## Structured Products <br> Research Report

## Structured Product Details

| Name <br> Revers | Reverse Convertible Notes linked to Jones Apparel Group |
| :---: | :---: |
| Issue Size | \$1.00 million |
| Issue Price | \$1,000 |
| Term | 3 Months |
| Annualized Coupon | Coupon 11.00\% |
| Pricing Date | January 26, 2010 |
| Issue Date | January 29, 2010 |
| Valuation Date | te April 26, 2010 |
| Maturity Date | e April 29, 2010 |
| Issuer | Barclays |
| CDS Rate | 52.96 bps |
| Swap Rate | 0.25\% |
| Reference Asset | set Jones Apparel Group's stock |
| Initial Level | el \$14.96 |
| Conversion Price | Price $\quad \$ 14.96$ |
| Trigger Price | ice \$11.22 |
| Dividend Rate | Rate 1.33\% |
| Implied Volatility | clatility $\quad 50.82 \%$ |
| Delta ${ }^{1}$ | $0.45$ |
| Fair Price at Issue | Issue \$949.04 |
| Realized Return | urn 11.61\% |
| CUSIP | 06740JJU5 |
| SEC Link data/312070/ | www.sec.gov/Archives/edgar/ ta/312070/000119312510015857/d424b2.htm |

## 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.


## Reverse Convertible Notes linked to Jones Apparel Group

## Description

Barclays issued $\$ 1.00$ million of Reverse Convertible Notes linked to Jones Apparel Group on January 29, 2010 at $\$ 1,000$ per note.

These notes are Barclays-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 $11.00 \%$. In addition to the monthly coupons, at maturity on April 29, 2010 investors will receive the market value of 66.84 shares of Jones Apparel Group's stock if on April 26, 2010 Jones Apparel Group's stock price closes below $\$ 14.96$ (Jones Apparel Group's stock price on January 26,2010 ) and had ever closed at or below $\$ 11.22$ during the term of the notes. Otherwise, investors will receive the $\$ 1,000$ face value per note.

## Valuation

This Barclays reverse convertible linked to Jones Apparel Group's stock can be valued as a combination of a note from Barclays and a short down-and-in, at-the-money put option on Jones Apparel Group's stock. For reasonable valuation inputs this note was worth $\$ 949.04$ per $\$ 1,000$ when it was issued on January 29, 2010 because investors were effectively being paid only $\$ 25.22$ for giving Barclays an option which was worth $\$ 76.18$.

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 Jones Apparel Group's stock price (borizontal axis). For comparison, the dashed line shows the payoff if you invested in Jones Apparel Group's stock directly.

Geng Deng, Ph.D., FRM
Director, SLCG
(+1) 703.890.0741
GengDeng@slcg.com

## Principal Payback Table

| Jones Appar- <br> el Group's <br> Stock | Converted <br> Note Payoff | Non-Con- <br> verted Note <br> Payoff |
| :---: | :---: | :---: |
| $\$ 0.00$ | $\$ 0.00$ |  |
| $\$ 1.50$ | $\$ 100.00$ |  |
| $\$ 2.99$ | $\$ 200.00$ |  |
| $\$ 4.49$ | $\$ 300.00$ |  |
| $\$ 5.98$ | $\$ 400.00$ |  |
| $\$ 7.48$ | $\$ 500.00$ |  |
| $\$ 8.98$ | $\$ 600.00$ |  |
| $\$ 10.47$ | $\$ 700.00$ |  |
| $\$ 11.97$ | $\$ 800.00$ | $\$ 1,000.00$ |
| $\$ 13.46$ | $\$ 900.00$ | $\$ 1,000.00$ |
| $\$ 14.96$ | $\$ 1,000.00$ | $\$ 1,000.00$ |
| $\$ 16.46$ | $\$ 1,000.00$ | $\$ 1,000.00$ |
| $\$ 17.95$ | $\$ 1,000.00$ | $\$ 1,000.00$ |
| $\$ 19.45$ | $\$ 1,000.00$ | $\$ 1,000.00$ |
| $\$ 20.94$ | $\$ 1,000.00$ | $\$ 1,000.00$ |
| $\$ 22.44$ | $\$ 1,000.00$ | $\$ 1,000.00$ |

Maturity Payoff Diagram


The contingent payoffs of this Reverse Convertible Note.

## Analysis

This reverse convertible's $11.00 \%$ coupon rate is higher than the yield Barclays paid on its straight debt but, in addition to Barclays's credit risk, investors bear the risk that they will receive shares of Jones Apparel Group'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 Barclays and post the note's issue price as collateral to secure satisfaction of the investors' obligations under the option contracts. Barclays 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 Barclays pays on its straight debt equals the value of the put option investors are giving to Barclays. 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 Barclays was suitable for the investor.

## $\underline{\text { Barclays's Stock Price }}$



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

## Barclays's CDS Rate



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

Jones Apparel Group's Stock Price


The graph above shows the bistorical levels of Jones Apparel Group's stock for the past several years. The final payoff of this note is determined by Jones Apparel Group's stock, price at maturity. Higher fluctuations in Jones Apparel Group's stock price correspond to a greater uncertainty in the final payout of this Reverse Convertible Note.

## Realized Payoff

This note matured on April 29, 2010 and investors received $\$ 1,000.00$ per note.

## Reference Asset Jones Apparel Group's Stock's Implied Volatility



The annualized implied volatility of Jones Apparel Group's stock on January 26, 2010 was 50.82\%, meaning that options contracts on Jones Apparel Group's stock were trading at prices that reflect an expected annual volatility of $50.82 \%$. The bigher the implied volatility, the larger the expected fluctuations of Jones Apparel Group's stock price and of the Note's market value during the life of the Notes.

## Decomposition of this Reverse Convertible 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 Convertible Note.

1. Delta measures the sensitivity of the price of the note to the Jones Apparel Group's stock price on January 26, 2010.
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 Jones Apparel Group's stock on January 26, 2010.
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.
