Structured Products Research Report

SECURITIES LITIGATION & CONSULTING GROUP

Report Prepared On: 04/29/13

Structured Product Details

Name	Single Observation ELKS linked to Las Vegas Sands Corp.
Issue Size	$16.01 million
Issue Price	$10
Term	6 Months
Annualized Coupon	12.00%
Pricing Date	January 25, 2012
Issue Date	January 30, 2012
Valuation Date	July 20, 2012
Maturity Date	July 25, 2012
Issuer	Citigroup
CDS Rate	128.11 bps
Swap Rate	0.78%
Reference Asset	Las Vegas Sands Corp.'s stock
Initial Level	$49.74
Trigger Price	$37.31
Conversion Price	$49.74
Dividend Rate	0.00%
Implied Volatility	38.40%
Delta[1]	0.35
Fair Price at Issue	$9.89
Realized Return	12.72%
CUSIP	17317U352
SEC Link	www.sec.gov/Archives/edgar/data/831001/000095010312000392/dp28303_424b2-0169.htm

Single Observation ELKS linked to Las Vegas Sands Corp.

Description

Citigroup issued $16.01 million of Single Observation ELKS linked to Las Vegas Sands Corp. on January 30, 2012 at $10 per note.

These notes are Citigroup-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.

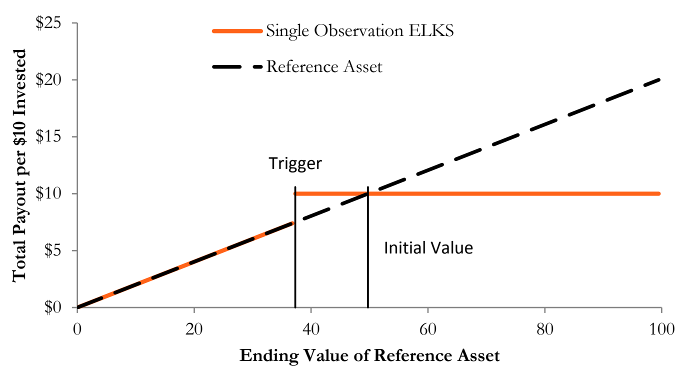
These 6-month notes pay monthly coupons at an annualized rate of 12.00%. In addition to the monthly coupons, on July 25, 2012 investors will receive the market value of 0.20 share of Las Vegas Sands Corp.'s stock if on July 20, 2012 Las Vegas Sands Corp.'s stock closes below $37.31 (75% of Las Vegas Sands Corp.'s stock price on January 25, 2012). Otherwise, investors will receive the $10 face value per note.

Valuation

This Citigroup single observation reverse convertible linked to Las Vegas Sands Corp.'s stock can be valued as a combination of a note from Citigroup and a short European out-of-the-money 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 $9.89 per $10 when it was issued on January 30, 2012 because investors were effectively being paid only $0.48 for giving Citigroup options which were worth $0.59.

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.

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.

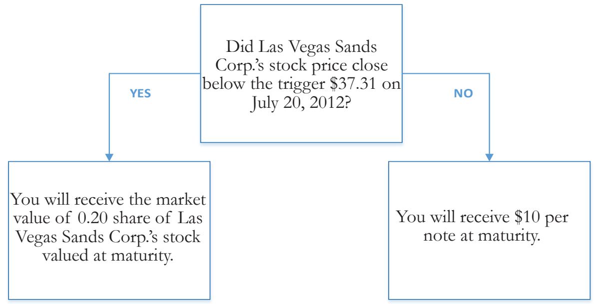
Mike Yan, Ph.D.,
Senior Financial Economist, SLCG
(+1) 703.539.6780
MikeYan@slcg.com

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

Principal Payback Table

Las Vegas Sands Corp.'s Stock	Note Payoff
$0.00	$0.00
$4.97	$1.00
$9.95	$2.00
$14.92	$3.00
$19.90	$4.00
$24.87	$5.00
$29.84	$6.00
$34.82	$7.00
$39.79	$10.00
$44.77	$10.00
$49.74	**$10.00**
$54.71	$10.00
$59.69	$10.00
$64.66	$10.00
$69.64	$10.00
$74.61	$10.00

