

Structured Product Details

Name Autocallable Contingent Coupon Equity Linked Securities Linked to Amazon.com Inc **Issue Size** \$4.48 million **Issue Price** \$1,000 12 Months Term Annualized Coupon 9.00% Pricing Date October 26, 2012 Issue Date October 31, 2012 Valuation Date October 26, 2013 Maturity Date October 31, 2013 Issuer Citigroup 46.3 bps CDS Rate 0.88% Swap Rate **Reference Asset** Amazon.com, Inc.'s stock Initial Level \$238.23 0.00% **Dividend Rate Implied Volatility** 35.28%

Fair Price at Issue	\$944.35
CUSIP SEC Link	1730T0ZC6 www.sec.gov/Archives/edgar/ data/831001/000095010312005746/ dp33863 424b2-0304.htm

Report Prepared On: 02/03/13

Autocallable Contingent Coupon Equity Linked Securities Linked to Amazon.com Inc

Structured Products Research Report

Description

Citigroup issued \$4.48 million of Autocallable Contingent Coupon Equity Linked Securities Linked to Amazon.com Inc on October 31, 2012 at \$1,000 per note.

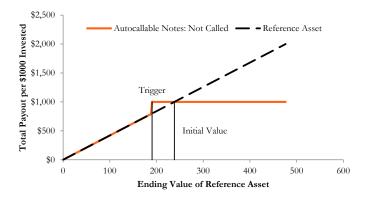
These 12-month notes are UBS-branded reverse convertible notes. On the quarterly coupon observation date, if the notes are not called back, they pay either quarterly coupon at an annualized rate of 9.00% if Amazon.com, Inc.'s stock price closes above the coupon barrier \$190.58, or no coupon if the stock price closes below the barrier. The first coupon observation date is January 26, 2013. This autocallable notes will be called back if the reference stock price on any quarterly call observation date after January 26, 2013 exceeds the initial stock price \$238.23. In this case, investors receive the principal plus any unpaid coupons. At maturity, the notes convert into shares of the reference security-4.20 shares of Amazon.com, Inc.'s stock in this case—if the market value of the reference stock at the note's maturity is below the trigger price \$190.58 (80% of the reference asset on October 27.201). Other 26, 2012). Otherwise, investors will receive the \$1,000 face value.

Valuation

This note can be viewed as a combination of a zero-coupon note from Citigroup, a series of contingent coupon payments, and a short put option on the reference asset. For reasonable valuation inputs this note was worth \$944.35 per \$1,000 face value when it was issued on October 31, 2012, including \$992.30 for the present value of the zero-coupon note, (\$82.54) for the short put options, and \$34.59 for the present value of all future contingent coupon payments.

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 Amazon.com, Inc.'s stock price (horizontal axis). For comparison, the dashed line shows the payoff if you invested in Amazon.com, Inc.'s stock directly.

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Related Research

Research Papers:

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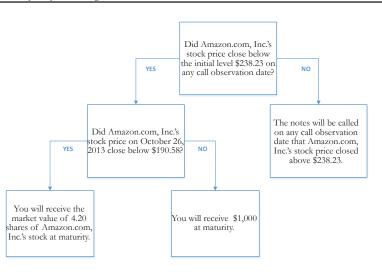
- "Are Structured Products Suitable for Retail Investors?" December 2006.
- "Structured Products in the Aftermath of Lehman Brothers," November 2009.
- "What TiVo and JP Morgan Teach Us about Re-verse Convertibles," June 2010.

Tim Dulaney, Ph.D.,

Principal Payback Table

Amazon.com, Inc.'s Stock	Note Payoff
\$0.00	\$0.00
\$23.82	\$100.00
\$47.65	\$200.00
\$71.47	\$300.00
\$95.29	\$400.00
\$119.12	\$500.00
\$142.94	\$600.00
\$166.76	\$700.00
\$190.58	\$1,000.00
\$214.41	\$1,000.00
\$238.23	\$1,000.00
\$262.05	\$1,000.00
\$285.88	\$1,000.00
\$309.70	\$1,000.00
\$333.52	\$1,000.00
\$357.35	\$1,000.00

Maturity Payoff Diagram



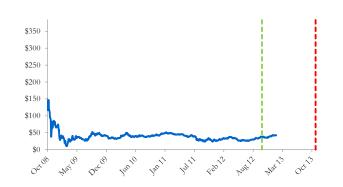
The contingent payoffs of this Autocallable Contingent Coupon Equity Linked Security.

Analysis

The 9.00% coupon rate on this Autocallable Contingent Coupon Equity Linked Security is higher than those paid by Citigroup on its straight debts but, in addition to Citigroup's credit risk, investors bear the risk that, 1) the note may be called; 2) the note may pay zero coupon because of the coupon contingency; 3) and the note will be converted into shares of Amazon.com, Inc.'s stock when Amazon.com, Inc.'s stock is worth substantially less than the face value of the note.

