

## Structured Product Details

Capped Leveraged Buffered Notes linked to iShares MSCI Emerging Markets ETF

Issue Size Issue Price \$1,000 24 Months Term **Annualized Coupon** 0.00%

**Pricing Date** March 28, 2014 Issue Date April 4, 2014 Valuation Date March 28, 2016 Maturity Date March 31, 2016

Deutsche Bank Issuer CDS Rate 38.58 bps 0.57% Swap Rate

iShares MSCI Emerging Reference Asset Markets ETF's stock \$40.74 Initial Level 2.09% Dividend Rate 21.49% Implied Volatility Delta1 0.56

Fair Price at Issue \$973.03

CUSIP 25152RJR5 www.sec.gov/Archives/edgar/ data/1159508/000095010314002321/ SEC Link dp45265\_424b2-1984af.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.

Tim Husson, Ph.D., Senior Financial Economist, SLCG (+1) 703.890.0743 TimHusson@slcg.com

# Report Prepared On: 11/19/14

# Capped Leveraged Buffered Notes linked to iShares MSCI Emerging Markets ETF

# Description

Deutsche Bank issued \$341,000 of Capped Leveraged Buffered Notes linked to iShares MSCI Emerging Markets ETF on April 4, 2014 at \$1,000 per note.

These notes are Deutsche Bank-branded PLUS securities that do not pay periodic coupons, but instead pay a single amount at maturity depending on iShares MSCI Emerging Markets ETF's stock price at maturity.

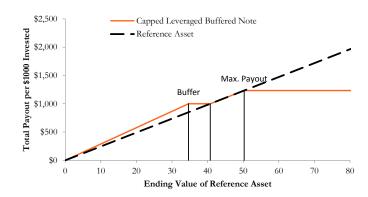
If iShares MSCI Emerging Markets ETF's stock price on March 28, 2016 is higher than \$40.74, but lower than \$50.27, the notes pay a return equal to the percentage increase in iShares MSCI Emerging Markets ETF's stock. If on March 28, 2016 iShares MSCI Emerging Markets ETF's stock price is above the \$50.27, the notes pay the maximum payout of \$1,233.80. If on March 28, 2016 iShares MSCI Emerging Markets ETF's stock price is below \$40.74, investors receive the face value per note reduced by the percentage decline in the reference asset. The notes will pay nothing at maturity if the reference asset declines to zero.

### Valuation

This note can be valued as a combination of a note from Deutsche Bank, a short at-themoney put option, one long at-the-money call option, and one short out-of-the-money call option. The short at-the-money put option exposes investors to any decline in iShares MSCI Emerging Markets ETF's stock. The one short out-of-the-money call option has the strike price of \$50.27, and limits the maximum return of the notes beyond the cap level. For reasonable valuation inputs this note was worth \$973.03 when it was issued on April 4, 2014 because the value of the options investors gave Deutsche Bank plus the interest investors would have received on Deutsche Bank's straight debt was worth \$26.97 more than the call options investors received from Deutsche Bank.

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

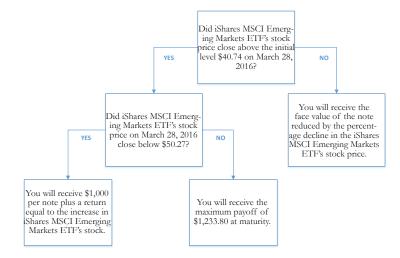


The payoff diagram shows the final payoff of this note given iShares MSCI Emerging Markets ETF's stock price (borizontal axis). For comparison, the dashed line shows the payoff if you invested in iShares MSCI Emerging Markets ETF's stock directly.

#### Principal Payback Table

iShares MSCI Emerging Markets ETF's Stock	Note Payoff
\$0.00	\$0.00
\$4.07	\$117.65
\$8.15	\$235.29
\$12.22	\$352.94
\$16.30	\$470.59
\$20.37	\$588.24
\$24.44	\$705.88
\$28.52	\$823.53
\$32.59	\$941.18
\$36.67	\$1,000.00
\$40.74	\$1,000.00
\$44.81	\$1,100.00
\$48.89	\$1,200.00
\$52.96	\$1,233.80
\$57.04	\$1,233.80
\$61.11	\$1,233.80

#### Maturity Payoff Diagram

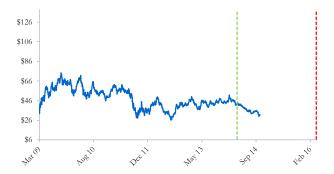


The contingent payoffs of this Capped Leveraged Buffered Note.

