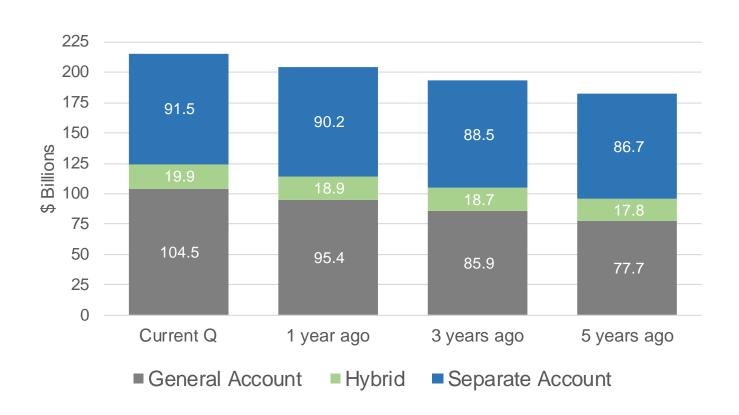


BOLI INDUSTRY ANALYTICS & ALLOCATIONS

BANK CALL REPORT BOLI BREAKDOWN

Banks reported \$215.9 billion of BOLI in 2021-Q3, of which \$91.5 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

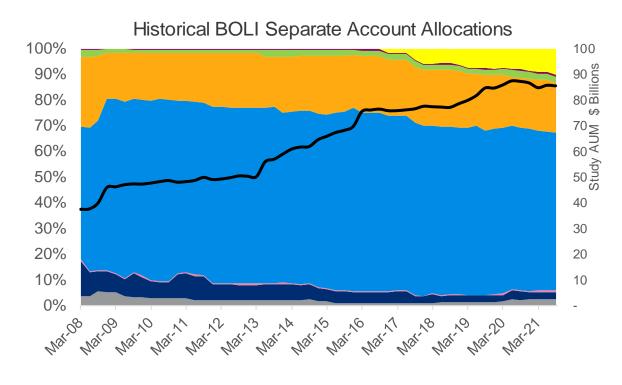
- MBS / Securitized (ABS / CMBS)
- CLO / Bank Loan
- Short Duration
- Government
- Portfolio types represent full portfolio MVs and do not look through to the holdings sector weights

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.

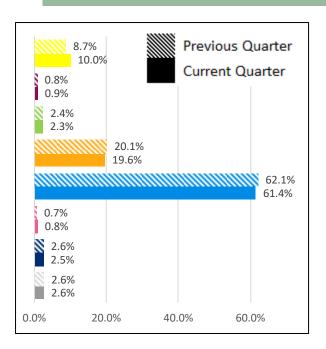
The chart below shows the study's total AUM (black line), and portfolio type breakdown (colored areas) over time.

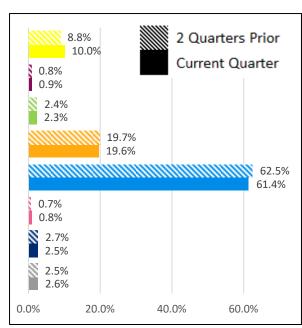


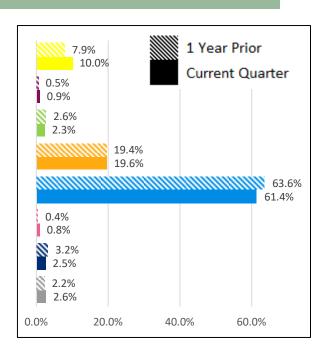
2021-Q3 Weights	
Cap Efficient / Multi Sector	10.0%
High Yield	0.9%
Credit	2.3%
Core Fixed Income	19.6%
MBS / Securitized	61.4%
CLO / Bank Loan	0.8%
Short Duration	2.5%
Government	2.6%

