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Equity-Linked Note Investments: Equity Upside with Principal Protection

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AGENDA

- Greenville Hospital System
- Overview and Note Structure
- Risk and Procurement Considerations
- Alternative Note Structures
- Portfolio Construction
- Valuation and Return Performance
- Conclusions
- Appendix

Greenville Hospital System

Corporate Profile



- Located in Upstate region of South Carolina
- Academic medical center
- New medical school opening Fall 2012
- Five acute care hospitals, 10 specialty facilities and 125 physician practice locations
- 9,500 employees, including 550 physicians
- \$1.5 billion net revenues
- \$1.1 billion investment portfolio (five pools)

Greenville Hospital System

Investment Policy Objectives

- Protect long-term mission of GHS through the following priorities:
 - Safety of funds through acceptable risks
 - Appropriate investment horizon and liquidity
 - Investment yield
- Provide secure source of retirement for GHS Pension Plan participants
 - Improve pension funding ratio over time
 - Maintain full funding of actuarial accrued liability
 - Meet or exceed long-term actuarial assumption

Greenville Hospital System

Investment Restrictions

- Eligible securities under SC Law
 - Obligations of the United States, its agencies or instrumentalities (rated AA- or higher)
 - Obligations of State of SC or any of its political units (rated AA- or higher)
 - SC Local Government Investment Pool (LGIP)
 - Certificates of Deposit (FDIC-insured or collateralized)
 - Repurchase agreements (collateralized)
 - ***Principal protected notes, bonds, guaranteed investment contracts, debentures or other contracts issued by banks or other entities (rated A- or higher; maturity not exceeding twelve years; may comprise no more than 40% of funds)***

Greenville Hospital System

Rationale for Equity-Linked Notes (ELNs)

- Meets SC investment restrictions
- Principal protection (if held until maturity)
 - Subject to credit risk of the note issuer
- Equity upside potential
 - Only allowable medium for equity exposure
- Diversification and access to variety of asset classes through broad market index basket
 - Current GHS equity index basket
 - 55% Domestic Large Cap (S&P 500)
 - 15% Domestic Small Cap (Russell 2000)
 - 30% International Equity (MSCI-EAFE)

Greenville Hospital System

Experience With Equity-Linked Notes

- Current ELN portfolio
 - \$84 million market value in Endowment Fund
 - Six notes/issuers; \$10-16 million par amount
 - See Appendix A for portfolio
- Previous experience with three other notes
 - Started ELN investing in 2001
 - One matured at a profit
 - A second one returned principal (down market)
 - A third sold due to credit downgrade
- Plan to replace equities with ELNs in Pension Plan due to SC Supreme Court ruling

Overview and Note Structure

Typical ELN Investors

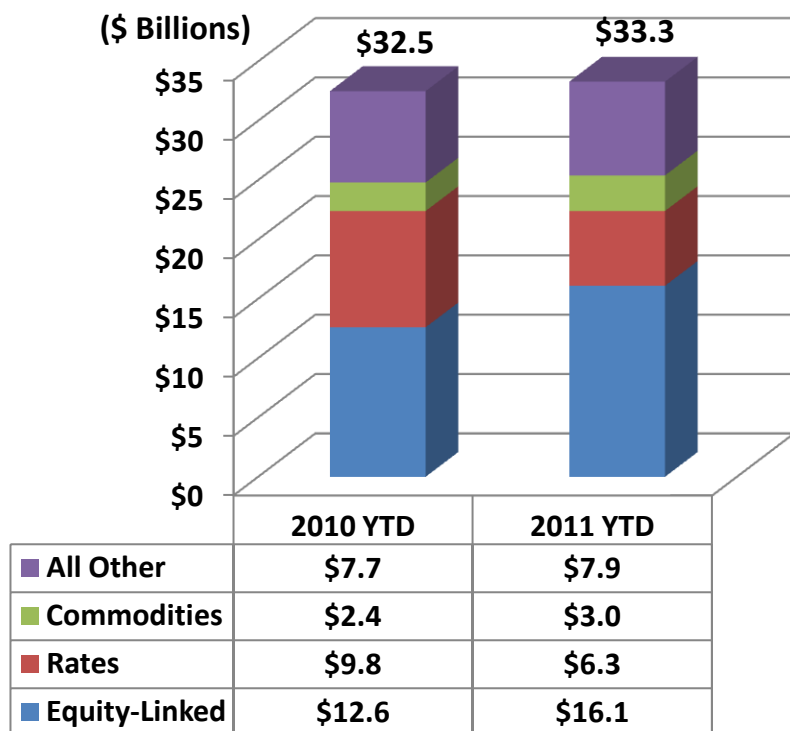
- Conservative investors
- Insurance companies
- Pensions and endowments
- Other entities with investment restrictions
- Mutual funds
- High net worth individuals
 - Risk disclosure practices and suitability are a hot topic

