

# Structured Product Details

Name	Buffered Equity Notes linked to iShares MSCI Emerging Markets Index Fund	
Issue Size	\$4.32 million	
Issue Price	\$1,000	
Term	24 Months	
Annualized Co	0.00%	
Pricing Date	June 25, 2009	
Issue Date	June 30, 2009	
Valuation Date	June 27, 2011	
Maturity Date	June 30, 2011	
Issuer	JPMorgan	
CDS Rate	118.41 bps	
Swap Rate	1.49%	
Reference Ass Initial Leve Dividend R Implied Vol Delta <sup>1</sup>	Markets Index Fund \$32.15 ate 1.92%	
Fair Price at Is Realized Retur CUSIP SEC Link		

Structured Products Research Report

Report Prepared On: 01/10/13

# Buffered Equity Notes linked to iShares MSCI Emerging Markets Index Fund

# Description

JPMorgan issued \$4.32 million of Buffered Equity Notes linked to iShares MSCI Emerging Markets Index Fund on June 30, 2009 at \$1,000 per note.

These notes are JPMorgan-branded Buffered PLUS securities that do not pay periodic coupons, but instead pay a single amount at maturity depending on the final level of iS-hares MSCI Emerging Markets Index Fund.

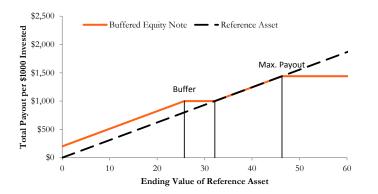
If on June 27, 2011 iShares MSCI Emerging Markets Index Fund's share price is higher than \$32.15, but lower than \$46.30, the notes pay a return equal to the percentage increase in iShares MSCI Emerging Markets Index Fund, up to a cap of 44.00%. If on June 27, 2011 the refe is below \$32.15 but not below \$25.72, investors receive \$1,000 face value per note. If iShares MSCI Emerging Markets Index Fund's share price on June 27, 2011 is lower than \$25.72, investors receive face value per note reduced by the amount the reference asset is below \$25.72 as a percent of the initial level, \$32.15.

# Valuation

This product can be valued as a combination of a note from JPMorgan, one short outof-the-money put option, one long at-the-money call option, and one short out-of-themoney call option. For reasonable valuation inputs this note was worth \$951.35 when it was issued on June 30, 2009 because the value of the options investors gave JPMorgan plus the interest investors would have received on JPMorgan's straight debt was worth \$48.65 more than the options investors received from JPMorgan.

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 iSbares MSCI Emerging Markets Index Fund's share price (borizontal axis). For comparison, the dashed line shows the payoff if you invested in iSbares MSCI Emerging Markets Index Fund directly.

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## **Related Research**

#### **Research Papers:**

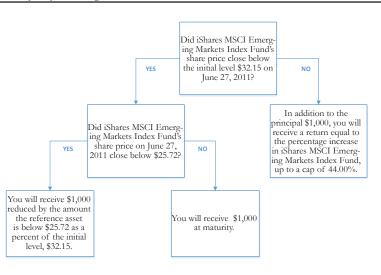
www.slcg.com/research.php

- "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

iShares MSCI Emerging Markets Index Fund	Note Payoff
\$0.00	\$200.00
\$3.22	\$300.00
\$6.43	\$400.00
\$9.65	\$500.00
\$12.86	\$600.00
\$16.08	\$700.00
\$19.29	\$800.00
\$22.51	\$900.00
\$25.72	\$1,000.00
\$28.94	\$1,000.00
\$32.15	\$1,000.00
\$35.37	\$1,100.00
\$38.58	\$1,200.00
\$41.80	\$1,300.00
\$45.01	\$1,400.00
\$48.23	\$1,440.00

#### Maturity Payoff Diagram

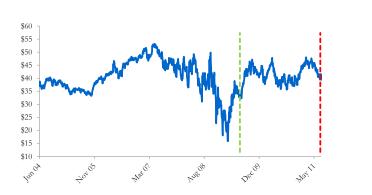


The contingent payoffs of this Buffered Equity Note.