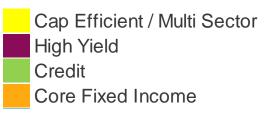
SEPARATE ACCOUNT ALLOCATION CHANGES

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





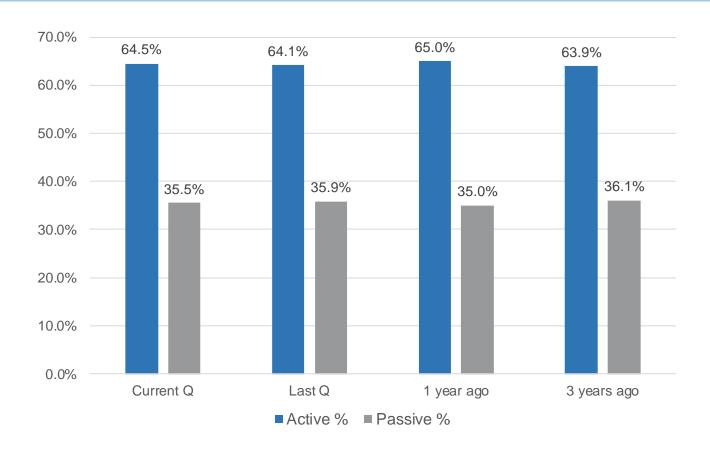






BREAKDOWN OF PORTFOLIOS (ACTIVE VS PASSIVE)

Of the \$86 billion in the study, 65% of the allocations are actively managed



ALLOCATION COMMON BENCHMARK PERFORMANCE

Using common benchmarks for the categories, a proxy for the industry's SA Q3 MV performance is estimated at 0.09%

Benchmark		Quarter	1-Year	3-Year	5-Year	Weights
Cap Efficient / Multi Sector	[Proxied By Blend of Below]	0.08%	1.32%	4.73%	3.22%	9.96%
High Yield	Bloomberg High Yield	0.87%	7.78%	6.79%	5.92%	0.85%
Credit	Bloomberg US Credit	-0.02%	1.45%	7.10%	4.38%	2.29%
Core Fixed Income	Bloomberg US Agg	0.05%	-0.90%	5.36%	2.94%	19.55%
MBS / Securitized	Bloomberg US Securitized	0.09%	-0.35%	3.98%	2.25%	61.42%
CLO / Bank Loan	Palmer CLOSE Index	0.39%	2.21%	2.75%	2.84%	0.84%
Short Duration	ML 90-Day LIBOR	0.04%	0.21%	1.46%	1.43%	2.48%
Government	BofA / ML 1-3Y Treasury	0.06%	0.03%	2.63%	1.62%	2.60%
Industry Proxy MV Performance using rolling weights:		0.09%	-0.16%	4.35%	2.50%	
Industry Proxy Stable Value Performance:		0.51%	2.13%	2.48%	2.45%	

CALL REPORT BOLI ANALYTICS

The overall effective RW for SA BOLI was ~39%; however, many banks default to 100%

Using the Q3 category weights and proxy portfolios, MBSA estimates a ~27% effective risk-weight 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	3,259	104.5	19.9	91.5	100.8	39.4	39.1%	85.5%
Last Q	3,277	102.3	19.8	92.4	103.4	42.5	41.1%	90.2%
1 year ago	3,279	95.4	18.9	90.2	98.5	37.3	37.9%	85.0%
3 years ago	3,513	85.9	18.7	88.5	100.6	40.5	40.3%	90.7%

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	91	62.5	13.8	87.7	95.8	35.6	37.1%	60.1%
Last Q	90	61.5	13.6	88.3	95.4	36.2	37.9%	60.7%
1 year ago	87	58.6	12.6	86.1	93.3	33.4	35.8%	55.5%
3 years ago	75	49.8	11.7	83.7	89.6	31.9	35.6%	55.4%

For larger banks, the mode Bank RW% is still 100%, but median drops to ~45%

FOOTNOTES / DISCLAIMERS

- 1. 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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