

## **Structured Product Details**

Name	Yield Optimization Notes with Contingent Protection linked to MetLife, Inc.
Issue Size Issue Price Term Annualized Cou	\$18.96 million \$38.83 6 Months 13.75%
Pricing Date Issue Date Valuation Date Maturity Date	August 16, 2010 August 19, 2010 February 16, 2011 February 23, 2011
Issuer CDS Rate Swap Rate	JPMorgan 53.82 bps 0.59%
Reference Asse	t MetLife, Inc.'s stock
Initial Level Conversion I Trigger Price Dividend Ra Implied Vola Delta <sup>1</sup>	te \$29.12 1.89%
Fair Price at Iss Realized Return	
CUSIP SEC Link	46634X302 www.sec.gov/Archives/edgar/ data/19617/000089109210003513/ e39765_424b2.htm

Report Prepared On: 10/25/12

# Yield Optimization Notes with Contingent Protection linked to MetLife, Inc.

Structured Products Research Report

# Description

JPMorgan issued \$18.96 million of Yield Optimization Notes with Contingent Protection linked to MetLife, Inc. on August 19, 2010 at \$38.83 per note.

These notes are JPMorgan-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.

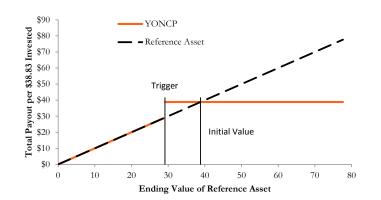
These 6-month notes pay monthly coupons at an annualized rate of 13.75%. In addition to the monthly coupons, on February 23, 2011 investors will receive the market value of one share of MetLife, Inc.'s stock if on February 16, 2011 MetLife, Inc.'s stock closes below \$29.12 (75% of MetLife, Inc.'s stock price on August 16, 2010). Otherwise, investors will receive the \$38.83 face value per note.

# Valuation

This JPMorgan single observation reverse convertible linked to MetLife, Inc.'s stock can be valued as a combination of a note from JPMorgan and a short European out-of-themoney cash-or-nothing put option, and a short European out-of-the-money put option on MetLife, Inc.'s stock. For reasonable valuation inputs this note was worth \$38.28 per \$38.83 when it was issued on August 19, 2010 because investors were effectively being paid only \$2.46 for giving JPMorgan options which were worth \$3.01.

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

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**Related Research** 

### **Research Papers:**

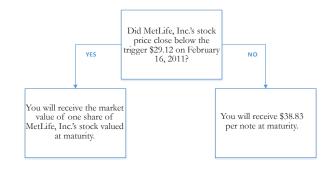
www.slcg.com/research.php

- "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 Reverse Convertibles," June 2010.

### Principal Payback Table

MetLife, Inc.'s Stock	Note Payoff
\$0.00	\$0.00
\$3.88	\$3.88
<b>\$</b> 7.77	\$7.77
\$11.65	\$11.65
\$15.53	\$15.53
\$19.42	\$19.42
\$23.30	\$23.30
\$27.18	\$27.18
\$31.06	\$38.83
\$34.95	\$38.83
\$38.83	\$38.83
\$42.71	\$38.83
\$46.60	\$38.83
\$50.48	\$38.83
\$54.36	\$38.83
\$58.25	\$38.83

### Maturity Payoff Diagram



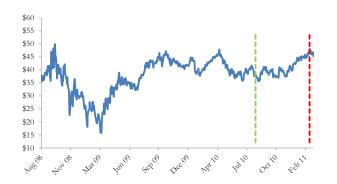
The contingent payoffs of this Yield Optimization Note with Contingent Protection.

## Analysis

This single observation reverse convertible's 13.75% coupon rate is higher than the yield JPMorgan paid on its straight debt but, in addition to JPMorgan's credit risk, investors bear the risk that they will receive shares of MetLife, Inc.'s stock when those shares are worth substantially less than the face value of the note at maturity.

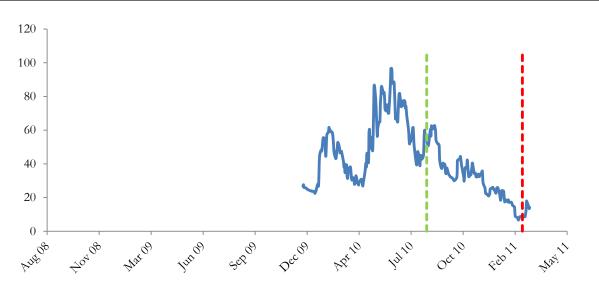
Investors purchasing these reverse convertibles effectively sell put options to JPMorgan and post the note's issue price as collateral to secure satisfaction of the investors' obligations under the option contracts. JPMorgan pays investors a "coupon" that is part payment for the put options and part 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 JPMorgan's straight debt equals the value of the put option investors are giving to JPMorgan. 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 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 Yield Optimization Note with Contingent Protection. Fluctuations in JPMorgan's CDS rate impact the market value of the notes in the secondary market.

## \$66.0 \$56.0 \$46.0 \$36.0 \$26.0 \$16.0 \$6.0 207 08 APT 10 Oct 10 Mar 09 Junog 5000 A11008 Declo Julio 42011

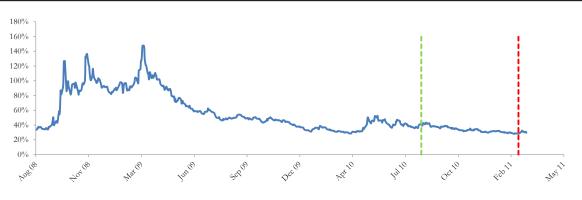
MetLife, Inc.'s Stock Price

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

### **Realized Payoff**

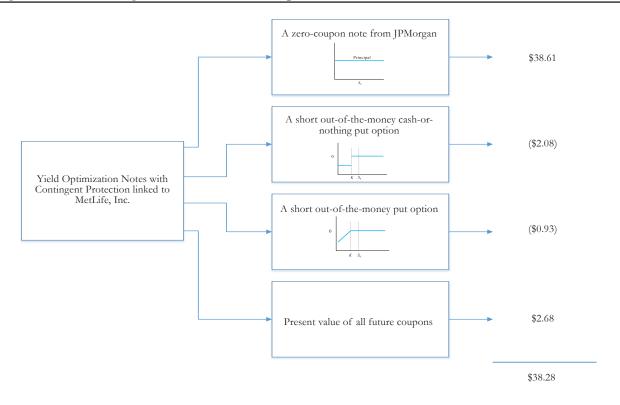
This note matured on February 23, 2011 and investors received \$38.83 per note.

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



The annualized implied volatility of MetLife, Inc.'s stock on August 16, 2010 was 42.18%, meaning that options contracts on MetLife, Inc.'s stock were trading at prices that reflect an expected annual volatility of 42.18%. The higher the implied volatility, the larger the expected fluctuations of MetLife, Inc.'s stock price and of the Note's market value during the life of the Notes.

#### Decomposition of this Yield Optimization Note with Contingent Protection



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 Yield Optimization Note with Contingent Protection.

- Delta measures the sensitivity of the price of the note to the MetLife, Inc.'s stock price on August 16, 2010.
  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 MetLife, Inc.'s stock on August 16, 2010.
  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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