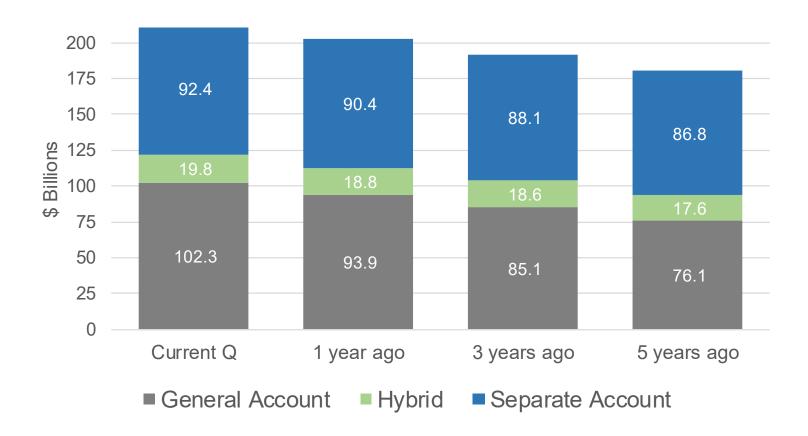


BOLI INDUSTRY ANALYTICS & ALLOCATIONS

BANK CALL REPORT BOLI BREAKDOWN

Banks reported \$214.6 billion of BOLI in 2021-Q2, of which \$92.4 billion was SA



STUDY PURPOSE AND BACKGROUND

Our study attempts to track how SA BOLI is allocated over time

- Gathered SA BOLI AUM data is categorized into portfolio types
 - Capital Efficient / Multi-Sector / Target RW
 - High Yield
 - Credit
 - Core Fixed Income

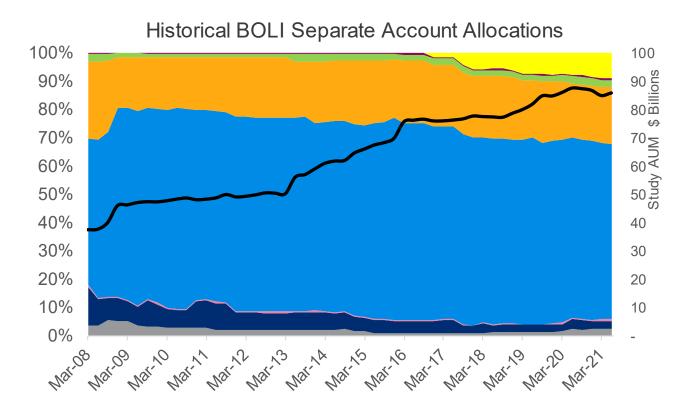
- MBS / Securitized (ABS / CMBS)
- CLO / Bank Loan
- Short Duration
- Government
- Portfolio types represent full portfolio MVs and do not look through to the holdings sector weights

Currently comprises \$86 billion – a massive share of the industry¹

HISTORICAL BOLI/COLI SEPARATE ACCOUNT ALLOCATIONS

For the last decade, allocations have been dominated by MBS / Securitized portfolios. More recently, capital efficient / multi-sector type portfolios are gaining traction.

The chart below shows the study's total AUM (black line), and portfolio type breakdown (colored areas) over time.

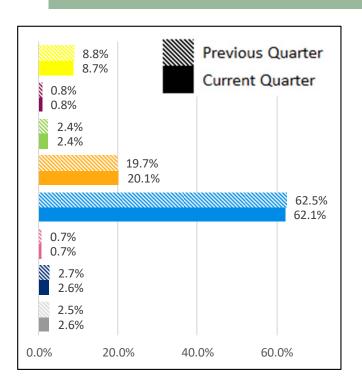


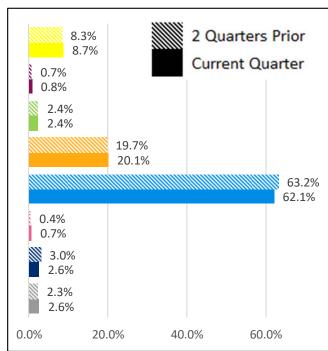
2021-Q2 Weights	
Cap Efficient / Multi Sector	8.7%
High Yield	0.8%
Credit	2.4%
Core Fixed Income	20.1%
MBS / Securitized	62.1%
CLO / Bank Loan	0.7%
Short Duration	2.6%
Government	2.6%

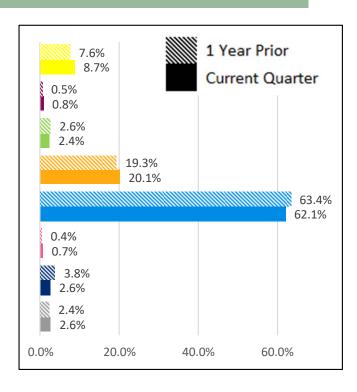
2021_02 Waights

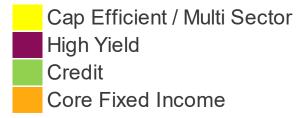
SEPARATE ACCOUNT ALLOCATION CHANGES

While some changes can be attributed to asset growth, periodic comparisons can indicate potential reallocations²





