**Report Prepared On: 12/05/12**

# Reverse Exchangeable Notes linked to Take-Two Interactive Software, Inc.

## Structured Product Details

| | |
|---|---|
| **Name** | Reverse Exchangeable Notes linked to Take-Two Interactive Software, Inc. |
| **Issue Size** | $669,000 |
| **Issue Price** | $1,000 |
| **Term** | 3 Months |
| **Annualized Coupon** | 24.00% |
| **Pricing Date** | March 23, 2007 |
| **Issue Date** | March 28, 2007 |
| **Valuation Date** | June 26, 2007 |
| **Maturity Date** | June 29, 2007 |
| **Issuer** | JPMorgan |
| **CDS Rate** | 7.37 bps |
| **Swap Rate** | 5.28% |
| **Reference Asset** | Take-Two Interactive Software, Inc.'s stock |
| Initial Level | $23.05 |
| Trigger Price | $18.44 |
| Conversion Price | $23.05 |
| Dividend Rate | 0.00% |
| Implied Volatility | 52.57% |
| Delta[1] | 0.45 |
| **Fair Price at Issue** | $957.78 |
| **Realized Return** | 26.01% |
| **CUSIP** | 48123JSU4 |
| **SEC Link** | www.sec.gov/Archives/edgar/data/19617/000089109207001120/e26747-424b2.htm |

## Description

JPMorgan issued $669,000 of Reverse Exchangeable Notes linked to Take-Two Interactive Software, Inc. on March 28, 2007 at $1,000 per note.

These notes are JPMorgan-branded reverse convertibles. Reverse convertibles pay periodic interest coupons and at maturity convert into shares of the reference security if the price of the reference stock at the notes' maturity is below its price when the notes were issued and had closed below a specified "trigger" during the term of the notes.

These 3-month notes pay monthly coupons at an annualized rate of 24.00%. In addition to the quarterly coupons, at maturity on June 29, 2007 investors will receive the market value of 43.38 shares of Take-Two Interactive Software, Inc.'s stock if on June 26, 2007 Take-Two Interactive Software, Inc.'s stock price closes below $23.05 (Take-Two Interactive Software, Inc.'s stock price on March 23, 2007) and had ever closed at or below $18.44 during the term of the notes. Otherwise, investors will receive the $1,000 face value per note.

## Valuation

This JPMorgan reverse convertible linked to Take-Two Interactive Software, Inc.'s stock can be valued as a combination of a note from JPMorgan and a short down-and-in, at-the-money put option on Take-Two Interactive Software, Inc.'s stock. For reasonable valuation inputs this note was worth $957.78 per $1,000 when it was issued on March 28, 2007 because investors were effectively being paid only $46.12 for giving JPMorgan an option which was worth $88.35.

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
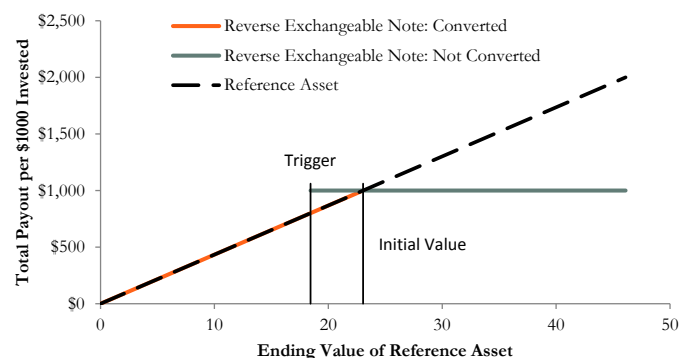


The payoff diagram shows the final payoff of this note given Take-Two Interactive Software, Inc.'s stock price (horizontal axis). For comparison, the dashed line shows the payoff if you invested in Take-Two Interactive Software, Inc.'s stock directly.