“Structured securities products (SSPs) present wide-ranging risks and regulatory issues, and they are becoming increasingly complex.” *SEC Staff Summary Report on Issues Identified in Examination of Certain SSPs Sold to Retail Investors (July 27, 2011)*. The SEC report identified common weaknesses seen in sales of structured securities products and described risk disclosure practices and other measures that should be taken by broker-dealers to better protect retail investors.

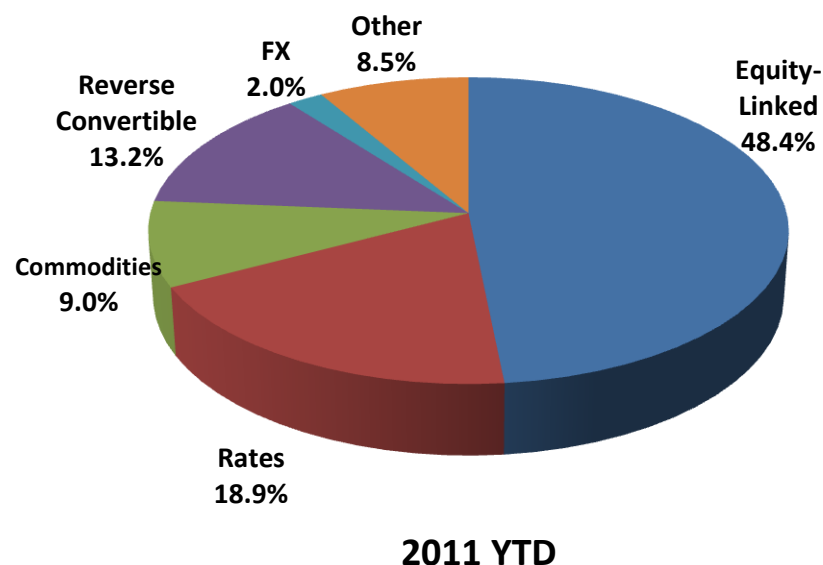
Overview and Note Structure

Structured Note and ELN Market (SEC-Registered)

U.S. Structured Note Volume



Asset Class Breakdown



Note: All figures above as of September 9, 2011. Does not include unregistered securities (Rule 144A Securities)

Source: Bloomberg, LP

Overview and Note Structure

Top Issuers of SEC-Registered ELNs

ISSUER	RANK	MARKET SHARE
Barclays	1	14.5%
Bank of America	2	13.3%
Goldman Sachs	3	10.7%
JP Morgan	4	8.8%
Morgan Stanley	5	8.3%
Royal Bank of Canada	6	7.2%
HSBC	7	6.7%
SEK	8	6.0%
Deutsche Bank	9	6.0%
Eksportfinans	10	4.9%
All Others	-	14.6%

Note: All figures above are Year-to-Date August 26, 2011. Does not include unregistered securities (Rule 144A Securities)

