

## Structured Product Details

Name Issue Size Issue Price Term Annualized Cou	Leveraged Equity Index Fund- Linked Notes linked to iShares MSCI Emerging Markets Index Fund \$9.86 million \$1,000 18 Months pon 0.00%
Pricing Date Issue Date Valuation Date Maturity Date	June 9, 2009 June 23, 2009 December 9, 2010 December 23, 2010
Issuer CDS Rate Swap Rate	Goldman Sachs 163.36 bps 1.80%
Reference Asset Initial Level Dividend Rat Implied Volat Delta <sup>1</sup>	Markets Index Fund \$113.00 e 2.55%
Fair Price at Iss Realized Return	#7 - 7 - 7 - 7
CUSIP SEC Link data/8	38145T805 www.sec.gov/Archives/edgar/ 86982/000119312509131644/d424b2.htm

Report Prepared On: 08/02/13

# Leveraged Equity Index Fund-Linked Notes linked to iShares MSCI Emerging Markets Index Fund

Structured Products Research Report

# Description

Goldman Sachs issued \$9.86 million of Leveraged Equity Index Fund-Linked Notes linked to iShares MSCI Emerging Markets Index Fund on June 23, 2009 at \$1,000 per note.

These notes are Goldman Sachs-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.

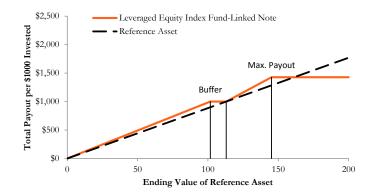
If on December 9, 2010 iShares MSCI Emerging Markets Index Fund's share price is higher than \$113.00, but lower than \$145.21, the notes pay a return equal to the percentage increase in iShares MSCI Emerging Markets Index Fund multiplied by 1.5, up to a cap of 42.75%. If on December 9, 2010 the refe is below \$113.00 but not below \$101.70, investors receive \$1,000 face value per note. If iShares MSCI Emerging Markets Index Fund's share price on December 9, 2010 is lower than \$101.70, investors receive face value per note reduced by 1.11 times the amount the reference asset is below \$101.70 as a percent of the initial level, \$113.00.

## Valuation

This product can be valued as a combination of a note from Goldman Sachs, 1.11 short out-of-the-money put options, 1.5 long at-the-money call options, and 1.5 short out-of-the-money call options. For reasonable valuation inputs this note was worth \$919.18 when it was issued on June 23, 2009 because the value of the options investors gave Goldman Sachs plus the interest investors would have received on Goldman Sachs's straight debt was worth \$80.82 more than the options investors received from Goldman Sachs.

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.

FIND SLCG STRUCTURED PRODUCTS RESEARCH AT

Senior Financial Economist, SLCG

PRODUCTS RESEARCH AT www.SLCG.com

Tim Husson, Ph.D.,

(+1) 703.890.0743 TimHusson@slcg.com

#### © 2012 SECURITIES LITIGATION & CONSULTING GROUP. ALL RIGHTS RESERVED. 3998 FAIR RIDGE DRIVE, SUITE 250, FAIRFAX, VA 22033 | MAIN (703) 246-9380 | INFO@SLCG.COM 100 WILSHIRE BLVD, SUITE 950, SANTA MONICA, CA 90401 | MAIN (310) 917-1075

### Related Research

**Research Papers:** 

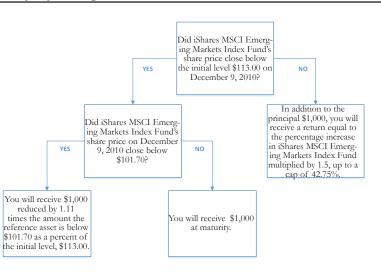
www.slcg.com/research.php

- "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	\$0.01
\$11.30	\$111.12
\$22.60	\$222.23
\$33.90	\$333.34
\$45.20	\$444.45
\$56.50	\$555.56
\$67.80	\$666.67
\$79.10	\$777.78
\$90.40	\$888.89
\$101.70	\$1,000.00
\$113.00	\$1,000.00
<b>\$124.3</b> 0	\$1,150.00
\$135.60	\$1,300.00
\$146.90	\$1,427.50
\$158.20	\$1,427.50
\$169.50	\$1,427.50

#### Maturity Payoff Diagram

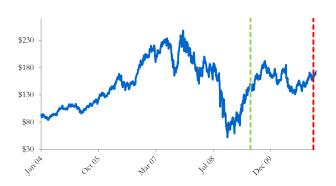


The contingent payoffs of this Leveraged Equity Index Fund-Linked Note.

