

Confidential Presentation to:

SEC

Holistic Trading Book Migration

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Risk Allowance Summary

Risk Allowance Summary

Pro-Forma Figures December 2007

(Risk Allowance in \$Millions)		Holistic Calculations				Proposed	Current Allowance
Corporates/EM/Muni	Jump-to-Default	Holding Period**	3m	6m	12m	3m	6,146 Reg Y
		Risk Allowance	2,358	3,158	4,137	2,358	
Principal Investments	Merton Model	Specification	Model	250% RWA*		Model	3,461 400% RWA*
		Risk Allowance	1,859	2,403		1,859	
Securitized Products	Jump-to-Gap	Holding Period	3m	6m	12m	12m	136 Reg Y
		Risk Allowance	849	1,108	1,453	1,453	
Market Neutral Strategies	Deal-break Risk	Confidence Level	99%	99.9%		99.9%	91
		Risk Allowance	91	137		137	
TOTAL						5,806	9,834

◆ We propose

- Corporates/EM/ Muni: JTD with one month holding period for investment grade exposures and 3-month holding period for non-investment grade exposure
- Principal Investments: Merton model with 12-month holding period
- Securitized Products: JTG with 12-month holding period
- Market Neutral Strategies: increase confidence level from the current 99% to 99.9%

*Grandfathered investments prior to DEC 2005 are risk-weighted at 100%.

**Holding Period for investment grade exposures is set at 1-month.

Risk Allowance Summary (Cont'd.)

Pro-Forma Risk Allowance Figures for Three Months: October to December 2007

	Proposed Holistic Risk Allowance			Current Risk Allowance		Change
	Products	Model	Allowance	Rule/Model	Allowance	
October	Corporates/EM/Muni	Jump-to-Default	2,422	Reg Y	6,461	(4,039)
	Principal Investments	Merton Model	1,651	400%/100% RWA*	3,111	(1,460)
	Securitized Products	Jump-to-Gap	1,568	Reg Y	134	1,434
	Market Neutral Strategies	99.9% Deal-break	128	99% Deal Break	85	43
	Total October		5,769		9,791	(4,022)
November	Corporates/EM/Muni	Jump-to-Default	2,227	Reg Y	6,146	(3,919)
	Principal Investments	Merton Model	1,869	400%/100% RWA*	3,435	(1,566)
	Securitized Products	Jump-to-Gap	1,369	Reg Y	136	1,233
	Market Neutral Strategies	99.9% Deal-break	92	99% Deal Break	61	31
	Total November		5,557		9,778	(4,221)
December	Corporates/EM/Muni	Jump-to-Default	2,358	Reg Y	6,146	(3,788)
	Principal Investments	Merton Model	1,859	400%/100% RWA*	3,461	(1,602)
	Securitized Products	Jump-to-Gap	1,453	Reg Y	136	1,317
	Market Neutral Strategies	99.9% Deal-break	137	99% Deal Break	91	46
	Total December		5,806		9,834	(4,028)

*Grandfathered investments prior to DEC 2005 are risk-weighted at 100%.

Jump-To-Default

Jump-to-Default – Capital Allowance

- ◆ The model applies to all our trading book positions that are subject to single name default risks, including corporate, emerging markets, and municipal issuers:
 - Bonds, loans, single name & index default swaps, CDO tranches, and default baskets
- ◆ Reg Y charge figures are as reported, which are updated quarterly

Pro-Forma Figures for Three Months: October to December 2007

	Risk Allowance (\$Millions)			
	Current Reg Y Add-on	JTD Computation		
		Holding Period in Months: IG / Non IG		
		1/3	1/6	1/12
October	6,461	2,422	3,159	4,085
November	6,146	2,227	2,950	3,911
December	6,146	2,358	3,158	4,137

Jump-to-Default – Model Assumptions

- ◆ Holding Period
 - One month for investment grade exposures
 - Proposed 3-month for non-investment grade exposures
- ◆ Probability of Default
 - Scaled to Holding Period linearly from annual PDs
 - Our annual PDs are rating agency long term default rates with the 3bp-floor, the same as those applied in the counterparty credit risk allowance calculations
- ◆ Correlation
 - Basel Banking Book one-year asset correlation

Jump-to-Default – Model Assumptions (Cont'd)

