

# Griffith, Ballard & Company

## Valuation Interest Rate Calculations

For use during Valuation Year 2023

Based on Actual Rates through June 30, 2023

### MOODY'S CORPORATE AVERAGE YIELDS

Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
4.67%	4.65%	5.18%	5.73%	5.56%	5.09%	5.02%	5.14%	5.23%	5.05%	5.28%	5.28%
12-Month Average: 2022: 3.51%				2021: 2.96%	2020: 3.34%	36-Month Average: 2022: 3.27%					

### CURRENT YEAR PROJECTED AVERAGES

	Average	projected if future monthly average changes by					
		-0.50%	+0.50%	-1.00%	+1.00%	-2.00%	+2.40%
12-month average	5.16%	5.16%	5.16%	5.16%	5.16%	5.16%	5.16%
36-month average	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%
Lower	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%	3.88%

### PROJECTED VALUATION RATES, BASED ON ABOVE

	Rate	Change from prior yr.	projected if future monthly average changes by					
			-0.50%	+0.50%	-1.00%	+1.00%	-2.00%	+2.40%
Life Formula	3.25%	0.25%	3.25%	3.25%	3.25%	3.25%	3.25%	3.25%
Life Reserve*	3.00%	0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Life Nonfor Fctr**	3.75%	0.00%	3.75%	3.75%	3.75%	3.75%	3.75%	3.75%
Flex Prem DA***	4.00%	0.75%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Single Prem DA***	4.25%	1.00%	4.25%	4.25%	4.25%	4.25%	4.25%	4.25%

\* Minimum change from prior year rate is 0.50%; \*\* can delay implementation until 1/1/2022; \*\*\* for Type C, 10 years and fewer, issue-year bas.

### NON-JUMBO\* IMMEDIATE ANNUITY (< \$250 M Initial Deposit)

Statutory Maximum Valuation Rates for Premium Determination Dates below:

	1/1/23-3/31/23	4/1/23-6/30/23	7/1/23-9/30/23	10/1/23-12/31/23
A	5.00%	4.75%	4.50%	5.00%
B	5.00%	4.50%	4.50%	5.00%
C	5.00%	4.50%	4.75%	5.00%
D	5.00%	4.75%	4.75%	5.00%

#### NON LIFE CONTINGENT

RP <= 5	A
5 < RP <= 10	B
10 < RP <= 15	C
RP > 15	D

see VM-22 3.A.2 (Table 1)

#### LIFE CONTINGENT

Issue Age:	< 70	70-79	80-89	90+
RP <= 5	D	C	B	A
5 < RP <= 10	D	C	B	B
10 < RP <= 15	D	C	C	C
RP > 15	D	D	D	D

see VM-22 3.A.3 (Table 2)

\* For Jumbo Annuities, consult the NAIC website: <https://content.naic.org/sites/default/files/pbr-2023-vm22-nonjumbo-jumbo-valuation-rates.xlsx>

### SINGLE PREMIUM DEFERRED ANNUITY

ISSUE-YEAR BASIS	2023				2022			
	Duration	Ref*	A	B	C	Ref*	A	B
5 Years or Less	5.16%	4.75%	4.50%	4.25%	3.51%	3.50%	3.25%	3.25%
5+ to 10 Years	5.16%	4.75%	4.50%	4.25%	3.51%	3.50%	3.25%	3.25%
10+ to 20 Years	3.88%	3.50%	3.50%	3.50%	3.27%	3.25%	3.25%	3.25%
Greater than 20 Years	3.88%	3.50%	3.25%	3.25%	3.27%	3.25%	3.00%	3.00%

### FLEXIBLE PREMIUM DEFERRED ANNUITY

ISSUE-YEAR BASIS	2023				2022			
	Duration	Ref*	A	B	C	Ref*	A	B
5 Years or Less	5.16%	4.75%	4.25%	4.00%	3.51%	3.50%	3.25%	3.25%
5+ to 10 Years	5.16%	4.50%	4.25%	4.00%	3.51%	3.50%	3.25%	3.25%
10+ to 20 Years	3.88%	3.50%	3.50%	3.50%	3.27%	3.25%	3.25%	3.00%
Greater than 20 Years	3.88%	3.50%	3.25%	3.25%	3.27%	3.00%	3.00%	3.00%

\* 12- preceding month average (if greater than 10 years, use 36- preceding month average, if lower)

### DYNAMIC MINIMUM ANNUITY NONFORFEITURE RATES

Five-Year Constant Maturity Treasury (Monthly Average) and Related Minimum Guarantee Rates

	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22
5-Yr CMT:	1.20%	1.23%	1.54%	1.81%	2.11%	2.78%	2.87%	3.19%	2.96%	3.03%
Minimum Rate*:	1.00%	1.00%	1.00%	1.00%	1.00%	1.55%	1.60%	1.95%	1.70%	1.80%
	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
5-Yr CMT:	3.70%	4.18%	4.06%	3.76%	3.64%	3.94%	3.82%	3.54%	3.59%	3.95%
Minimum Rate*:	2.45%	2.95%	2.80%	2.50%	2.40%	2.70%	2.55%	2.30%	2.35%	2.70%

NOTE: most designs cap the minimum guaranteed rate at 3%, though formula would resolve to the higher amount.