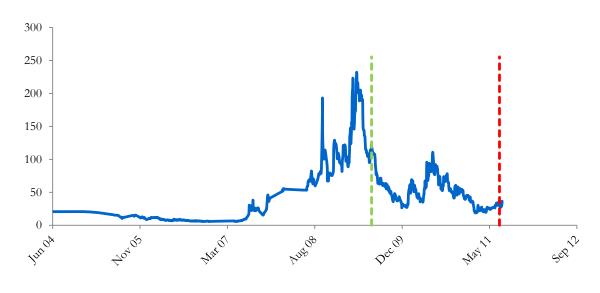
# Analysis

This Buffered Equity Note pays investors the increase in iShares MSCI Emerging Markets Index Fund capped at 44.00%, but if iShares MSCI Emerging Markets Index Fund declines over the term of the note, investors will suffer losses equal to the percentage decline in iShares MSCI Emerging Markets Index Fund. In addition, investors bear the credit risk of JPMorgan. Investors purchasing this Buffered Equity Note effectively sell at-the-money put and out-of-the-money call options to JPMorgan, buy at-the-money call options, and a zero-coupon note from JPMorgan. This Buffered Equity Note is fairly priced if and only if the market value of the options investors received from JPMorgan equals the market value of the options investors gave JPMorgan plus the interest investors would have received on JPMorgan's straight debt.

#### JPMorgan's Stock Price



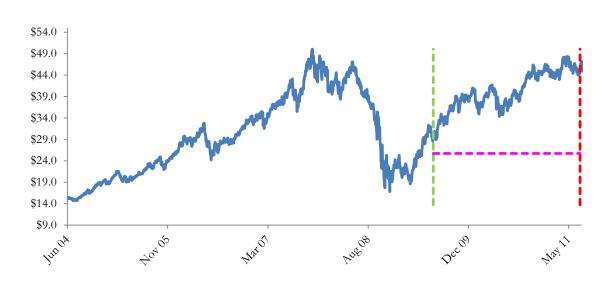
The graph above shows the adjusted closing price of the issuer JPMorgan for the past several years. The stock price of the issuer is an indication of the financial strength of JPMorgan. The adjusted price shown above incorporates any stock split, reverse stock split, etc.



## 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 Buffered Equity Note. Fluctuations in JPMorgan's CDS rate impact the market value of the notes in the secondary market.



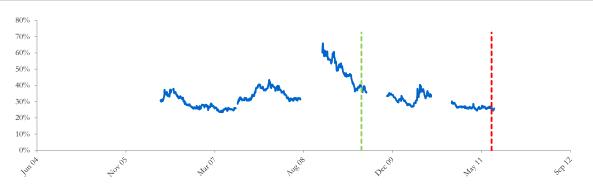


The graph above shows the historical levels of iShares MSCI Emerging Markets Index Fund for the past several years. The final payoff of this note is determined by iShares MSCI Emerging Markets Index Fund's share price at maturity. Higher fluctuations in iShares MSCI Emerging Markets Index Fund's share price correspond to a greater uncertainty in the final payout of this Buffered Equity Note.

#### **Realized Payoff**

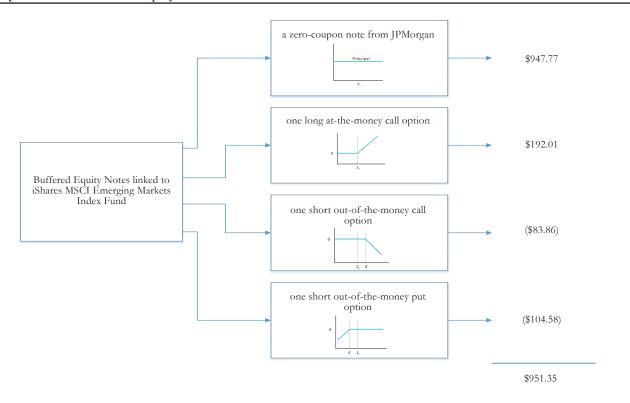
This note matured on June 30, 2011 and investors received \$1,392.44 per note.

### Reference Asset iShares MSCI Emerging Markets Index Fund's Implied Volatility



The annualized implied volatility of isbares MSCI Emerging Markets Index Fund on June 25, 2009 was 37.96%, meaning that options contracts on isbares MSCI Emerging Markets Index Fund were trading at prices that reflect an expected annual volatility of 37.96%. The higher the implied volatility, the larger the expected fluctuations of isbares MSCI Emerging Markets Index Fund's share price and of the Note's market value during the life of the Notes.

### Decomposition of this Buffered Equity 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 Buffered Equity Note.

- Delta measures the sensitivity of the price of the note to the iShares MSCI Emerging Markets Index Fund's share price on June 25, 2009.
  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 iShares MSCI Emerging Markets Index Fund on June 25, 2009.
  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.

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