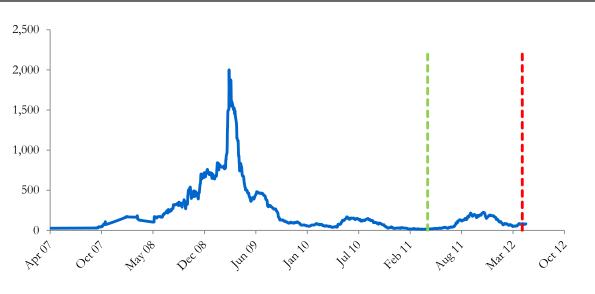
Investors purchasing these reverse convertibles effectively sell put options to HSBC and post the note's issue price as collateral to secure satisfaction of the investors' obligations under the option contracts. HSBC pays investors a "coupon" that is part payment for the put options and part interest on the investors' posted collateral. This reverse convertible is fairly priced if and only if the difference between the reverse convertible's "coupon rate" and interest paid on HSBC's straight debt equals the value of the put option investors are giving to HSBC. Whether this reverse convertible is suitable or not is identically equivalent to whether selling put options on the reference stock at the option premium being paid by HSBC was suitable for the investor.

#### HSBC's Stock Price

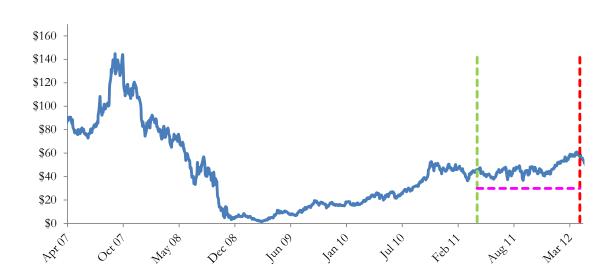


The graph above shows the adjusted closing price of the issuer HSBC for the past several years. The stock price of the issuer is an indication of the financial strength of HSBC. The adjusted price shown above incorporates any stock split, reverse stock split, etc.





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 Trigger Yield Optimization Note. Fluctuations in HSBC's CDS rate impact the market value of the notes in the secondary market.



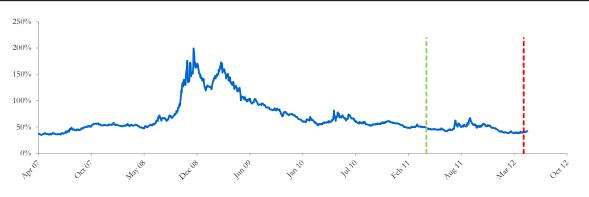
#### Las Vegas Sands Corp.'s Stock Price

The graph above shows the historical levels of Las Vegas Sands Corp.'s stock for the past several years. The final payoff of this note is determined by Las Vegas Sands Corp.'s stock price at maturity. Higher fluctuations in Las Vegas Sands Corp.'s stock price correspond to a greater uncertainty in the final payout of this Trigger Yield Optimization Note.

#### **Realized Payoff**

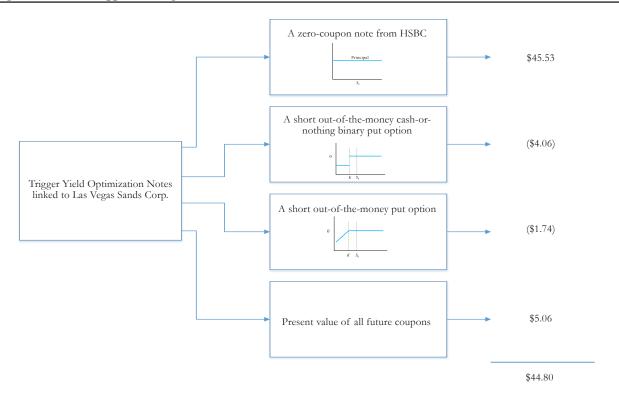
This note matured on April 30, 2012 and investors received \$45.97 per note.

## Reference Asset Las Vegas Sands Corp.'s Stock's Implied Volatility



The annualized implied volatility of Las Vegas Sands Corp.'s stock on April 21, 2011 was 47.95%, meaning that options contracts on Las Vegas Sands Corp.'s stock were trading at prices that reflect an expected annual volatility of 47.95%. The higher the implied volatility, the larger the expected fluctuations of Las Vegas Sands Corp.'s stock price and of the Note's market value during the life of the Notes.

#### Decomposition of this Trigger Yield Optimization Note



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 Trigger Yield Optimiza-tion Note.

- Delta measures the sensitivity of the price of the note to the Las Vegas Sands Corp.'s stock price on April 21, 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 Las Vegas Sands Corp.'s stock on April 21, 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.

©2012 Securities Litigation and Consulting Group. All Rights Reserved. This research report and its contents are for informational and educational purposes only. The views and opinions on this document are those of the authors and should not be considered investment advice. Decisions based on information obtained from this document are your sole responsibility, and before making any decision on the basis of this information, you should consider whether the information is appropriate in light of your particular investment needs, objectives and financial circumstances. Investors should seek financial advice regarding the suitability of investing in any securities or following any investment strategies.