- ◆ Recovery
 - CDS – based on CDS pricing
 - Cash – tiered
 - Name-specific recovery uses market and/or internal research available
 - Otherwise sector-based and product (loans vs. bonds) recovery
 - Lastly generic conservative assumption (currently loans 75%, bonds 25%)

- ◆ Long and short risks of the same issuer are netted

- ◆ Treatment of CDS indices and synthetic corporate CDO tranches
 - Decomposed into per-name CDS exposures
 - Tranche capital structure reflected in the decomposed exposures

- ◆ Confidence level = 99.9%

Principal Investments

Principal Investments – Capital Allowance

- ◆ The capital charge for the Principal Investment portfolio is calculated using the Merton Model of valuing a firm's equity; it applies to our investments in
 - Private equity funds; individual private equity investments
 - Investments and seed money in hedge funds; minority stakes in hedge funds

Pro-Forma Figures for Three Months: October to December 2007

	Risk Allowance (\$Millions)		
	Current	250% Flat RWA*	Proposed Model
October	3,111	2,161	1,651
November	3,435	2,380	1,869
December	3,461	2,403	1,859

[Additional detail on the Principal Investment allowance can be found in Appendix A – on pp. 26-28]

*Grandfathered investments prior to December 2005 are risk-weighted at 100%.

Principal Investments – Model Assumptions

- ◆ Equity is modeled as call option on the assets of the investment struck at the face value of the debt
- ◆ The capital charge is a function of:
 1. Holding Period, representing the horizon over which capital is invested
 2. Leverage, defined as the current ratio of the value of the assets to the value of the equity
 3. Volatility of the underlying assets
 4. Asset value correlation
- ◆ The model allows us to assign each individual investment a volatility and leverage commensurate with the risk/return profile of the underlying asset and calculate the capital contribution of each individual investment

Principal Investments – Model Assumptions (Cont'd)

- ◆ The total portfolio is grouped by strategy based on business cut and volatility/leverage characteristics
 - Hedge fund investments by strategy
 - Private equity investments by business cut/asset class
- ◆ For hedge fund investments the volatility depends on the investment strategy of the fund. The fund value of the volatility for each strategy is benchmarked against the historical performances listed in the Credit Suisse Tremont Hedge Fund Index
- ◆ Private Equity volatility and leverage are assigned levels that are based on our experience of the historic risk/return profile of these investments
- ◆ The volatility, leverage and holding period for each investment strategy is assigned to one of three levels: Low, Medium, and High. Each level is defined by a range used in the calculation as follows

Volatility			Leverage			Holding Period		
Definition	Range	Value	Definition	Range	Value	Definition	Range	Value
Low	0% - 10%	5%	Low	1 – 1.5	1.25	Low	0 – 6 months	3
Medium	10% - 20%	15%	Medium	1.5 - 3	2.25	Medium	6 – 12 months	6
High	20% +	25%	High	3 +	4	High	12 + months	12

Principal Investments – Model Assumptions (Cont'd)

- ◆ The correlation of the model has been calibrated to produce a risk weight of 300% for highest risk investment with a high volatility, high leverage, and high holding period
- ◆ For the pro-forma results shown here, the holding period is kept at 12 months for all our investments, in line with the buy and hold strategy of the Principal Investment portfolio
- ◆ Large investments presenting concentration risk are floored to a risk weight of 250%
 - If an investment in a given strategy is more than 3 standard deviations away from the average investment amount for this strategy, it is subject to the concentration floor
 - All hedge fund investments, individual private equity investments and publicly listed investments held in the Principal Investments portfolio are subject to the concentration test

Securitized Products

Securitized Products – Capital Allowance

- ◆ We propose to adopt the SIFMA Framework for Securitizations/Tranched Products (December 2007)
 - Employ jump-to-gap (JTG) model – to calculate capital allowance for all our trading book RMBS, CMBS, and ABS exposures, including:
 - Securities, whole loan pools, index swaps, ABS CDOs, ABS CDS
 - Positions of all credit ratings
- ◆ Currently a small Reg Y capital add-on is charged against the sub-investment grade secondary and trading book retained interest positions
- ◆ Following table shows three months' of pro-forma JTG risk allowances vs. current reg Y charges

	Risk Allowance (\$Millions)			
	Current Reg Y Add-on	JTG Computation		
		Holding Period		
		12-month	6-month	3-month
October	134	1,568	1,213	875
November	136	1,369	1,032	777
December	136	1,453	1,108	849

[Additional detail on the Securitized Products allowance can be found in Appendix B – on pp. 30-33]