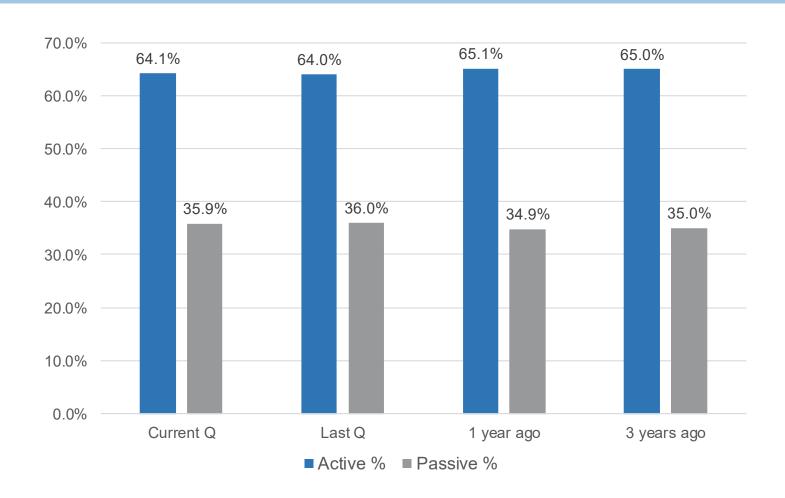






BREAKDOWN OF PORTFOLIOS (ACTIVE VS PASSIVE)

Of the \$86 billion in the study, 64% of the allocations are actively managed



ALLOCATION COMMON BENCHMARK PERFORMANCE

Using common benchmarks for the categories, a proxy for the industry's SA Q2 MV performance is estimated at 0.86%

Benchmark		Quarter	1-Year	3-Year	5-Year	Weights
Cap Efficient / Multi Sector	[Proxied By Blend of Below]	1.39%	2.68%	4.88%	3.35%	8.72%
High Yield	Bloomberg High Yield	1.04%	11.11%	7.25%	6.71%	0.79%
Credit	Bloomberg US Credit	3.31%	2.99%	7.43%	4.64%	2.39%
Core Fixed Income	Bloomberg US Agg	1.83%	-0.33%	5.34%	3.03%	20.14%
MBS / Securitized	Bloomberg US Securitized	0.44%	-0.20%	3.93%	2.35%	62.09%
CLO / Bank Loan	Palmer CLOSE Index	0.37%	3.85%	2.89%	3.00%	0.67%
Short Duration	ML 90-Day LIBOR	0.05%	0.25%	1.64%	1.46%	2.56%
Government	BofA / ML 1-3Y Treasury	-0.03%	0.07%	2.67%	1.59%	2.64%
Industry Proxy MV Performance using rolling weights:		0.86%	0.20%	4.33%	2.60%	
Industry Proxy Stable Value Performance:		0.52%	2.22%	2.51%	2.47%	

CALL REPORT BOLI ANALYTICS

The overall effective RW for SA BOLI was ~41%; however, many banks default to 100%

■ Using the Q2 category weights and proxy portfolios, **MBSA estimates a ~28%** effective riskweight for SA BOLI in our Study using the Basel III Standardized Approach

All Banks

	# of Banks	GA BOLI (\$B)	Hybrid BOLI (\$B)	SA BOLI (\$B)	SA Exposure (\$B)	SA RWA (\$B)	Total RWA / Total Exposure	Average Bank RW%
Current Q	3,277	102.3	19.8	92.4	103.4	42.5	41.1%	90.2%
Last Q	3,274	98.9	19.3	91.8	100.4	39.7	39.5%	85.1%
1 year ago	3,295	93.9	18.8	90.4	101.7	40.3	39.6%	90.1%
3 years ago	3,545	85.1	18.6	88.1	100.2	40.3	40.2%	91.4%

Bank RW% median and mode were 100% for all periods

\$25B+ Banks

	# of Banks	GA BOLI (\$B)	Hybrid BOLI (\$B)	SA BOLI (\$B)	SA Exposure (\$B)	SA RWA (\$B)	Total RWA / Total Exposure	Average Bank RW%
Current Q	90	61.5	13.6	88.3	95.4	36.2	37.9%	60.7%
Last Q	91	60.4	13.2	87.7	95.1	35.8	37.6%	59.2%
1 year ago	85	57.3	12.6	86.3	93.5	33.9	36.2%	57.0%
3 years ago	73	49.3	11.6	83.3	89.3	31.8	35.6%	70.7%

For larger banks, the mode Bank RW% is still 100%, but median drops to ~46%

FOOTNOTES / DISCLAIMERS

- Regarding industry coverage;
 - Some of the data included in the study may include portfolios that are comingled with corporations or non-banking entities
 - Some of the missing assets may include equity portfolios, which are excluded from this study
- 2. "Reallocations" assumed by significant changes in categorical weights without a parallel change in total assets. May or may not reflect any actual reallocation activity.

*Call Report Data may include BHC data from Y-9C Reports

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