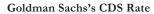
## Analysis

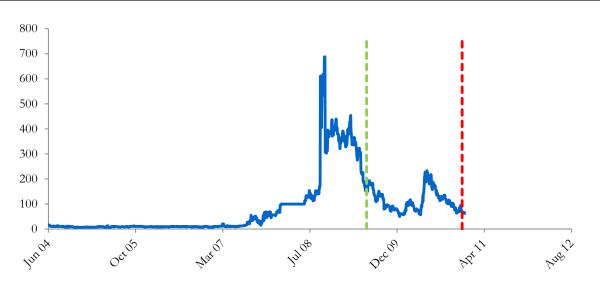
This Leveraged Equity Index Fund-Linked Note pays investors the increase in iShares MSCI Emerging Markets Index Fund multiplied by 1.5 capped at 42.75%, but if iShares MSCI Emerging Markets Index Fund declines over the term of the note, investors will suffer losses equal to the percentage decline in iShares MSCI Emerging Markets Index Fund. In addition, investors bear the credit risk of Goldman Sachs. Investors purchasing this Leveraged Equity Index Fund-Linked Note effectively sell at-the-money put and out-of-the-money call options to Goldman Sachs, buy at-the-money call options, and a zero-coupon note from Goldman Sachs. This Leveraged Equity Index Fund-Linked Note is fairly priced if and only if the market value of the options investors received from Goldman Sachs equals the market value of the options investors gave Goldman Sachs plus the interest investors would have received on Goldman Sachs's straight debt.

#### **Goldman Sachs's Stock Price**



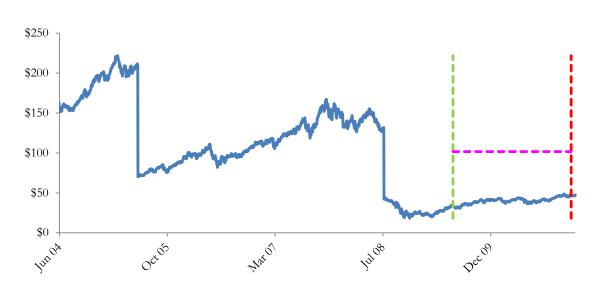
The graph above shows the adjusted closing price of the issuer Goldman Sachs for the past several years. The stock price of the issuer is an indication of the financial strength of Goldman Sachs. The adjusted price shown above incorporates any stock split, reverse stock split, etc.





Credit default swap (CDS) rates are the market price that investors require to bear credit risk of an issuer such as Goldman Sachs. 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 Goldman Sachs's debt, including outstanding Leveraged Equity Index Fund-Linked Note. Fluctuations in Goldman Sachs's CDS rate impact the market value of the notes in the secondary market.

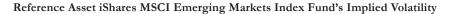


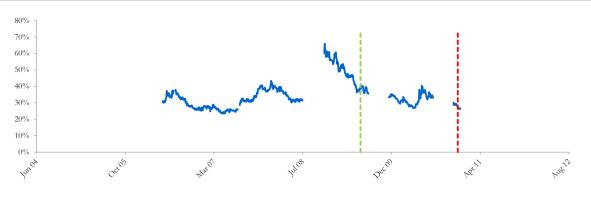


The graph above shows the historical levels of iShares MSCI Emerging Markets Index Fund for the past several years. The final payoff of this note is determined by iShares MSCI Emerging Markets Index Fund's share price at maturity. Higher fluctuations in iShares MSCI Emerging Markets Index Fund's share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

### **Realized Payoff**

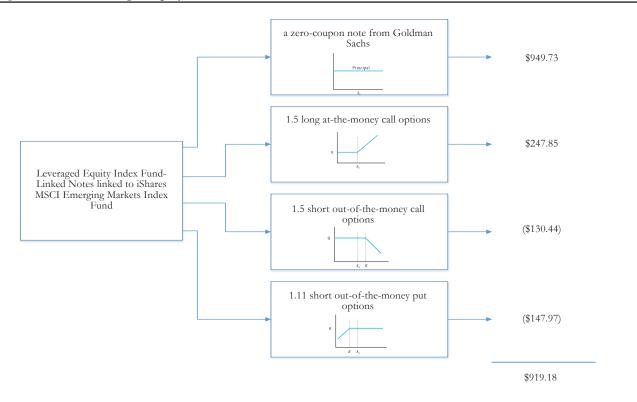
This note matured on December 23, 2010 and investors received \$456.10 per note.





The annualized implied volatility of iShares MSCI Emerging Markets Index Fund on June 9, 2009 was 38.75%, meaning that options contracts on iShares MSCI Emerging Markets Index Fund were trading at prices that reflect an expected annual volatility of 38.75%. The higher the implied volatility, the larger the expected fluctuations of iShares MSCI Emerging Markets Index Fund's share price and of the Note's market value during the life of the Notes.

### Decomposition of this Leveraged Equity Index Fund-Linked 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 Leveraged Equity Index Fund-Linked Note.

- Delta measures the sensitivity of the price of the note to the iShares MSCI Emerging Markets Index Fund's share price on June 9, 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 9, 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.

©2012 Securities Litigation and Consulting Group. All Rights Reserved. This research report and its contents are for informational and educational purposes only. The views and opinions on this document are those of the authors and should not be considered investment advice. Decisions based on information obtained from this document are your sole responsibility, and before making any decision on the basis of this information, you should consider whether the information is appropriate in light of your particular investment needs, objectives and financial circumstances. Investors should seek financial advice regarding the suitability of investing in any securities or following any investment strategies.