Source: Bloomberg, LP

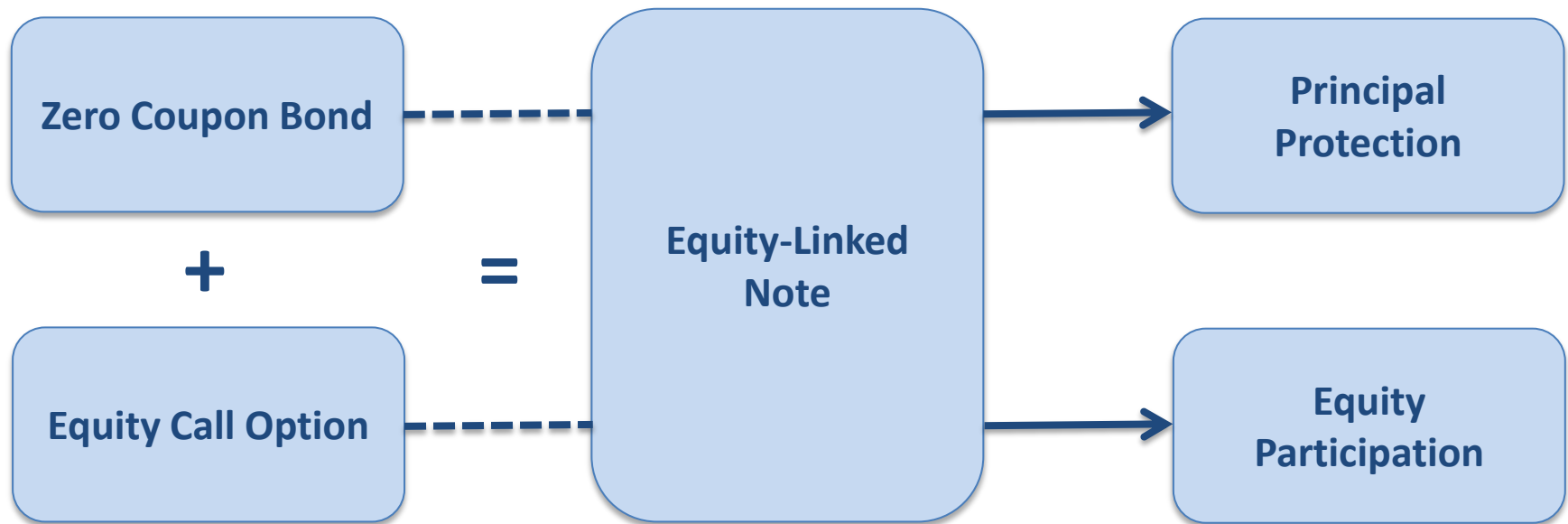
Overview and Note Structure

Definition and Terms

- Equity-Linked Note
 - A structured debt instrument with a coupon or return linked to performance of a reference or underlying asset such a single stock, equity index or basket of stocks/indices
 - Can be structured to return 100% of principal at maturity
 - Typically issued as senior unsecured notes of commercial or investment banks; alternative structure can be a market-linked CD

Overview and Note Structure

Basic Structure of 100% Principal Protected ELN



An ELN can be constructed by combining a zero coupon bond (provides 100% principal protection at maturity) and a call option that provides exposure to the underlying equity. The discount from par on the zero coupon bond can be used to purchase the call option.

Overview and Note Structure

Basic Structure of 100% Principal Protected ELN

- Participation Rate
 - The percentage of the reference asset's price gains that the investor is entitled to receive at maturity
 - Participation rates can be less than, equal to or greater than 100%
 - Factors influencing participation rate
 - Longer term – increases participation rate
 - Increased reference volatility – lowers participation rate
 - Increased credit risk – increases participation rate
 - Higher interest rates – increases participation rate

Overview and Note Structure

Basic Structure of 100% Principal Protected ELN

- At maturity, if the final level of reference asset is greater than the starting level, the payment received is:

$\text{Principal} + (\text{Principal} \times \text{Reference Asset Return} \times \text{Participation Rate})$

- If the final level of the reference asset is lower than the starting level, then 100% of principal is returned



Overview and Note Structure

Commonly Used Equity Indices

- S&P 500
- DJIA
- Russell 2000
- S&P 400 Midcap
- MSCI EAFE
- Euro Stoxx 50
- Nikkei 225

Overview and Note Structure

Example Term Sheet

Indicative Terms

Issuer:	ABC Bank
Principal amount:	\$10,000,000
Denominations:	\$1,000 per note
Maturity date:	September 1, 2018
Coupon:	0%
Reference asset:	S&P 500
Initial reference index value:	1,200.00
Payment at maturity:	Principal amount + (Principal amount X reference asset return X participation rate) <i>If the reference asset return is less than or equal to 0%, then the payment at maturity will be equal to the principal amount</i>
Participation Rate:	90%

Overview and Note Structure

Example Maturity Settlement Calculations

Reference Index Returns

Hypothetical Initial Index Level	1200	1200	1200	1200	1200	1200
Hypothetical Final Index Level	600	900	1200	1350	1500	1800
Percent Return on Reference Index	-50.0%	-25.0%	0.0%	12.5%	25.0%	50.0%

Note Example 1

Participation Rate	90%	90%	90%	90%	90%	90%
Total Note Return	0.0%	0.0%	0.0%	11.3%	22.5%	45.0%
Maturity Payment per \$1,000 Note	\$1,000	\$1,000	\$1,000	\$1,113	\$1,225	\$1,450

