

# Structured Product Details

Name Auto	Auto Callable Contingent Interest Notes linked to Apple Inc.	
Issue Size	\$10.44 million	
Issue Price	\$1,000	
Term	12 Months	
Annualized Coupon	19.55%	
Pricing Date	October 19, 2012	
Issue Date	October 24, 2012	
Valuation Date	November 1, 2013	
Maturity Date	November 6, 2013	
Issuer	JPMorgan	
CDS Rate	27.08 bps	
Swap Rate	0.88%	
Reference Asset	Apple, Inc.'s stock	
Initial Level	\$609.80	
Dividend Rate	0.43%	
Implied Volatility	36.80%	
Fair Price at Issue	\$978.33	
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	dp33721_424b2-ps765.htm

Report Prepared On: 04/19/13

# Auto Callable Contingent Interest Notes linked to Apple Inc.

**Structured Products Research Report** 

# Description

JPMorgan issued \$10.44 million of Auto Callable Contingent Interest Notes linked to Apple Inc. on October 24, 2012 at \$1,000 per note.

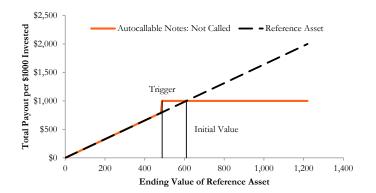
These 12-month notes are UBS-branded reverse convertible notes. On the quarterly coupon observation date, if the notes are not called back, they pay either quarterly coupon at an annualized rate of 19.55% if Apple, Inc.'s stock price closes above the coupon bar-rier \$487.84, or no coupon if the stock price closes below the barrier. The first coupon observation date is January 31, 2013. This autocallable notes will be called back if the reference stock price on any quarterly call observation date after January 31, 2013 exceeds the initial stock price \$609.80. In this case, investors receive the principal plus any unpaid coupons. At maturity, the notes convert into shares of the reference security—1.64 shares of Apple, Inc.'s stock in this case—if the market value of the reference stock at the note's maturity is below the trigger price \$487.84 (80% of the reference asset on October 19, 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 JPMorgan, a series of contingent coupon payments, and a short put option on the reference asset. For reasonable valuation inputs this note was worth \$978.33 per \$1,000 face value when it was issued on October 24, 2012, including \$993.36 for the present value of the zero-coupon note, (\$88.56) for the short put options, and \$73.53 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 Apple, Inc.'s stock price (horizontal axis). For comparison, the dashed line shows the payoff if you invested in Apple, Inc.'s stock directly.

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## **Related Research**

#### **Research Papers:**

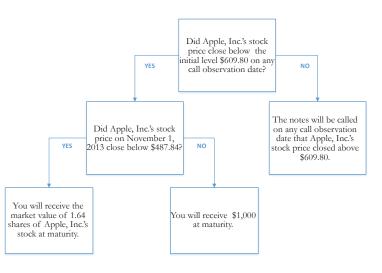
www.slcg.com/research.php

- "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 Re-verse Convertibles," June 2010.

### Principal Payback Table

Apple, Inc.'s Stock	Note Payoff
\$0.00	\$0.00
\$60.98	\$100.00
\$121.96	\$200.00
\$182.94	\$300.00
\$243.92	\$400.00
\$304.90	\$500.00
\$365.88	\$600.00
\$426.86	\$700.00
\$487.84	\$1,000.00
\$548.82	\$1,000.00
\$609.80	\$1,000.00
\$670.78	\$1,000.00
\$731.76	\$1,000.00
\$792.74	\$1,000.00
\$853.72	\$1,000.00
\$914.70	\$1,000.00

#### Maturity Payoff Diagram



The contingent payoffs of this Auto Callable Contingent Interest Note.

# Analysis

The 19.55% coupon rate on this Auto Callable Contingent Interest Note is higher than those paid by JPMorgan on its straight debts but, in addition to JPMorgan'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 Apple, Inc.'s stock when Apple, Inc.'s stock is worth substantially less than the face value of the note.

