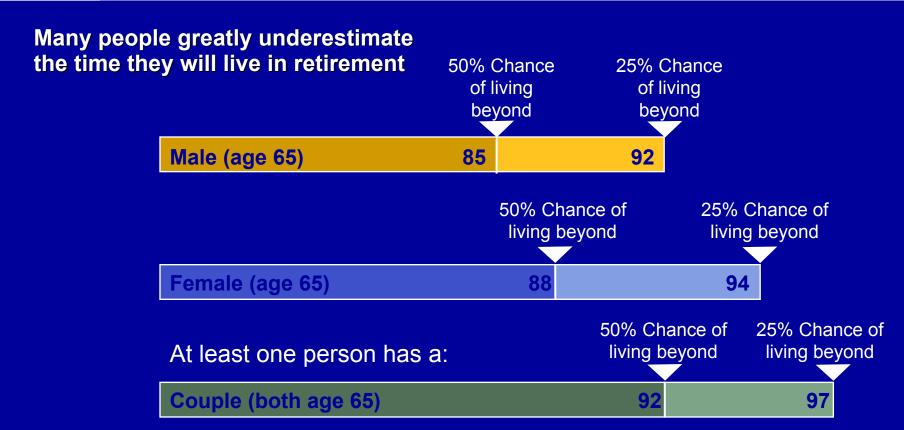
# MetLife

# Individual Variable Annuities

Smith Barney Investors Seminar September 11, 2003

#### **MetLife**

# The Problem



# MetLife The Problem

- Responsibility has shifted to the individual
  - Number of Define Benefit plans has decreased by 50% in last 20 years\*
  - Social Security accounts for just 38% of total income for retired people age 65 or older\*\*
  - 401(k) plans often don't provide for lifetime income

#### Source:

- \* Department of Labor Pension and Welfare Administration
- \*\*Social Security Administration, January, 2003

# A Solution: Guaranteed MetLife Minimum Income Benefit

#### **GMIB Market Needs Addressed:**

- **Provides investing confidence**
- **Provides option for life time income**
- Provides opportunity to keep pace with inflation with downside protection

#### **GMIB Client Profile:**

- Individuals that wish to maintain standard of living
- Individuals who seek investment risk protection •
- Individuals concerned about outliving income
- Individuals wanting flexibility and investment control



#### Guaranteed Minimum Income Benefit

#### WHAT IS IT?

An optional feature designed to provide a **predictable level of future** retirement income regardless of investment performance or actual account value

#### **HOW DOES IT PROTECT INVESTORS?**

Uses two separate Income Bases from which a guaranteed future income can be calculated

- One that steps up periodically to lock in the gains of a bull market, and
- Another that offers a "floor" to help protect against the downside of a bear market



The 1st Income Base...

### Compounding Income Base

- Protects income against a bear market
- Predictable from day 1
- An amount equal to purchase payments is compounded annually until the contract anniversary prior to the owner's 81<sup>st</sup> birthday.
- The Income Base is adjusted for any withdrawals.

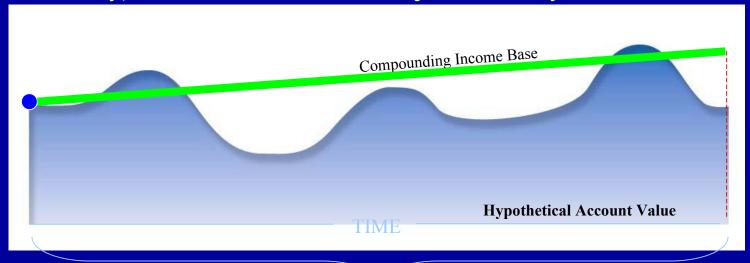




The 1st Income Base...

### The Compounding Income Base

An amount equal to purchase payments is compounded annually (until the contract anniversary prior to the owner's 81<sup>st</sup> birthday) and the Income Base is adjusted for any withdrawals.

