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**UPDATE ON PROGRESS TOWARD
PRINCIPLE BASED RESERVING
FOR LIFE PRODUCTS**

(The Impact of the VM-20 Impact Study on Individual Companies)

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Life PBR – Phase I Illustrative Results

ULSG Product

Final VM-20 Reserve	5 Year Block	1 Year Block
Net Premium Reserve	1,659 million	211 million
Deterministic Reserve	1,366 million	177 million
Stochastic Reserve	1,374 million	200 million
Final VM-20 Reserve = Max(NPR, Deterministic, Stochastic)	1,659 million	211 million
Current AXXX Reserve	2,972 million	364 million
Current Fund Value	1,373 million	193 million

Ratio of VM-20 Reserve to Current AXXX Reserve	5 Year Block	1 Year Block
	56%	58%

Ratio of VM-20 Reserve to Fund Value	5 Year Block	1 Year Block
	121%	109%

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Life PBR – Phase I Assumption Comparison

ULSG Products

Assumption	Current Statutory	Net Premium	Deterministic	Stochastic
Methodology	CRVM with AXXX (Formulaic)	Fund Based VM-20 (Formulaic)	Gross Prem VM-20 (Cash Flow Based)	GPVAD (Cash Flow Based)
Mortality	2001 CSO	2001 CSO	Prudent Estimate	Prudent Estimate
Lapse	2% yrs 1-2, followed by 1%	Dynamic based on funding, max = 1%	Prudent Estimate	Prudent Estimate
Interest	4%	5%	Net Earned Rate	105% 1 year Treasury
Treatment of Expenses	CRVM Expense allowance	VM-20 Revised Expense Allowance	Prudent Estimate	Prudent Estimate
Asset Assumptions	N/A	N/A	NAIC Spreads	NAIC Spreads
Premium	Shadow Prem, where SH IV = 0 at end of each year	Level premium which funds policy to end of Sec Guar Per (Changes with Funding Levels)	Amount paid over last 12 months, unless > 2x Billed or Single	Amount paid over last 12 months, unless > 2x Billed or Single

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Life PBR – Phase I Illustrative Results (continued)						
Term and Whole Life						
Val Date: 12/31/2009		(\$ million)				
1 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
Current Stat Reserve	\$28	\$13	\$58	\$71	\$170	\$9
Current GAAP Reserve	\$15	\$9	\$21	\$12	\$57	\$78
Net Premium Reserve	\$8	\$4	\$8	\$4	\$25	\$9
5 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
Current Stat Reserve	\$271	\$205	\$640	\$624	\$1,741	\$682
Current GAAP Reserve	\$153	\$105	\$250	\$148	\$656	\$976
Net Premium Reserve	\$78	\$68	\$180	\$113	\$439	\$682

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Life PBR – Phase I Illustrative Results (continued)						
Term and Whole Life						
Val Date: 12/31/2009		(\$ million)				
1 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
Net Premium Reserve	\$8	\$4	\$8	\$4	\$25	\$9
NPR Run 1	\$8	\$4	\$8	\$4	\$25	\$9
NPR Run 2	\$8	\$4	\$8	\$4	\$25	\$9
NPR Run 3	\$8	\$4	\$8	\$4	\$25	\$9
5 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
Net Premium Reserve	\$78	\$68	\$180	\$113	\$439	\$682
NPR Run 1	\$107	\$80	\$197	\$118	\$501	\$976
NPR Run 2	\$117	\$100	\$283	\$250	\$750	\$976
NPR Run 3	\$119	\$104	\$300	\$279	\$803	\$976

*NPR Run 1 = NPR with shock lapse at end of level term period set equal to 100%
 *NPR Run 2 = NPR with shock lapse set equal to 100% and lapse rate during level term period set equal to 0%
 *NPR Run 3 = NPR with shock lapse rate equal to 100%, level period lapse rate equal to 0% and val interest rate equal to 4%

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Life PBR – Phase I Illustrative Results (continued)						
Term and Whole Life						
Val Date: 12/31/2009		(\$ million)				
1 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
Deterministic Exclusion Test	Pass	Pass	Pass	Pass	Pass	Pass
Deterministic Reserve	(\$24)	(\$12)	(\$1)	(\$2)	(\$38)	N/A
Det Res Run 1	(\$13)	(\$6)	\$6	(\$1)	(\$14)	N/A
5 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
Deterministic Exclusion Test	Pass	Pass	Pass	Fail	Pass	Pass
Deterministic Reserve	(\$22)	\$14	\$183	\$138	\$314	N/A
Det Res Run 1	\$47	\$48	\$222	\$140	\$457	N/A

*Det Res Run 1 = deterministic reserve with shock lapse set equal to 100%

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Life PBR – Phase I Results (continued)

