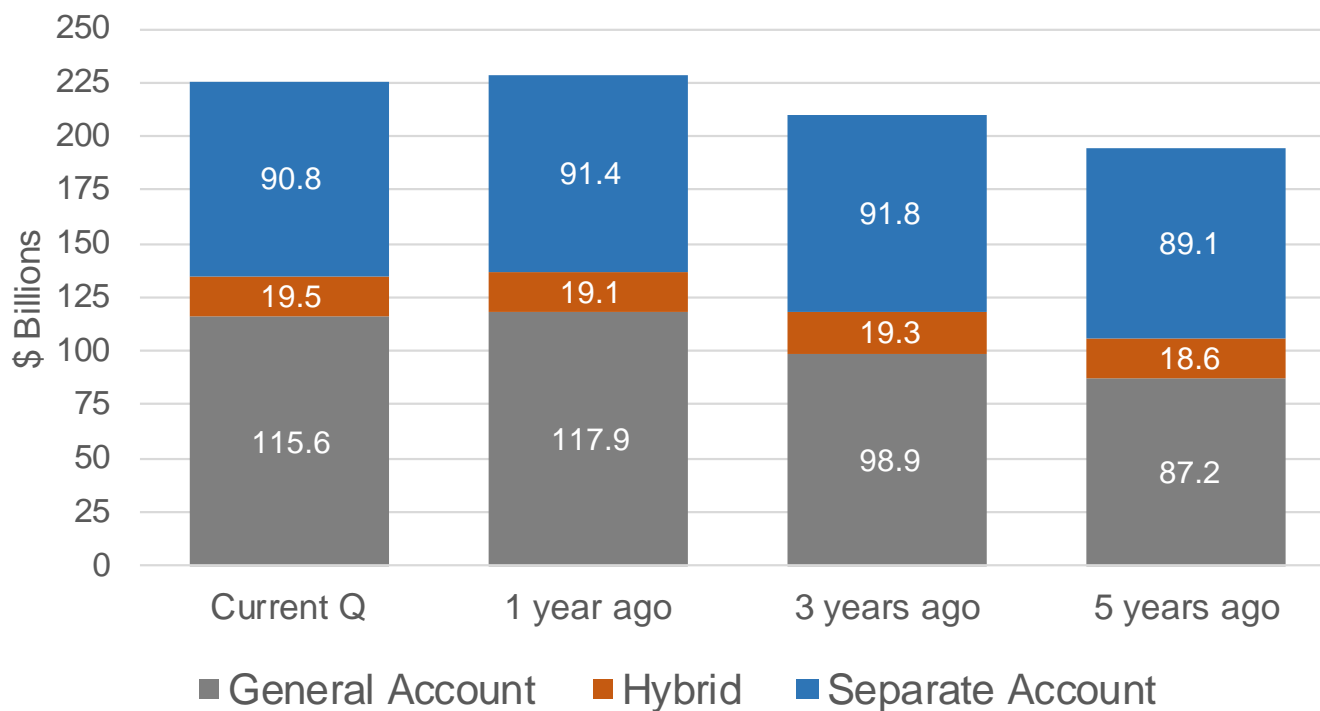


BOLI INDUSTRY ALLOCATIONS & ANALYTICS

BANK CALL REPORT BOLI BREAKDOWN

Banks reported \$225.9 billion of BOLI in 2024-Q1, of which \$90.8 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