## 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.

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**Principal Payback Table**

| Take-Two Interactive Software, Inc.'s Stock | Converted Note Payoff | Non-Converted Note Payoff |
|---|---|---|
| $0.00 | $0.00 | |
| $2.31 | $100.00 | |
| $4.61 | $200.00 | |
| $6.92 | $300.00 | |
| $9.22 | $400.00 | |
| $11.53 | $500.00 | |
| $13.83 | $600.00 | |
| $16.14 | $700.00 | |
| $18.44 | $800.00 | $1,000.00 |
| $20.75 | $900.00 | $1,000.00 |
| **$23.05** | **$1,000.00** | **$1,000.00** |
| $25.36 | $1,000.00 | $1,000.00 |
| $27.66 | $1,000.00 | $1,000.00 |
| $29.97 | $1,000.00 | $1,000.00 |
| $32.27 | $1,000.00 | $1,000.00 |
| $34.58 | $1,000.00 | $1,000.00 |

**Maturity Payoff Diagram**
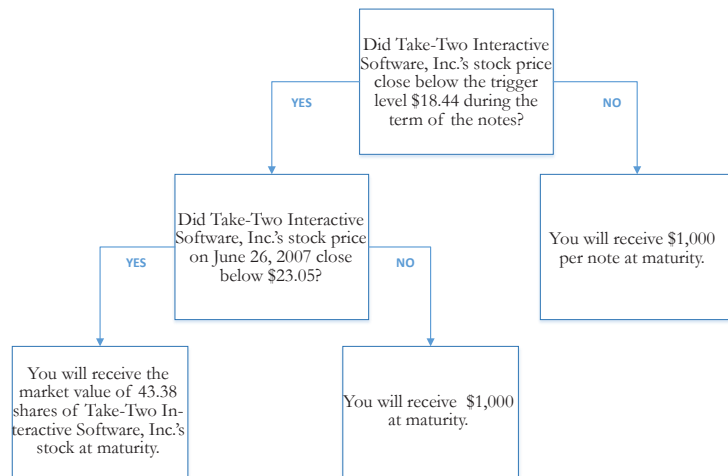


*The contingent payoffs of this Reverse Exchangeable Note.*

## Analysis

This reverse convertible's 24.00% 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 Take-Two Interactive Software, Inc.'s stock when they are worth substantially less than the face value of the note at maturity.

Investors purchasing 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 excess of the reverse convertible's "coupon rate" above the interest JPMorgan pays on its straight debt equals the value of the put option investors are giving to JPMorgan. Whether the reverse convertible is suitable or not is 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**
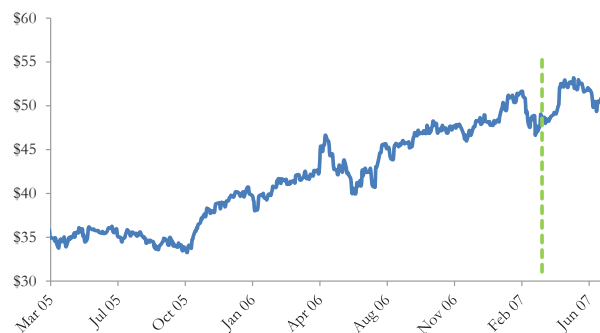


*The graph above shows the adjusted closing price of the issuer JPMorgan for the past several years. The stock price of the issuer is an indication of the financial strength of JPMorgan. The adjusted price shown above incorporates any stock split, reverse stock split, etc.*