Maturity Payoff Diagram



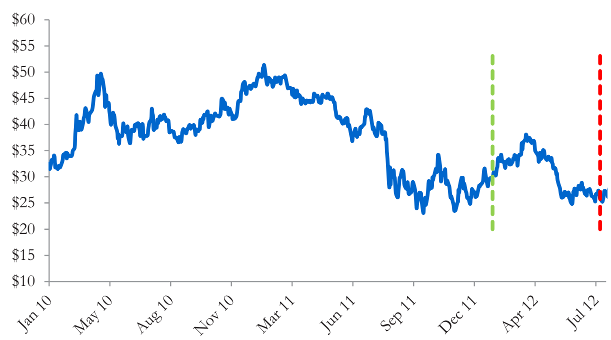
The contingent payoffs of this Single Observation ELKS.

Analysis

This single observation reverse convertible's 12.00% coupon rate is higher than the yield Citigroup paid on its straight debt but, in addition to Citigroup'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 Citigroup and post the note's issue price as collateral to secure satisfaction of the investors' obligations under the option contracts. Citigroup 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 Citigroup's straight debt equals the value of the put option investors are giving to Citigroup. 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 Citigroup was suitable for the investor.

Citigroup's Stock Price

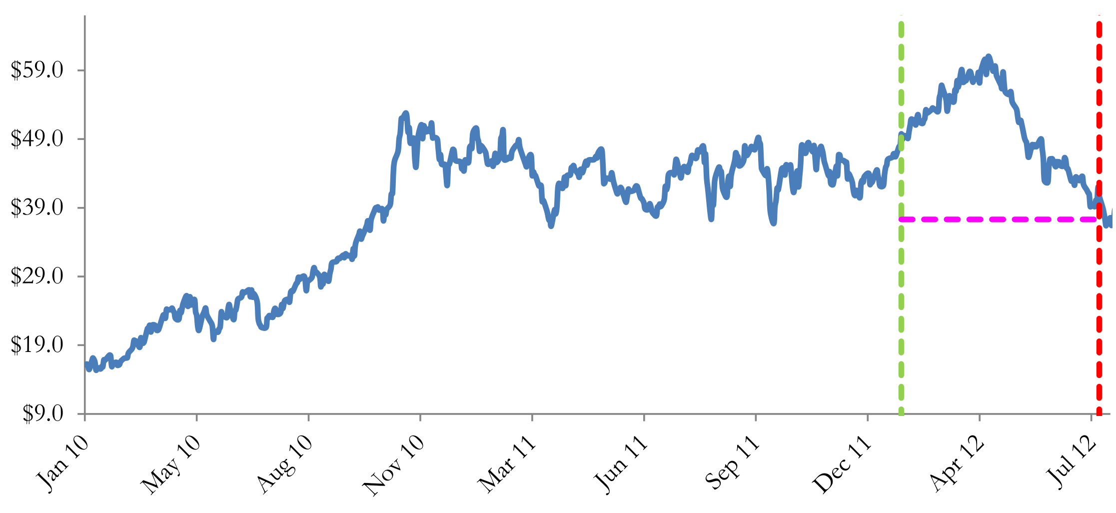


The graph above shows the adjusted closing price of the issuer Citigroup for the past several years. The stock price of the issuer is an indication of the financial strength of Citigroup. The adjusted price shown above incorporates any stock split, reverse stock split, etc.

Citigroup's CDS Rate

Credit default swap (CDS) rates are the market price that investors require to bear credit risk of an issuer such as Citigroup. 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 Citigroup's debt, including outstanding Single Observation ELKS. Fluctuations in Citigroup's CDS rate impact the market value of the notes in the secondary market.