Securitized Products – Model Assumptions

- ◆ We adopt the approach described in “Method B: Multistep threshold model” in the SIFMA Framework
- ◆ The model is a two-factor model where the asset value is driven by two systematic factors together with an idiosyncratic factor :

$$\tilde{A}_i = \beta_{G,i} \tilde{X} + \beta_{M,i} \tilde{Y} + \sqrt{1 - \beta_{G,i}^2 - \beta_{M,i}^2} \tilde{Z}_i$$

where

\tilde{A}_i is the value of asset i

\tilde{X} is the overall macro (global) risk factor

\tilde{Y} is the systematic risk factor dependent on asset i 's collateral type

\tilde{Z}_i is the originator shelf-specific (idiosyncratic) risk factor for asset i

- ◆ The asset value is subject to three down gaps, a small (S), medium (M), or large (L) gap
 - the gap sizes are different by ratings and reflect the recent market experiences
 - the annual gap probabilities are calibrated by setting:
 - 1) the expected total gap loss (expressed as percentage price drops) is the same as the expected annual default loss (with zero recovery): $p_s S + p_m M + p_L L = PD * 1$
 - 2) the expected gap loss from all three gaps are equal: $p_s S = p_m M = p_L L$

Securitized Products – Model Assumptions (Cont'd.)

◆ Calibration of the correlations

- The global factor loadings $\beta_{G,i}$ are calibrated to the corporate A-IRB RWAs by setting the calculated JTG model capital charge on a portfolio of diversified asset-backed bonds with all different collateral types and all different originator shelves to the corporate A-IRB RWAs of zero recovery
- The collateral type factor loadings $\beta_{M,i}$ are calibrated to the Basel Securitization Framework (SF) RWAs by setting the calculated JTG model capital charge on a portfolio of one type of collateral bonds with all different originator shelves to the SF RWAs
 - The Basel SF RWAs are modified for the calibration purposes for crediting ratings below BB-. The calibration SF RWAs are as follows:

Credit Rating	AAA to AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC- & below
Calibration SF RWA	15%	18%	20%	32%	64%	75%	135%	250%	425%	650%	750%	880%	950%	1000%	1050%	1075%

Securitized Products – Model Assumptions (Cont'd.)

- ◆ We have classified our portfolios into categories by collateral type (RMBS which includes home equity loans, CMBS, ABS, CDO) in combination with region (US and Europe).
- ◆ There are a small number of trades in our Securitized Products line of business that are corporate issuers; these positions are not included in the JTD calculation so they are included in JTG calculation as a separate category
- ◆ Whole loans are included in the JTG calculation by splitting the loans into shadow bonds with expected securitization capital structure
- ◆ The model is currently a one time step model; potential future developments include the implementation to multi-time step for a given holding period

Market Neutral Strategies

Market Neutral Strategies – Capital Allowance

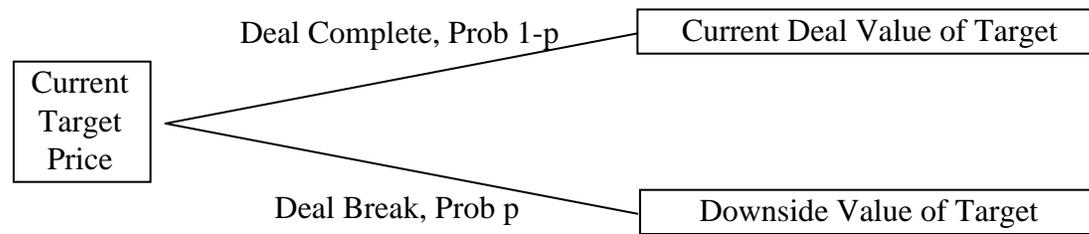
- ◆ In addition to VaR-based capital charge, positions in our M&A market neutral strategies are currently subject to a capital add-on, calculated only using the portfolio distribution deal-break losses, at 99% confidence level
- ◆ We propose to increase the confidence level to 99.9% confidence level
- ◆ In the following table the pro-forma numbers are estimated by scaling the current (99%) capital charges; future implementation, to be completed shortly, will cut the 99.9% tail directly from the portfolio loss distribution

	Risk Allowance (\$Millions)	
	Current	Proposed
October	128	191
November	92	137
December	137	205