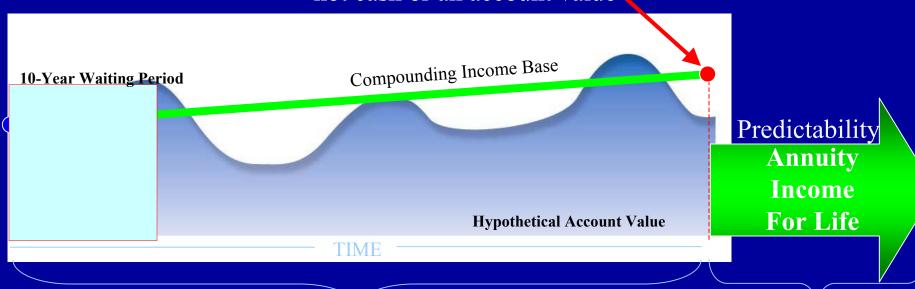




The 1<sup>st</sup> Income Base...

### The Compounding Income Base

Income Base is applied to special GMIB annuity purchase factors to determine lifetime income – it is not cash or an account value



Pay-In

Pay-Out



The 2<sup>nd</sup> Income Base...

# Highest Anniversary Value Income Base

- •Locks in bull market gains to determine retirement income
- Secures an amount equal to the highest account value achieved on any prior contract anniversary before the owner's 81st birthday
- The Income Base is adjusted for any withdrawals or purchase payments

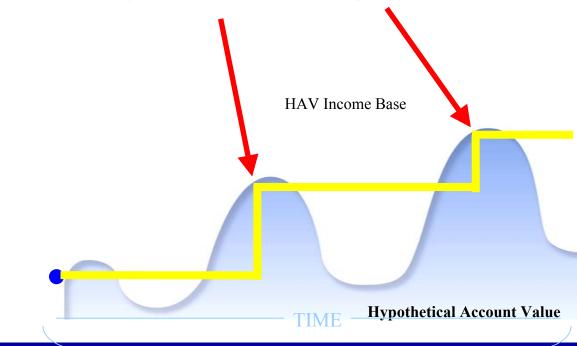




The 2<sup>nd</sup> Income Base...

### The Highest Anniversary Value Income Base

Locks in an amount equal to the highest account value achieved on any contract anniversary before the owner's 81st birthday

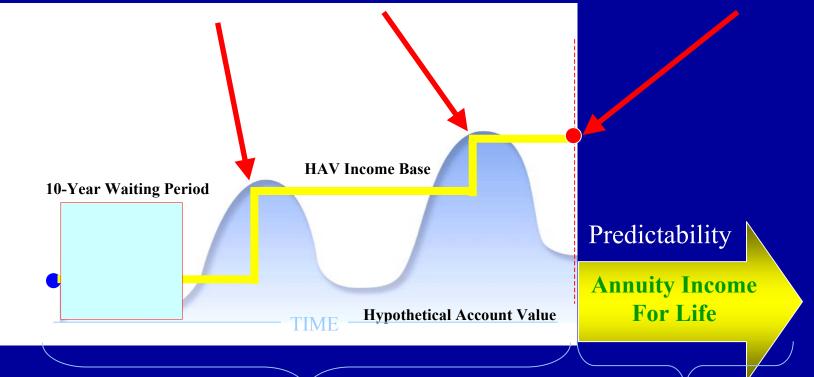




The 2<sup>nd</sup> Income Base...

### The Highest Anniversary Value Income Base

Income Base is applied to special GMIB annuity purchase factors to determine lifetime income – it is not cash or an account value



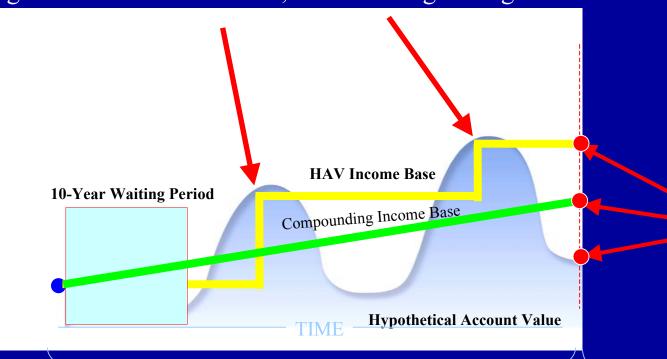
Pay-In

Pay-Out



## 2 Income Bases Working Together

If <u>current</u> annuity purchase factors, applied to the <u>account value</u>, would produce a greater amount of income, then clients get the greater amount