# **Analysis**

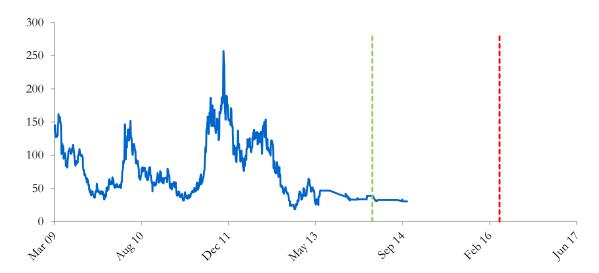
This Capped Leveraged Buffered Note pays investors the increase in iShares MSCI Emerging Markets ETF's stock capped at 23.38%, but if iShares MSCI Emerging Markets ETF's stock declines over the term of the note, investors will suffer losses equal to the percentage decline in iShares MSCI Emerging Markets ETF's stock. In addition, investors bear the credit risk of Deutsche Bank. Investors purchasing this Capped Leveraged Buffered Note effectively sell at-the-money put and out-of-the-money call options to Deutsche Bank, buy at-the-money call options, and a zero-coupon note from Deutsche Bank. This Capped Leveraged Buffered Note is fairly priced if and only if the market value of the options investors received from Deutsche Bank equals the market value of the options investors gave Deutsche Bank plus the interest investors would have received on Deutsche Bank's straight debt.

### Deutsche Bank's Stock Price



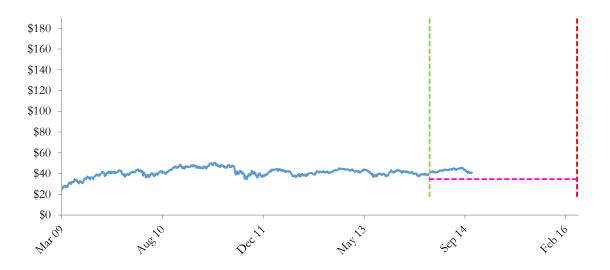
The graph above shows the adjusted closing price of the issuer Deutsche Bank for the past several years. The stock price of the issuer is an indication of the financial strength of Deutsche Bank. The adjusted price shown above incorporates any stock split, reverse stock split, etc.

## Deutsche Bank's CDS Rate



Credit default swap (CDS) rates are the market price that investors require to bear credit risk of an issuer such as Deutsche Bank. 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 Deutsche Bank's debt, including outstanding Capped Leveraged Buffered Note. Fluctuations in Deutsche Bank's CDS rate impact the market value of the notes in the secondary market.

#### iShares MSCI Emerging Markets ETF's Stock Price

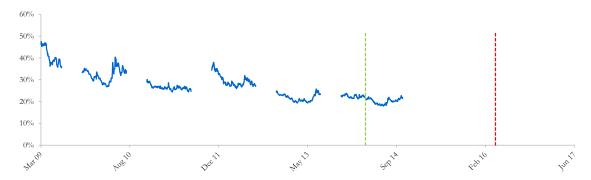


The graph above shows the historical levels of iShares MSCI Emerging Markets ETF's stock for the past several years. The final payoff of this note is determined by iShares MSCI Emerging Markets ETF's stock price at maturity. Higher fluctuations in iShares MSCI Emerging Markets ETF's stock price correspond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

#### Realized Payoff

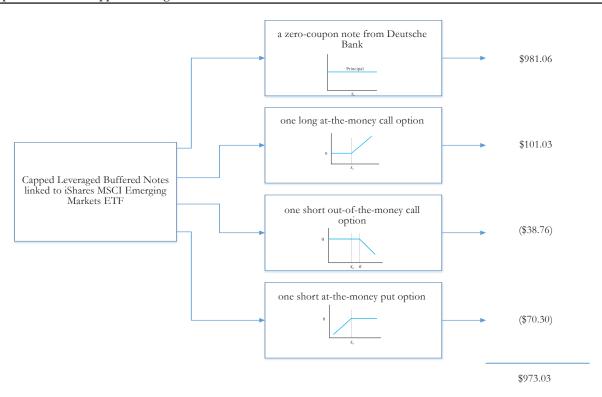
This product will mature on March 31, 2016.

## Reference Asset iShares MSCI Emerging Markets ETF's Stock's Implied Volatility



The annualized implied volatility of iShares MSCI Emerging Markets ETF's stock on March 28, 2014 was 21.49%, meaning that options contracts on iShares MSCI Emerging Markets ETF's stock were trading at prices that reflect an expected annual volatility of 21.49%. The higher the implied volatility, the larger the expected fluctuations of iShares MSCI Emerging Markets ETF's stock price and of the Note's market value during the life of the Notes.

#### Decomposition of this Capped Leveraged Buffered 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 Capped Leveraged Buffered Note.

- 1. Delta measures the sensitivity of the price of the note to the iShares MSCI Emerging Markets ETF's stock price on March 28, 2014.

  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 iShares MSCI Emerging Markets ETF's stock on March 28, 2014.

  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.