Note Example 2

Participation Rate	110%	110%	110%	110%	110%	110%
Total Note Return	0.0%	0.0%	0.0%	13.8%	27.5%	55.0%
Maturity Payment per \$1,000 Note	\$1,000	\$1,000	\$1,000	\$1,138	\$1,275	\$1,550

Risk and Procurement Considerations

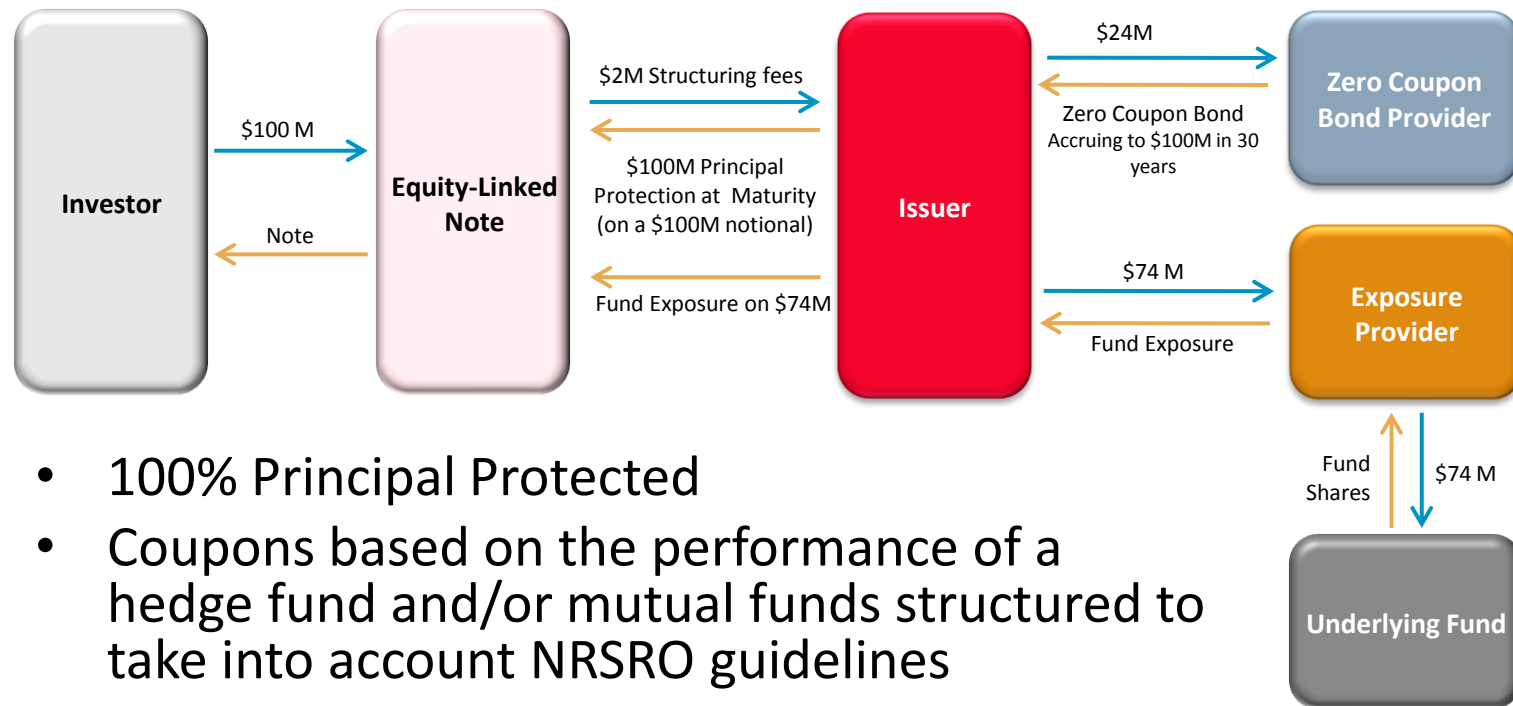
- Risk Considerations
 - Potential loss of principal
 - Issuer credit default risk
 - If not held until maturity
 - May be illiquid prior to maturity
 - Daily pricing may not be available
 - Market risk of underlying index
 - Opportunity cost – no current income
 - Risks should be addressed in investment policy

Risk and Procurement Considerations

- Procurement Considerations
 - Negotiated versus competitive RFP/bids
 - Fair market value analysis
 - Independent consultant
 - Financial and legal review of documents
 - Term sheet, prospectus, offering circular, etc.
 - Consult with auditor and tax expert
 - Monthly MTM reporting capabilities