## JPMorgan's CDS Rate
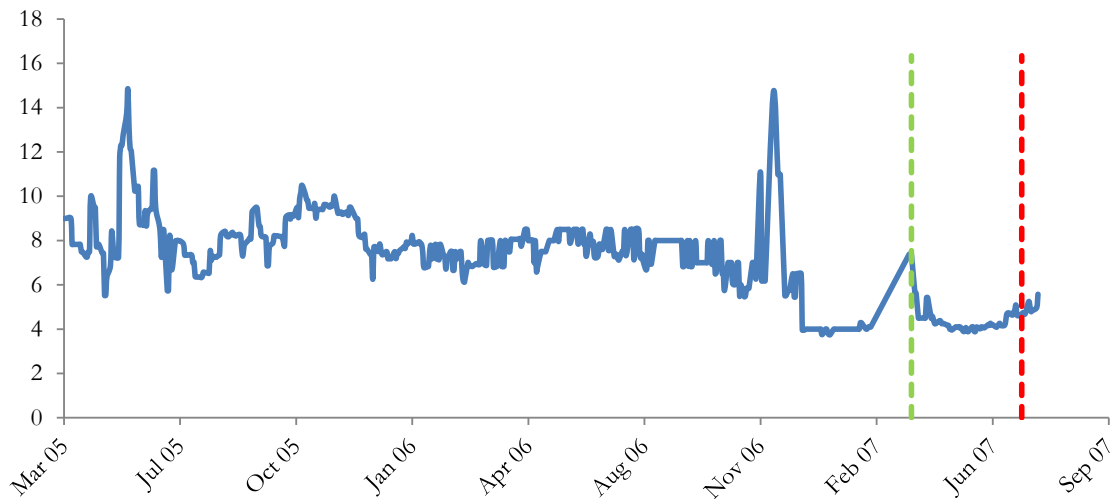


*Credit default swap (CDS) rates are the market price that investors require to bear credit risk of an issuer such as JPMorgan. CDS rates are usually given in basis points (bps). One basis point equals 0.01%. Higher CDS rates reflect higher perceived credit risk, higher required yields, and therefore lower market value of JPMorgan's debt, including outstanding Reverse Exchangeable Note. Fluctuations in JPMorgan's CDS rate impact the market value of the notes in the secondary market.*

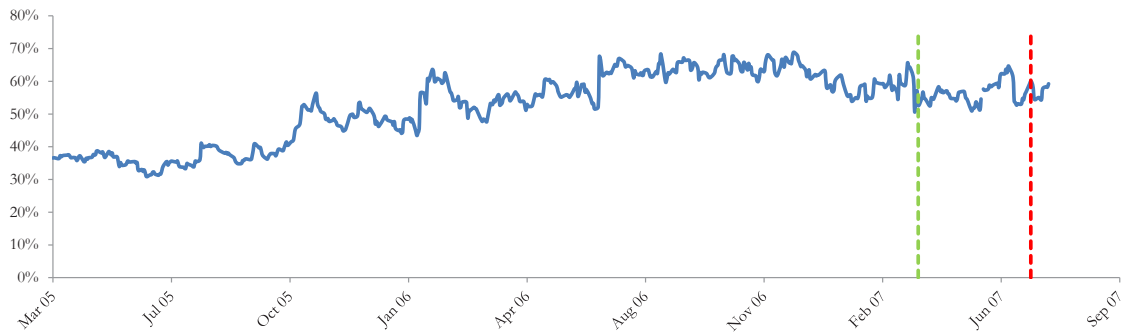## Take-Two Interactive Software, Inc.'s Stock Price
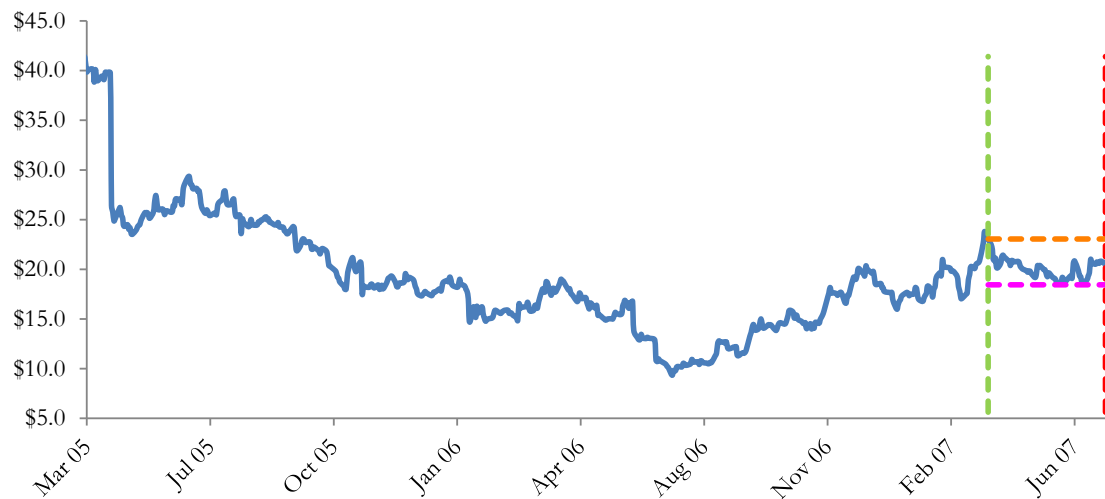


*The graph above shows the historical levels of Take-Two Interactive Software, Inc.'s stock for the past several years. The final payoff of this note is determined by Take-Two Interactive Software, Inc.'s stock price at maturity. Higher fluctuations in Take-Two Interactive Software, Inc.'s stock price correspond to a greater uncertainty in the final payout of this Reverse Exchangeable Note.*

## Realized Payoff

This note matured on June 29, 2007 and investors received $1,000.00 per note.