Market Neutral Strategies – Model Assumptions

◆ Deal Break Risk for Merger Arbitrage Strategies

- If deal breaks, target and acquirer are assumed to experience the reverse of percentage price movements at deal announcement
- Probability of deal break is estimated by assuming that current target price is the expected value of deal complete value and deal break value



$$S_{Target} = (1 - p) \times current_deal_value + pS_{Target}(1 - initial_premium) \Rightarrow p$$

- Events across different M&A deals are assumed independent
- Portfolio loss distribution as well as at the desired confidence level

Holistic Trading Book Implementation

Holistic Trading Book Implementation

◆ Timeframe

- New Holistic Trading Book methodologies can be commenced upon SEC approval
 - JTD implementation to be automated and integrated
 - Other methodologies somewhat manual with automation to be implemented in the near future
- JTD for corporate, emerging market, and municipal issuer default exposures
 - Automated system currently in UAT
 - Principal Investments
 - Model implemented in Excel spreadsheets
 - No immediate plan for further automation prior to automation of position feed
 - JTG for asset-backed securitized products
 - Model implemented in Excel spreadsheets, positions exported from VaR engine
 - Market neutral strategies
 - Deal-break risk model has been implemented and running in LehmanRisk prior to CSE inception at Lehman (December 2005)
 - Change confidence level from 99% to 99.9% should be completed before end of February 2008

Appendix A: Principal Investments Allowance Details

Principal Investments: Pro-Forma Results

Results for Month Ended October 2007

Investment Strategy / Asset Class	EAD (\$Millions)	Risk Allowance (\$Millions)			Avg Model Risk Weight
		Current	250% Flat RWA*	Proposed Model	
Hedge Fund - Convertible Arbitrage	54	17	11	2	58%
Hedge Fund - Emerging Markets	282	90	56	42	185%
Hedge Fund - Equity Market Neutral	40	13	8	2	58%
Hedge Fund - Event Driven - Multi-Strategy	695	217	136	48	87%
Hedge Fund - Fixed Income Arbitrage	203	60	38	9	58%
Hedge Fund - Long-Short Equity	408	85	59	56	171%
Hedge Fund - Managed Futures	18	4	3	2	168%
Hedge Fund - Multi-Strategy	1,365	387	248	187	171%
Hedge Fund - Other	117	6	23	16	168%
Private Equity - CDO	897	207	169	155	216%
Private Equity - Merchant Banking	469	115	76	63	168%
Private Equity - Mezz	353	94	61	32	113%
Private Equity - MLP	628	201	126	93	185%
Private Equity - Private Equity Funds	1,459	448	282	196	168%
Private Equity - Real Estate	1,558	247	245	209	168%
Private Equity - Venture Capital	177	24	19	26	185%
Private Equity - Individual Investments	2,237	673	426	361	202%
Private Equity - Other	409	87	60	37	113%
Publicly Traded Equity	691	132	113	114	206%
Grand Total	12,063	3,111	2,161	1,651	171%

*Grandfathered investments prior to December 2005 are risk-weighted at 100%.

Principal Investments: Pro-Forma Results

Results for Month Ended November 2007

Investment Strategy / Asset Class	EAD (\$Millions)	Risk Allowance (\$Millions)			Avg Model Risk Weight
		Current	250% Flat RWA*	Proposed Model	
Hedge Fund - Convertible Arbitrage	54	17	11	2	58%
Hedge Fund - Emerging Markets	277	89	55	41	185%
Hedge Fund - Equity Market Neutral	39	13	8	2	58%
Hedge Fund - Event Driven - Multi-Strategy	647	202	127	46	89%
Hedge Fund - Fixed Income Arbitrage	150	46	29	7	58%
Hedge Fund - Long-Short Equity	399	84	58	55	172%
Hedge Fund - Managed Futures	18	4	3	2	168%
Hedge Fund - Multi-Strategy	1,371	398	254	185	169%
Hedge Fund - Other	421	114	84	61	181%
Private Equity - CDO	725	153	135	125	216%
Private Equity - Merchant Banking	505	126	83	68	168%
Private Equity - Mezz	62	15	10	6	113%
Private Equity - MLP	609	195	122	90	185%
Private Equity - Private Equity Funds	1,499	460	290	201	168%
Private Equity - Real Estate	1,854	311	299	249	168%
Private Equity - Venture Capital	185	28	21	27	185%
Private Equity - Individual Investments	3,133	948	599	493	197%
Private Equity - Other	354	69	49	32	113%
Publicly Traded Equity	1,060	162	143	176	208%
Grand Total	13,362	3,435	2,380	1,869	175%

*Grandfathered investments prior to December 2005 are risk-weighted at 100%.

