

## Structured Product Details

Name Buffered Bullish Enhanced Return Notes linked to iShares MSCI Emerging Markets Index Fund **Issue Size** \$518,000 **Issue Price** \$1,000 24 Months Term Annualized Coupon 0.00% Pricing Date July 12, 2011 Issue Date July 15, 2011 Valuation Date July 10, 2013 Maturity Date July 15, 2013 Bank of Montreal Issuer CDS Rate 92.25 bps 0.65% Swap Rate iShares MSCI Emerging **Reference Asset** Markets Index Fund Initial Level \$46.12 1.82% **Dividend Rate** 25.82% **Implied Volatility** Delta1 0.48Fair Price at Issue \$962.28 **Realized Return** -1.84% CUSIP 06366QQA8 SEC Link www.sec.gov/Archives/edgar/ data/927971/000121465911002279/ j713110424b2.htm

Structured Products Research Report

# Buffered Bullish Enhanced Return Notes linked to iShares MSCI Emerging Markets Index Fund

## Description

Report Prepared On: 08/02/13

Bank of Montreal issued \$518,000 of Buffered Bullish Enhanced Return Notes linked to iShares MSCI Emerging Markets Index Fund on July 15, 2011 at \$1,000 per note.

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

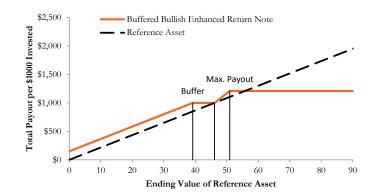
If on July 10, 2013 iShares MSCI Emerging Markets Index Fund's share price is higher than \$46.12, but lower than \$50.96, the notes pay a return equal to the percentage increase in iShares MSCI Emerging Markets Index Fund multiplied by 2.0, up to a cap of 21.00%. If on July 10, 2013 the refe is below \$46.12 but not below \$39.20, investors receive \$1,000 face value per note. If iShares MSCI Emerging Markets Index Fund's share price on July 10, 2013 is lower than \$39.20, investors receive face value per note reduced by the amount the reference asset is below \$39.20 as a percent of the initial level, \$46.12.

## Valuation

This product can be valued as a combination of a note from Bank of Montreal, one short out-of-the-money put option, two long at-the-money call options, and two short out-of-the-money call options. For reasonable valuation inputs this note was worth \$962.28 when it was issued on July 15, 2011 because the value of the options investors gave Bank of Montreal plus the interest investors would have received on Bank of Montreal's straight debt was worth \$37.72 more than the options investors received from Bank of Montreal.

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 (horizontal axis). For comparison, the dashed line shows the payoff if you invested in iSbares MSCI Emerging Markets Index Fund 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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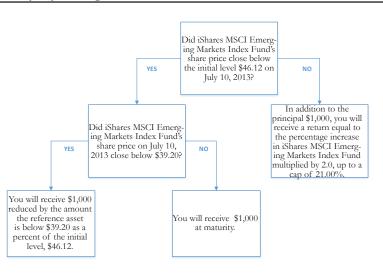
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#### Principal Payback Table

iShares MSCI Emerging Markets Index Fund	Note Payoff
\$0.00	\$150.00
\$4.61	\$250.00
\$9.22	\$350.00
\$13.84	\$450.00
\$18.45	\$550.00
\$23.06	\$650.00
\$27.67	\$750.00
\$32.28	\$850.00
\$36.90	\$950.00
\$41.51	\$1,000.00
\$46.12	\$1,000.00
\$50.73	\$1,200.00
\$55.34	\$1,210.00
\$59.96	\$1,210.00
\$64.57	\$1,210.00
\$69.18	\$1,210.00

#### Maturity Payoff Diagram

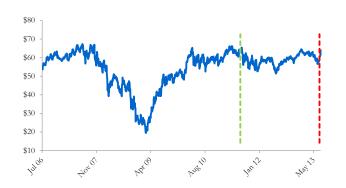


The contingent payoffs of this Buffered Bullish Enhanced Return Note.