## Reference Asset Take-Two Interactive Software, Inc.'s Stock's Implied Volatility



*The annualized implied volatility of Take-Two Interactive Software, Inc.'s stock on March 23, 2007 was 52.57%, meaning that options contracts on Take-Two Interactive Software, Inc.'s stock were trading at prices that reflect an expected annual volatility of 52.57%. The higher the implied volatility, the larger the expected fluctuations of Take-Two Interactive Software, Inc.'s stock price and of the Note's market value during the life of the Notes.*

## Decomposition of this Reverse Exchangeable Note
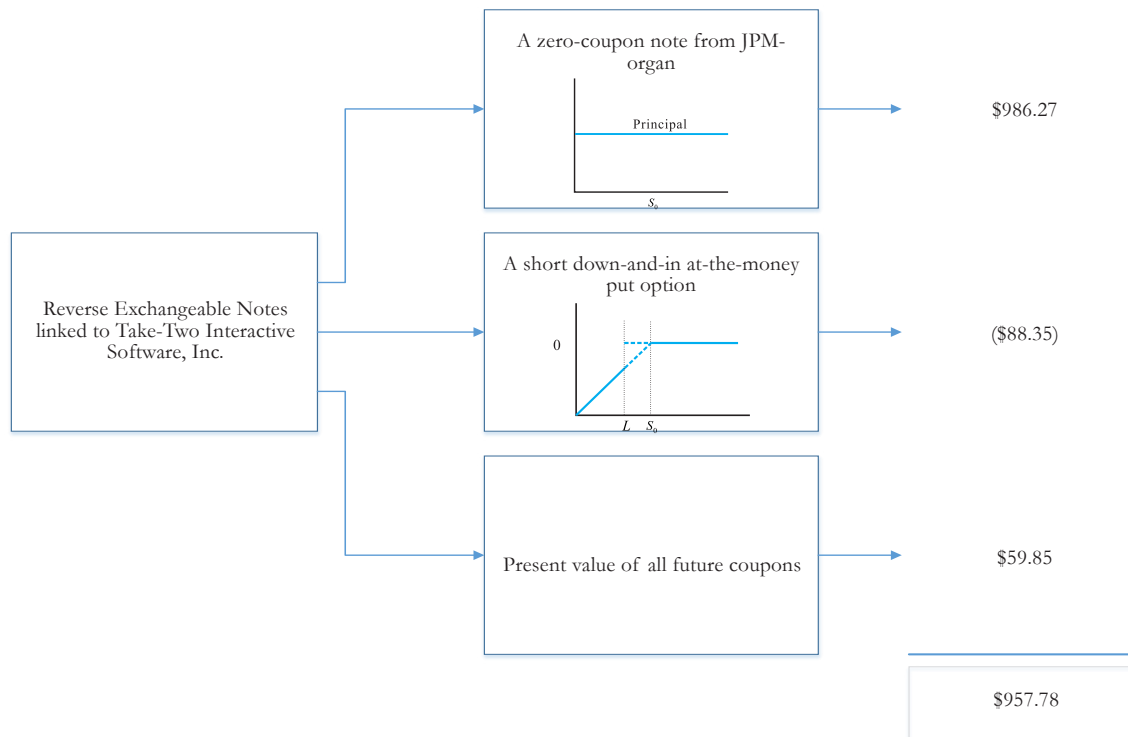


*This note can be decomposed into different components, and each component can be valued separately. The chart above shows the value of each component of this Reverse Exchangeable Note.*

1. Delta measures the sensitivity of the price of the note to the Take-Two Interactive Software, Inc.'s stock price on March 23, 2007.
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 Take-Two Interactive Software, Inc.'s stock on March 23, 2007.
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.