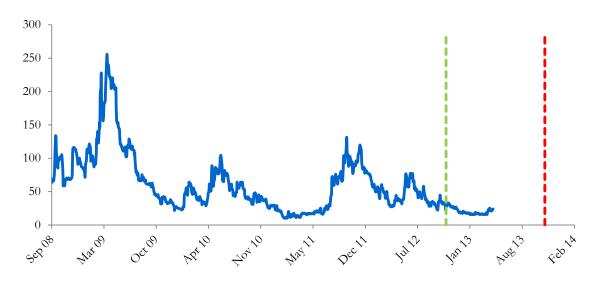
Investors purchasing these autocallable phoenix notes effectively sell contingent put options to JPMorgan and post the note's issue price as collateral to secure satisfaction of the investors' obligations under the option contracts. JPMorgan pays investors a contingent coupon that is part payment for the put options and part interest on the investors' posted collateral. This Auto Callable Contingent Interest Note is fairly priced if and only if the difference between the contingent put options investors are giving to JPMorgan. Whether this Auto Callable Contingent Interest Note is suitable or not is identically equivalent to whether selling put options on the reference stock at the option premium being paid by JPMorgan was suitable for the investor.

#### JPMorgan's Stock Price



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

### JPMorgan's CDS Rate



Credit default swap (CDS) rates are the market price that investors require to bear credit risk of an issuer such as JPMorgan. 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 JPMorgan's debt, including outstanding Auto Callable Contingent Interest Note. Fluctuations in JPMorgan's CDS rate impact the market value of the notes in the secondary market.

# \$700 \$600 \$500 \$400 \$300 \$200 \$100 \$0 APTIO octog 704 10 May 11 Jull Jan 13 Aug 13 5er08 Mar 09 Decl

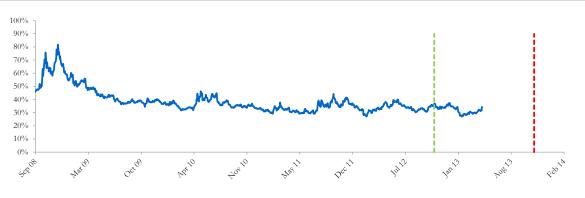
#### Apple, Inc.'s Stock Price

The graph above shows the historical levels of Apple, Inc.'s stock for the past several years. The final payoff of this note is determined by Apple, Inc.'s stock price at maturity. Higher fluctuations in Apple, Inc.'s stock price correspond to a greater uncertainty in the final payout of this Auto Callable Contingent Interest Note.

#### **Realized Payoff**

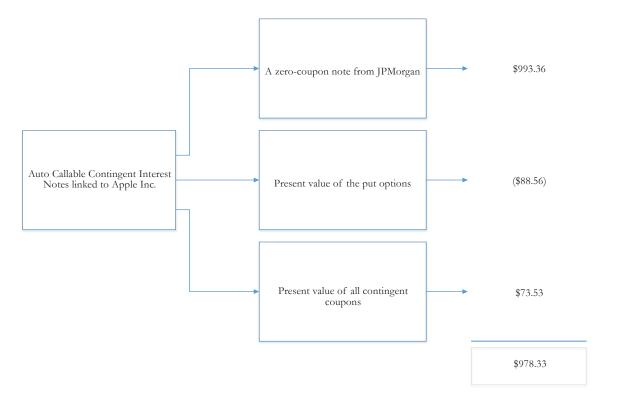
This product will mature on November 6, 2013.

### Reference Asset Apple, Inc.'s Stock's Implied Volatility



The annualized implied volatility of Apple, Inc.'s stock on October 19, 2012 was 36.80%, meaning that options contracts on Apple, Inc.'s stock were trading at prices that reflect an expected annual volatility of 36.80%. The bigher the implied volatility, the larger the expected fluctuations of Apple, Inc.'s stock price and of the Note's market value during the life of the Notes.

#### Decomposition of this Auto Callable Contingent Interest 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 Auto Callable Contingent Interest Note.

- Delta measures the sensitivity of the price of the note to the Apple, Inc's stock price on October 19, 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 Apple, Inc's stock on October 19, 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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