Alternative Note Structures

Fund-Linked Notes

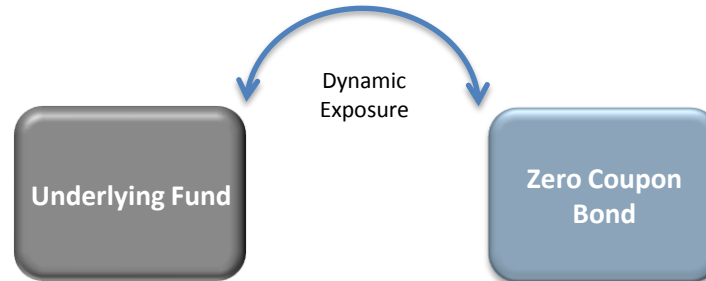


- 100% Principal Protected
- Coupons based on the performance of a hedge fund and/or mutual funds structured to take into account NRSRO guidelines
- PPN is comprised of two parts: a zero coupon bond and exposure to the performance of the underlying fund

Note: The term NRSRO is an abbreviation for Nationally Recognized Statistical Rating Organization

Alternative Note Structures

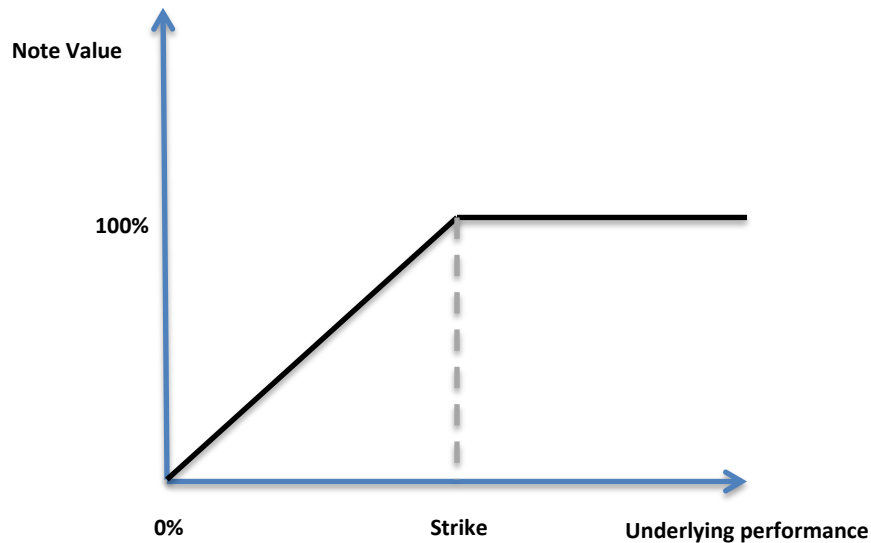
CPPI (Constant Proportion Portfolio Insurance)



- Constant proportion portfolio insurance (CPPI) is a capital guarantee structure that embeds a dynamic trading strategy in order to provide participation to the performance of the underlying fund
- Say an issuer has a \$100 portfolio, a zero of \$90 and a multiplier of 5 (ensuring protection against a drop of at most 20% before rebalancing the portfolio)
 - Day 1: Issuer allocates $(5 * (\$100 - \$90)) = \$50$ to the fund and the remaining \$50 to the zero. The exposure will be revised as the portfolio value changes.

Alternative Note Structures

Non-Principal Protected (Buy-Write)



- Issuer uses proceeds to buy stock and sells call options against it
- Proceeds of option sale used to pay coupons
 - e.g. 53-week note with quarterly coupons

Portfolio Construction

- Risks
 - Issuer credit risk
 - Rate risk
 - Equity risk
- Concentrated Portfolio – usually consists of a single note with or without a credit hedge i.e. long CDS position on issuer
- Diversification
 - Issuer – Portfolio consisting of notes issued by various issuers diversifies exposure to issuer credit
 - Maturities – Portfolio of notes of different maturities
 - Diversifies liquidity, interest rate and reinvestment risk
 - Equity exposure – diversify the underlier e.g. notes referencing different funds/indices

Valuation and Return Performance (1/4)

- Using Issuer Marks – Note valuation by the Issuer used to value portfolio
- Model Marks – Bottom-up approach to come up with valuation
 - Valuing the bond components separately
 - Risk free rate (e.g. Treasury yields)
 - Issuer spread over risk-free rate –
 - As measured by Issuer CDS spread
 - As measured by yields on comparable straight bonds from Issuer