Term and Whole Life

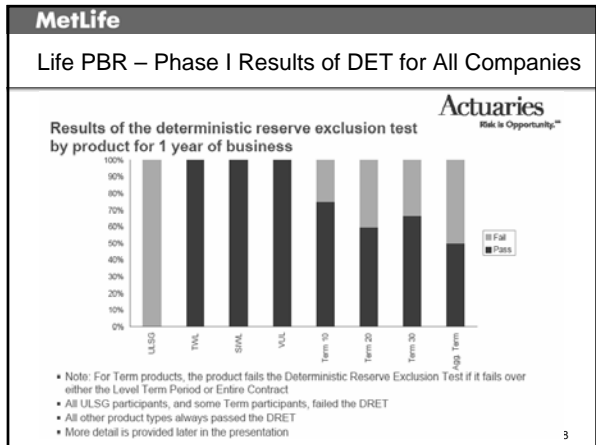
Val Date: 12/31/2009

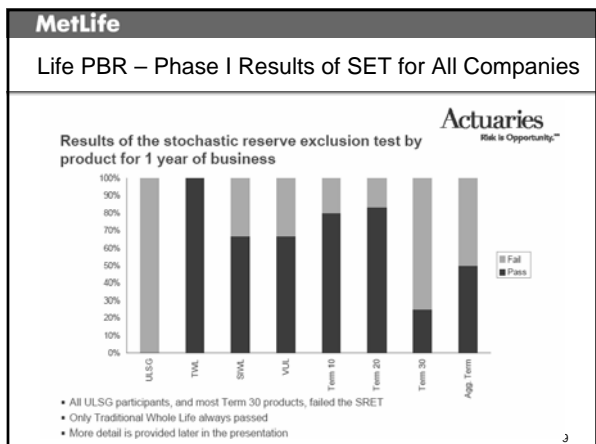
1 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
(b-a)/c	0.80%	0.62%	3.07%	8.12%	3.32%	2.52%
Stochastic Exclusion Test	Pass	Pass	Pass	Fail	Pass	Pass

5 Year Block	10-Year Term	15-Year Term	20-Year Term	30-Year Term	Term Total	Whole Life
(b-a)/c	0.88%	0.58%	2.81%	7.96%	3.19%	2.44%
Stochastic Exclusion Test	Pass	Pass	Pass	Fail	Pass	Pass

*a = adjusted deterministic reserve using baseline economic scenario
 *b = largest adjusted deterministic reserve under any of the other 15 economic scenarios
 *c = PV (Death Benefits, Surrender Benefits and Dividends) using baseline economic scenario

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Life PBR – Phase I Results for All Companies

Actuaries
Risk is Opportunity™

Minimum reserve "winner" by product – Credit spread alternative 1, on a direct basis, for 1 year of business

Product	SR (%)	DR (%)	NPR (%)
ULSG	35	35	30
TNL	0	0	100
SML	0	0	100
VUL	0	0	100
Term 10	0	0	100
Term 20	0	0	100
Term 30	25	35	40
Agg Term	30	30	40

- The greatest reserve is usually the NPR
- Except for ULSG and Term 30
- The DR only appears in ULSG and Term products with longer LTPs

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Life PBR – Issues With Understanding VM-20

- Unclear and incorrect language and references in current draft
- Little guidance on reinsurance (none for the deterministic exclusion test)
- Little guidance on development of PAD's
- Iterative nature of starting asset requirement for Stochastic Reserve
- Complex , unclear, conservative asset spread and default assumption definitions
- Asset spread and default cost assumptions do not cover all asset sectors
- Creation of new models, new technologies
 - New internal interfaces, models and grid computing for long run times
- Interaction with C3P3 for final impact on company capital

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Life PBR – Issues With Our Understanding VM-20

- Ambiguity and other difficulty complying with VM-20 is causing inter company variances (e.g. UCS and mortality credibility)
- Blending of older age insured mortality to Social Security deaths
- Possible required use of Alt 1 (or amended Alt 1) for discounting
 - Instead of varying spreads or pegging or using Alt 1+150 bps
- Credibility blend to a standard table rather than use of company specific x factors
- Total margin versus individual assumption margins
- Lack of direction on duration of Mean Reversion formulae
- Prescribed lapses vs. own experience with independent review

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Life PBR – Phase II Sensitivities for All Companies

- Mortality (% change in DR or SR reserve)
 - Remove improvements – Term 42% and ULSG 5%
 - Include margins – Term 67%, ULSG 9%, VUL 1%, WL 11%
 - Company Credibility – Term 213%, ULSG 27%, WL 33%
 - 10% permanent increase – Term 49%, ULSG/VUL 3%, WL 12%
- No margin – Term -58%, ULSG -22%, VUL -50%, WL -14%
- Initial T-curve-100bps – Term 3%, ULSG 11%, VUL 9%
- 80% of Lapses – Term 10%, ULSG 5%, VUL 16%, WL 7%
- Premium acceleration (both increases and decreases) decreases reserves by 15% on ULSG

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Life PBR – Preliminary Conclusions

- Required margins on mortality will have a dramatic effect on reserve levels for Term and Whole Life products.
- The level of other required margins on these products will also markedly affect their required reserves.
- Changes to the T-curve rate cause large swings in ULSG reserves which will have to be addressed
- We are waiting for the NAIC official results from Phase II
 - We may have to investigate changing the mean reversion formula for future interest rate changes, employing economic hedges and new forms of reinsurance.

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