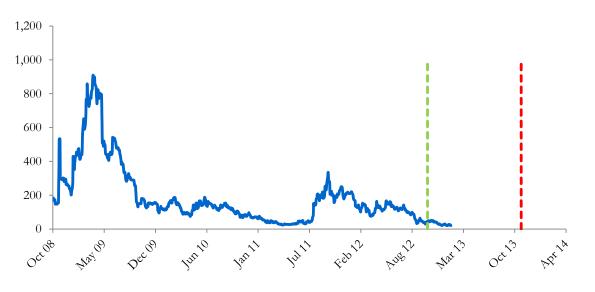
Investors purchasing these autocallable phoenix notes effectively sell contingent put options to Citigroup and post the note's issue price as collateral to secure satisfaction of the investors' obligations under the option contracts. Citigroup pays investors a contingent coupon that is part payment for the put options and part interest on the investors' posted collateral. This Autocallable Contingent Coupon Equity Linked Security is fairly priced if and only if the difference between the contingent coupon and interest paid on Citigroup's straight debt equals the value of the contingent put options investors are giving to Citigroup. Whether this Autocallable Contingent Coupon Equity Linked Security 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

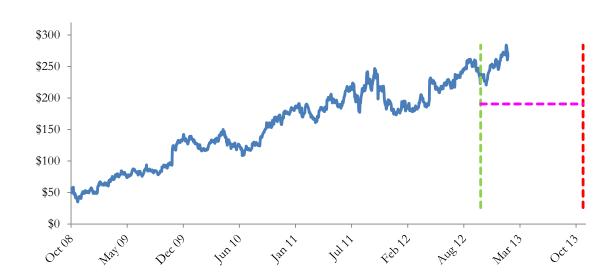


The graph above shows the adjusted closing price of the issuer Citigroup for the past several years. The stock price of the issuer is an indication of the financial strength of Citigroup. The adjusted price shown above incorporates any stock split, reverse stock split, etc.





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, bigher required yields, and therefore lower market value of Citigroup's debt, including outstanding Autocallable Contingent Coupon Equity Linked Security. Fluctuations in Citigroup's CDS rate impact the market value of the notes in the secondary market.



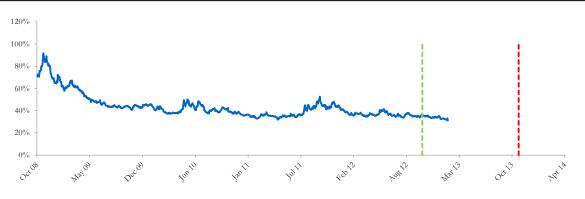
Amazon.com, Inc.'s Stock Price

The graph above shows the historical levels of Amazon.com, Inc.'s stock for the past several years. The final payoff of this note is determined by Amazon.com, Inc.'s stock price at maturity. Higher fluctuations in Amazon.com, Inc.'s stock price correspond to a greater uncertainty in the final payout of this Autocallable Contingent Coupon Equity Linked Security.

Realized Payoff

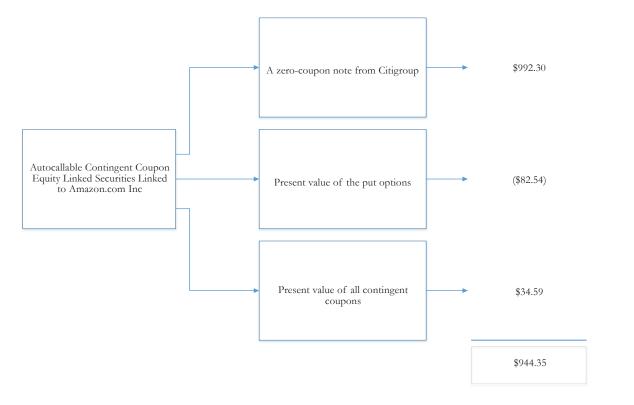
This note was early terminated on January 28, 2013 due to its automatic call feature. The Amazon.com, Inc.'s stock price on January 28, 2013 was \$276.04, higher than the initial level \$238.23. Investors received \$1,000 per note plus any unpaid coupons.





The annualized implied volatility of Amazon.com, Inc.'s stock on October 26, 2012 was 35.28%, meaning that options contracts on Amazon.com, Inc.'s stock were trading at prices that reflect an expected annual volatility of 35.28%. The bigher the implied volatility, the larger the expected fluctuations of Amazon.com, Inc.'s stock price and of the Note's market value during the life of the Notes.

Decomposition of this Autocallable Contingent Coupon Equity Linked 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 Autocallable Contingent Coupon Equity Linked Security.

- Delta measures the sensitivity of the price of the note to the Amazon.com, Inc.'s stock price on October 26, 2012.
 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 Amazon.com, Inc.'s stock on October 26, 2012.
 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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