BANKS

90) Actions 91) View Real-time

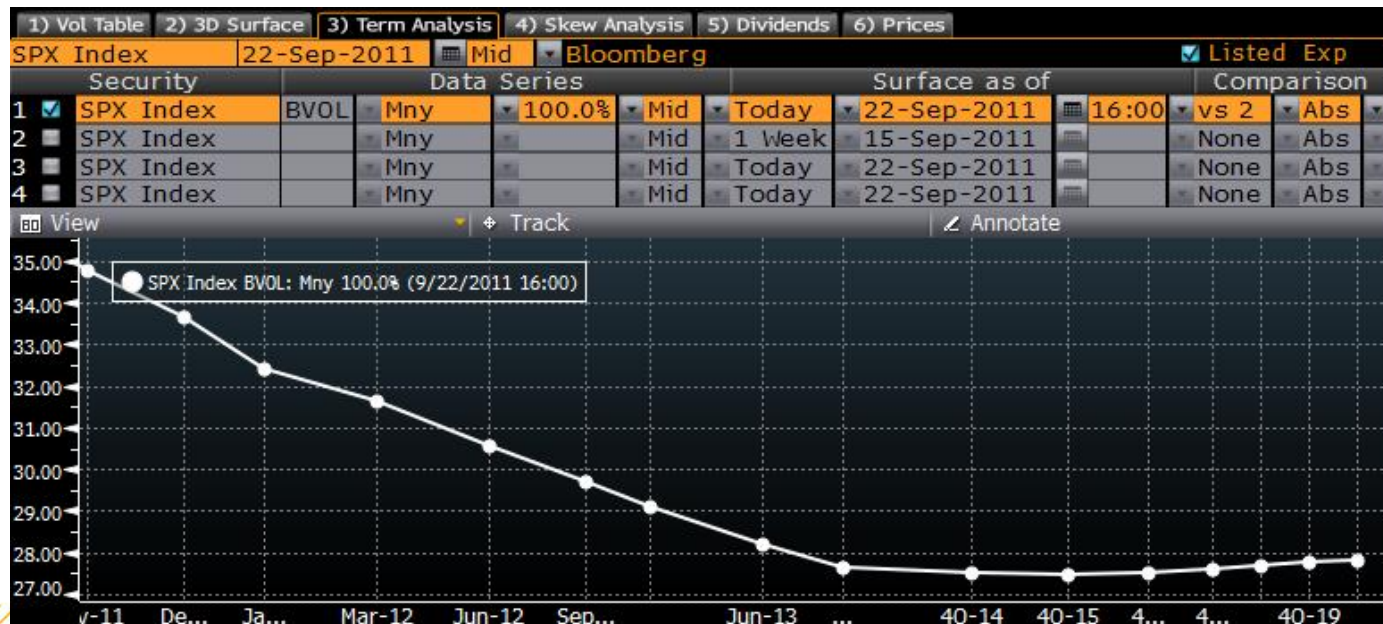
Issuer In the News BANK All Grades

BANK

Issuer	Px. Source			Time	CDS (CMAN)			Dec 31
	5Yr	Chg	CBIL		5Yr	Time		
100) American Express	124.44	+1.9	8:50	124.85	09/21		79.00	
101) BBVA	345.10	+16.8	8:50	324.55	09/21		268.72	
102) BNP Paribas	285.00	+14.3	8:50	264.83	09/21		114.67	
103) Banco Santander	332.33	+13.3	8:50	319.18	09/21		249.74	
104) Bank of America	351.48	+14.2	8:50	373.60	09/21		178.98	
105) Barclays	258.67	+8.1	8:50	240.07	09/21		120.88	
106) Citigroup	235.71	+6.2	8:51	260.21	09/21		145.79	
107) Commerzbank	291.35	+12.8	8:50	274.82	09/21		147.53	
108) Credit Agricole	289.00	+14.0	8:50	274.70	09/21		168.44	
109) Credit Suisse	199.00	+5.9	8:50	195.00	09/21		100.17	
110) Deutsche Bank	211.78	+12.4	8:50	196.30	09/21		105.46	
111) Goldman	253.03	+17.9	8:50	263.16	09/21		122.50	