Las Vegas Sands Corp.'s Stock Price

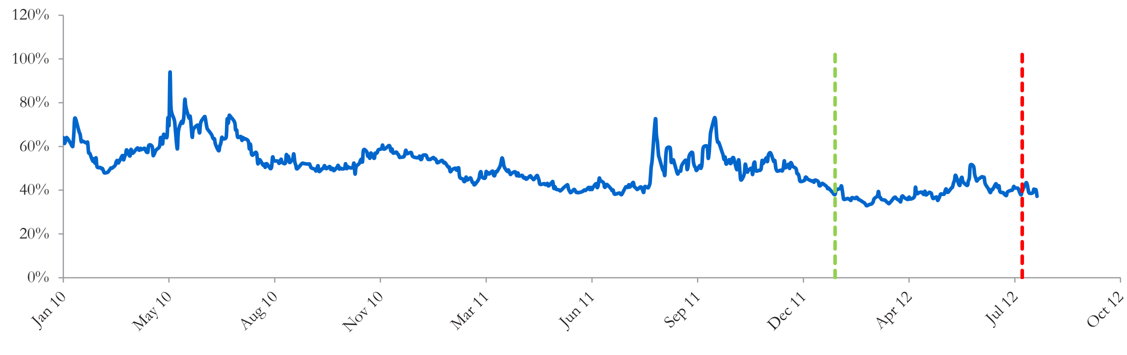


The graph above shows the historical levels of Las Vegas Sands Corp.'s stock for the past several years. The final payoff of this note is determined by Las Vegas Sands Corp.'s stock price at maturity. Higher fluctuations in Las Vegas Sands Corp.'s stock price correspond to a greater uncertainty in the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

Realized Payoff

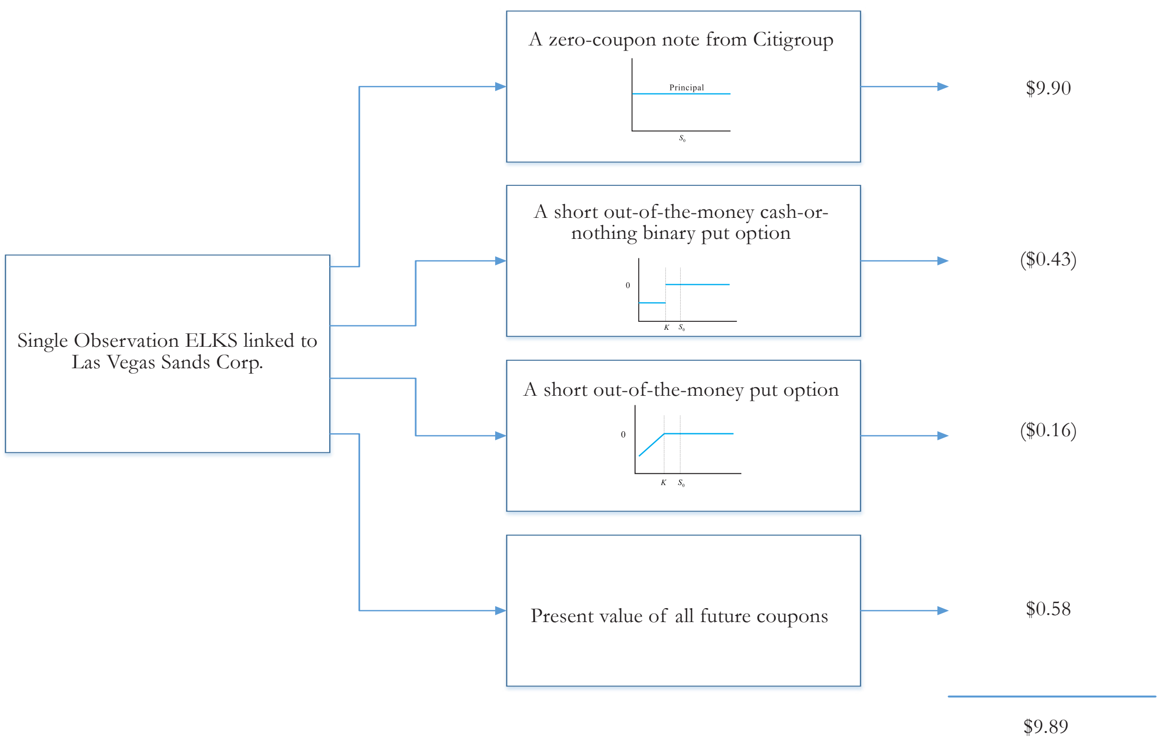
This note matured on July 25, 2012 and investors received $10.00 per note.

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



The annualized implied volatility of Las Vegas Sands Corp.'s stock on January 25, 2012 was 38.40%, meaning that options contracts on Las Vegas Sands Corp.'s stock were trading at prices that reflect an expected annual volatility of 38.40%. 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 Single Observation ELKS



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 Single Observation ELKS.

1. Delta measures the sensitivity of the price of the note to the Las Vegas Sands Corp.'s stock price on January 25, 2012.
2. 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 Las Vegas Sands Corp.'s stock on January 25, 2012.
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.