## Analysis

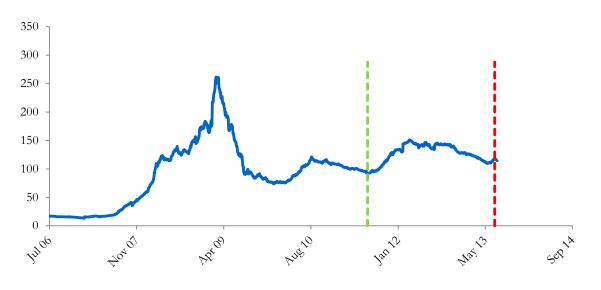
This Buffered Bullish Enhanced Return Note pays investors the increase in iShares MSCI Emerging Markets Index Fund multiplied by 2.0 capped at 21.00%, but if iShares MSCI Emerging Markets Index Fund declines over the term of the note, investors will suffer losses equal to the percentage decline in iShares MSCI Emerging Markets Index Fund. In addition, investors bear the credit risk of Bank of Montreal. Investors purchasing this Buffered Bullish Enhanced Return Note effectively sell at-the-money put and out-of-the-money call options to Bank of Montreal, buy at-the-money call options, and a zero-coupon note from Bank of Montreal. This Buffered Bullish Enhanced Return Note is fairly priced if and only if the market value of the options investors received from Bank of Montreal plus the interest investors would have received on Bank of Montreal's straight debt.

#### Bank of Montreal's Stock Price



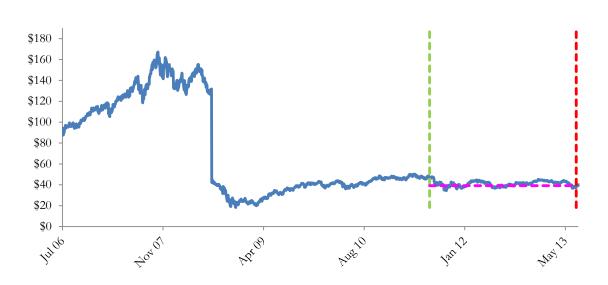
The graph above shows the adjusted closing price of the issuer Bank of Montreal for the past several years. The stock price of the issuer is an indication of the financial strength of Bank of Montreal. The adjusted price shown above incorporates any stock split, reverse stock split, etc.

#### Bank of Montreal's CDS Rate



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

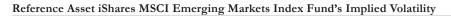


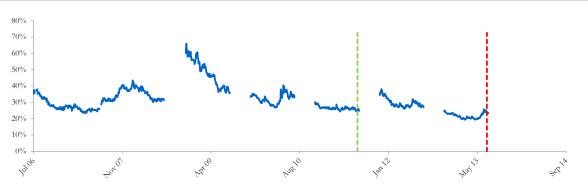


The graph above shows the historical levels of iShares MSCI Emerging Markets Index Fund for the past several years. The final payoff of this note is determined by iShares MSCI Emerging Markets Index Fund's share price at maturity. Higher fluctuations in iShares MSCI Emerging Markets Index Fund's share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

#### **Realized Payoff**

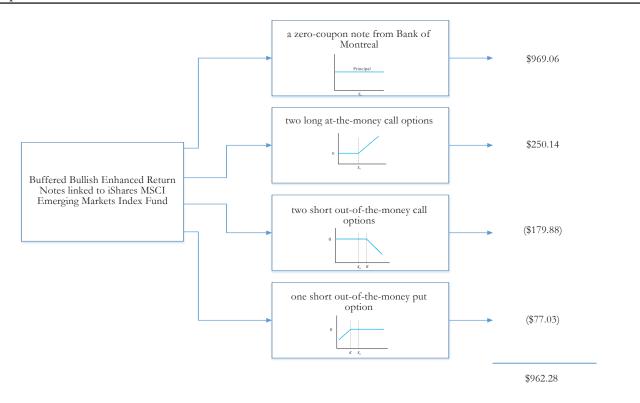
This note matured on July 15, 2013 and investors received \$963.53 per note.





The annualized implied volatility of isbares MSCI Emerging Markets Index Fund on July 12, 2011 was 25.82%, meaning that options contracts on isbares MSCI Emerging Markets Index Fund were trading at prices that reflect an expected annual volatility of 25.82%. 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 Bullish Enhanced Return 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 Bullish Enhanced Return Note.

- Delta measures the sensitivity of the price of the note to the iShares MSCI Emerging Markets Index Fund's share price on July 12, 2011.
  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 July 12, 2011.
  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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