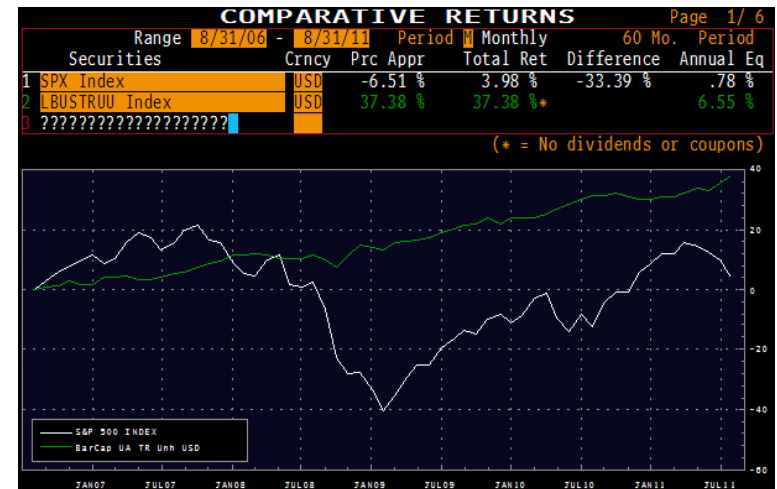
Valuation and Return Performance (2/4)

- Model Marks – Bottom-up approach to come up with valuation
 - Valuing equity
 - Valuing equity options (e.g. in Zero + Call or Buy-Write Notes)
 - Equity index option implied volatilities from options market (SPX <Index> OVDV)



Valuation and Return Performance (3/4)

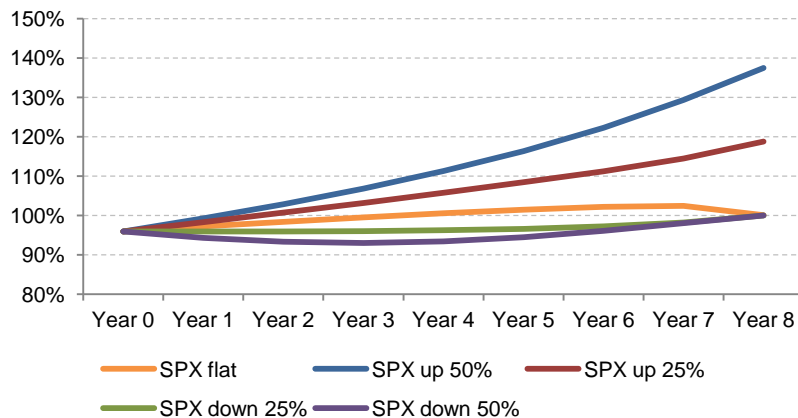
- Returns as if Maturity Date
 - Value of Note if terminated today
- Benchmarking performance of the bond – Individual benchmarks can be used to measure the performance of individual components of a structured note
 - Equity benchmarks e.g. S&P 500 Index
 - Bond benchmarks e.g. BarCap US Agg Total Return Value Unhedged USD (LBUSTRUU Index)
 - In practice, the benchmark needs to be a blend of both weighted in the same proportion and your exposure to each component



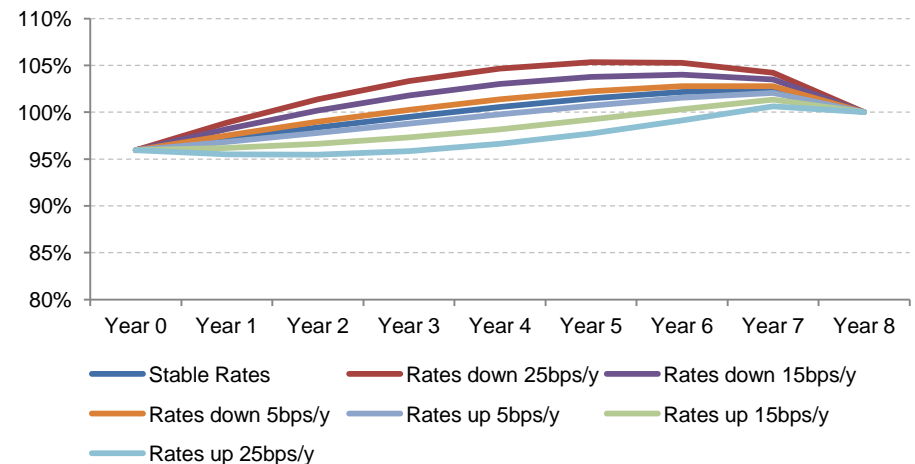
Valuation and Return Performance (4/4)

- Evolution of a Principal-Protected Note's Mark-to-Market under different scenarios, for both the underlying and rates.