Principal Investments: Pro-Forma Results

Results for Month Ended December 2007

Investment Strategy / Asset Class	EAD (\$Millions)	Risk Allowance (\$Millions)			Avg Model Risk Weight
		Current	250% Flat RWA*	Proposed Model	
Hedge Fund - Convertible Arbitrage	54	17	11	3	58%
Hedge Fund - Emerging Markets	278	89	56	41	185%
Hedge Fund - Equity Market Neutral	41	13	8	2	58%
Hedge Fund - Event Driven - Multi-Strategy	595	187	117	44	93%
Hedge Fund - Fixed Income Arbitrage	121	36	23	6	58%
Hedge Fund - Long-Short Equity	403	84	58	55	172%
Hedge Fund - Managed Futures	18	4	3	2	168%
Hedge Fund - Multi-Strategy	1,420	414	264	187	164%
Hedge Fund - Other	458	120	92	67	183%
Private Equity - CDO	186	40	27	32	216%
Private Equity - Merchant Banking	501	125	82	67	168%
Private Equity - Mezz	58	15	10	5	113%
Private Equity - MLP	586	187	117	87	185%
Private Equity - Private Equity Funds	1,544	476	300	207	168%
Private Equity - Real Estate	2,209	374	373	297	168%
Private Equity - Venture Capital	194	31	23	29	185%
Private Equity - Individual Investments	3,132	946	598	493	197%
Private Equity - Other	493	114	77	45	113%
Publicly Traded Equity	1,157	188	164	191	206%
Grand Total	13,449	3,461	2,403	1,859	173%

*Grandfathered investments prior to December 2005 are risk-weighted at 100%.

Appendix B: Securitized Products Allowance Details

Securitized Products: Pro-Forma Results

Results for Month Ended October 2007

October	(\$Millions)		Long	Hedge	Net	JTG Risk Allowance
	US	RMBS	71,731	(51,226)	20,504	873
		CMBS	36,601	(14,847)	21,754	529
		ABS	2,194	(105)	2,089	261
		CDO	2,496	(3,977)	(1,481)	33
		Corp	979	(2,115)	(1,135)	45
		TOTAL	114,001	(72,270)	41,731	1,128
	EUROPE	RMBS	14,247	(5,375)	8,871	457
		CMBS	12,915	0	12,915	483
		ABS	345	0	345	58
		CORP	254	(539)	(285)	(0)
		Other	88	(6)	82	88
		TOTAL	27,848	(5,921)	21,928	806
	TOTAL		141,850	(78,191)	63,659	1,568

Securitized Products: Pro-Forma Results

Results for Month Ended November 2007

November	(\$Millions)		Long	Hedge	Net	JTG Risk Allowance
	US	RMBS	69,187	(50,662)	18,525	634
		CMBS	35,590	(17,275)	18,315	494
		ABS	2,555	(122)	2,433	261
		CDO	1,987	(3,091)	(1,104)	29
		Corp	1,569	(2,977)	(1,408)	48
		TOTAL	110,889	(74,128)	36,761	949
	EUROPE	RMBS	15,427	(5,525)	9,903	421
		CMBS	11,571	0	11,571	452
		ABS	343	0	343	58
		CORP	260	(463)	(203)	8
		Other	90	0	90	90
		TOTAL	27,692	(5,988)	21,704	643
	TOTAL		138,581	(80,116)	58,465	1,369

Securitized Products: Pro-Forma Results

Results for Month Ended December 2007

December	(\$Millions)		Long	Hedge	Net	JTG Risk Allowance
	US	RMBS	65,711	(49,759)	15,953	577
		CMBS	35,216	(17,984)	17,232	422
		ABS	4,039	(118)	3,921	753
		CDO	1,714	(2,580)	(866)	29
		Corp	1,625	(2,999)	(1,374)	50
		TOTAL	108,306	(73,440)	34,866	1,080
	EUROPE	RMBS	14,194	(3,513)	10,681	431
		CMBS	12,085	(364)	11,721	440
		ABS	373	0	373	57
		CORP	255	(691)	(436)	(0)
		Other	0	0	0	
		TOTAL	26,907	(4,568)	22,339	615
	TOTAL		135,213	(78,008)	57,204	1,453