Clients Get Whatever **Produces** The Greatest Income

#### **MetLife**

# **Product Design Risk Mitigation**

- If the past is an indication:
  - Over long-term STOCKS outperform BONDS that outperform Cash
  - GMIB has a minimum 10 year investment horizon allowing the client to realize "long-term investment returns"
- Hedge against longevity and low interest rates
  - 7 year setback in age (75 year old becomes a 68 year old) reflected in guaranteed annuity purchase rates.
  - GMIB utilizes a 2 ½% long-term interest rate to provide "life time" income payments
- Diversified Asset Allocation through Morningstar models
- Company "Dollar Cost Averages" as client purchases and exercises GMIB

Limit "dollar for dollar" withdrawals

#### **MetLife**®

# **GMIB - Pricing Methodology**

- Generated 1000 robust stochastic scenarios of stock returns and interest rates, over a 20 year time horizon
- For each scenario, modeled:
  - Policyholder behavior -- withdrawals, utilization of dollar-fordollar corridor, GMIB annuitizations, etc.
  - Policy values -- AV, GMIB Income Base, Annuity Payout Rates
  - PV of GMIB Fees and GMIB Claims
    - Difference is Net Gain/(Loss)
  - Economic Capital
  - ROI

# MetLife GMB - Capital

#### Economic Capital

- 4 standard deviations of change in market value over a one-year period
- Depends on in-the-money ratio, payout annuity rates, waiting period, and age

#### **Statutory RBC**

- Methodology not yet finalized by industry working group
- 90th percentile Conditional Tail Expectation of PV of Stat Surplus
- MetLife targets Stat surplus at 300% RBC
- Initial testing indicates 300% RBC is generally similar to Economic Capital

# **GMIB ROI**

Results of Return on Investment (ROI) for 1000 stochastic scenarios:

Average ROI 15%

Median ROI 18%

Probability ROI > 15% 70%

Probability ROI > 12% 80%

Hypothetical pricing results, illustration shows potential distribution of pricing results

# MetLife GMIB Utilization

(\$ millions)	June 2003 YTD Deposits GMIB	June 2003 YTD Deposits with GMIB	Utilization * Rate
<b>MetLife</b> Investors	\$2,970	\$1,693	70%
MetLife Financial Services	\$1,336	\$138	12%
NEW ENGLAND FINANCIAL DOWNER TO STAY THE COURSE A Molt. fin Affiliate	\$486	\$248	59%
<b>MetLife</b> Resources™	<u>\$31</u>	<u>\$ 4</u>	<u>31%</u>
Total	\$4,823	\$2,083	43%

<sup>17</sup> 

# MetLife GMB EXPOSURE

(\$ Millions)	Total Fund	Fund w/ GMIB	GMIB*	Guar. **	Current **
	06/30/03	Exposure	Exposure	e Income	Income
MetLife Financial Services	\$235	\$68	\$ 2	\$0.3	\$0.4
New England Financial	639	188	12	0.9	1.0
MetLife Investors Group	4,003	1,133	111	5.7	6.2
Total	4,878	1,389	126	6.9	7.6

<sup>\*</sup>GMIB base excess over fund. GMIB base is the higher of the 6% accumulation and the Account Value Ratchet. GMIB base is reset on policy anniversary

<sup>\*\*</sup> Assumes IMMEDIATE annuitization using guaranteed annuity purchase rates for male age 65 receiving monthly income for life with 10 years certain

<sup>\*\*\*</sup> Assumes IMMEDIATE annuitization using current annuity purchase rates (6/30/03) for male age 65 receiving monthly for life with 10 years certain

# Reinsurance

- 25% of MetLife Investors and New England Financial
   GMIB is reinsured
- Current reinsurance capacity of \$4 billion expired
   August 2003
- Currently seeking reinsurance opportunities that make financial sense, lack of capacity pushing prices higher

# MetLife Risk Management

- Dynamic hedging currently under review
  - Purchase options to hedge risk
  - Current pricing covers anticipated "cost of hedge strategy"
  - FAS 133 Account Issues: Assets at Market, Liabilities at Book
- Will utilize "economically sound reinsurance"
- Current strategy is to hold "economic capital" and "reserves"
- As of Q2 YTD account value with GMIB is 9% of individual annuity assets under management.