Flat Rates & SPX Moving
MtM Evolution of {ZC + 75% Participation on ATM Call}, under different scenarios



Flat SPX & Rates Moving
MtM Evolution of {ZC + 75% Participation on ATM Call}, under different Rates scenarios



Conclusions

- Attractive to investors seeking reduced downside risk and volatility; also suitable for certain restricted portfolios
- Provides access to wide variety of asset classes
- Largest segment of growing structured note market
- Principal protection dependent upon credit of issuer
- Basic structures are recommended for new investors
- Complex structures add more variables and risk
- Formal risk and procurement guidelines recommended

APPENDIX



Appendix A

Equity-Linked Portfolio – Endowment Fund

Issuer	Market Value (\$ Millions)	Market Value as % of Par	Underlying Indices	Participation Rate	Maturity	S&P Rating	Moody's Rating	Fitch Rating
Deutsche Bank AG	\$17.0	114%	100% S&P 500	110.00%	02/03/2012	A+	Aa3	AA-
Morgan Stanley	\$16.6	104%	40% S&P 500 30% Russell 2000 30% MSCI EAFE	119.00%	12/11/2013	A	A2	A
Citigroup Funding, Inc.	\$14.5	96%	60% S&P 500 20% Russell 2000 20% MSCI EAFE	109.00%	10/10/2014	A	A3	A+
Goldman Sachs Group	\$14.2	95%	60% S&P 500 20% Russell 2000 20% MSCI EAFE	119.25%	10/13/2015	A	A1	A+
Rabobank Nederland	\$10.5	105%	55% S&P 500 30% Russell 2000 15% MSCI EAFE	77.3%	07/03/2017	AAA	Aaa	AA+
Barclays Bank PLC	\$11.0	110%	55% S&P 500 30% Russell 2000 15% MSCI EAFE	111.5%	06/26/2018	AA-	Aa3	AA-
Portfolio Total	\$83.9	104%	62% S&P 500 17% Russell 2000 21% MSCI EAFE	-	-	A+	A1	A+

Appendix B

Example Investment Guidelines

In addition to the general investment policies, procedures and applicable laws governing the overall investment portfolio, investment in equity-linked notes shall be in accordance with the following guidelines:

- 1) Equity-linked notes shall be structured to provide 100% principal protection at maturity. The original term of an equity-linked note shall be limited to a minimum of three years and a maximum of twelve years. Investment in individual securities within the equity-linked note portfolio shall be laddered to achieve multiple entry and maturity points to mitigate the impact of market-timing risks. Such investments will carry an intermediate to long-term investment horizon and will be held until maturity unless unusual circumstances warrant early sale or redemption.
- 2) New equity-linked notes will be acquired through a formalized Request For Proposals (RFP) and bidding process to ensure high quality credit ratings, competitive participation rates, appropriate structure, price reporting capabilities and proper legal review and documentation.
- 3) A diversified asset allocation approach shall be achieved through the use of a basket of underlying indices reflecting a prudent mix of domestic and international equities, taking into consideration the entire equity-linked note investment portfolio. Underlying equity indices shall be limited to well-known domestic and international equity market indices such as the S&P 500, Russell 2000, MSCI-EAFE or similar indices which provide a broad and deep coverage of the relevant equity market by capitalization size, growth and value investment style and sector group. New equity-linked investments will have an underlying index basket allocation comprised of the following:
 - 55% Domestic Large Cap (S&P 500)
 - 15% Domestic Small Cap (Russell 2000)
 - 30% International Equity (MSCI-EAFE)
- 4) The credit exposure of the equity-linked investment portfolio shall be diversified through investment with multiple issuers. The maximum dollar credit exposure to any one issuer of an equity-linked note (at each time of investment) shall be limited to the lower of ___% of overall investment portfolio assets or ___% of any single investment pool's assets.
- 5) The unenhanced credit rating of any one issuer of equity-linked investments shall be a minimum of "AA-" from two nationally recognized credit rating organizations at time of investment. The credit ratings of each issuer shall be monitored by Management on a monthly basis and reported to the Investment Committee on a quarterly basis. Should any single credit rating of an issuer of equity-linked notes be downgraded to the "A-" level, the Investment Committee will be notified. Management will evaluate and determine whether the investment should be sold or continue to be held. Management will report the decision made to the Investment Committee as part of the quarterly investment report.

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CPA Information

- **CPA Field of Study:**
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- **CPE Code:**
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