The Study currently comprises \$78 billion – a massive share of the industry¹

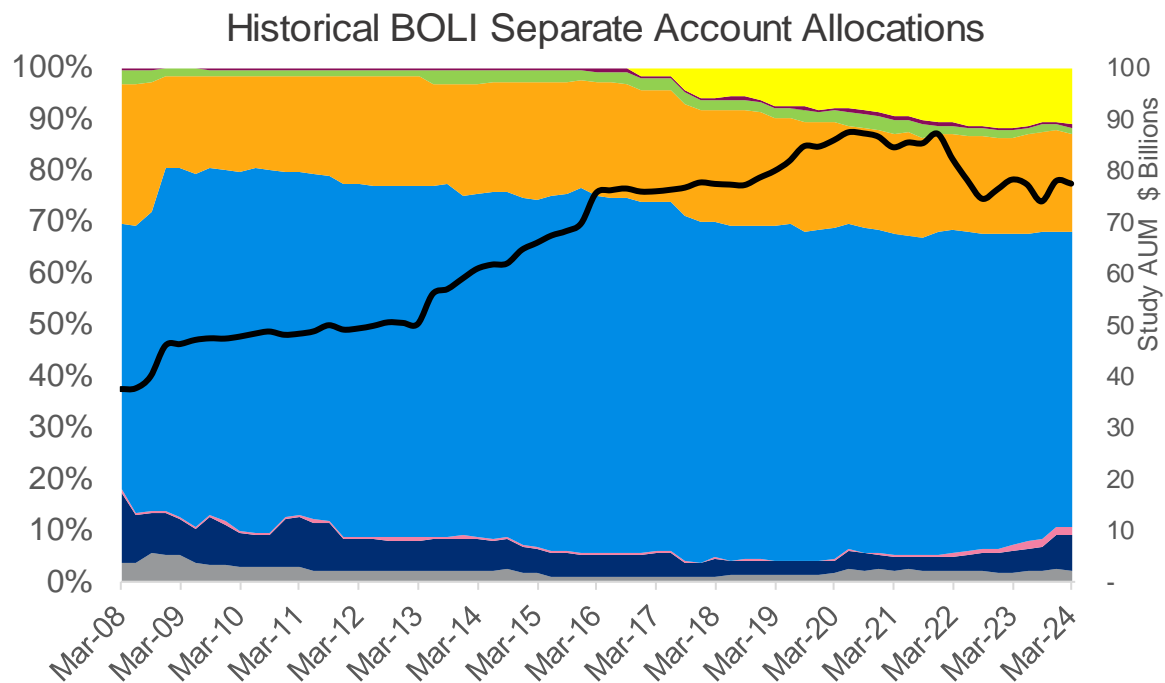
- \$50 billion (65%) of the assets are actively managed

HISTORICAL BOLI/COLI SEPARATE ACCOUNT ALLOCATIONS

Allocations have been dominated by MBS / Securitized portfolios. Recently, multi-sector type portfolios have gained a solid share, but seemed to have leveled off.

In 2023, MV declines from rising rates saw short-duration increases from both reallocations (forced and voluntary), as well as resilience to the rate increases.

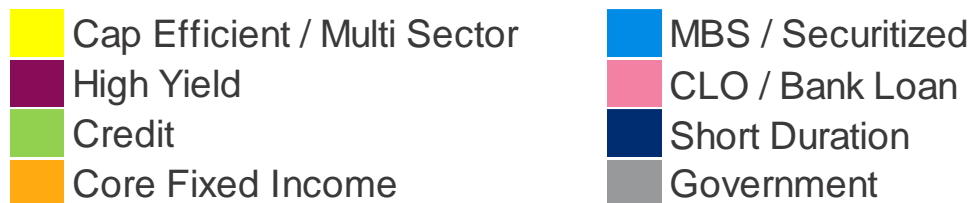
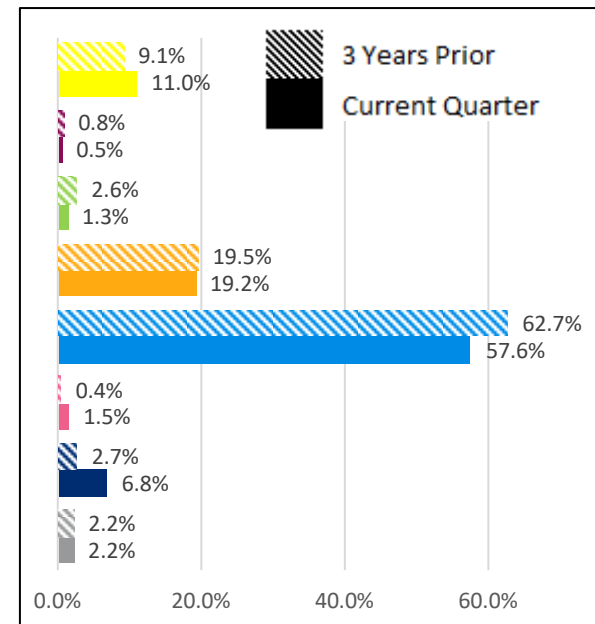
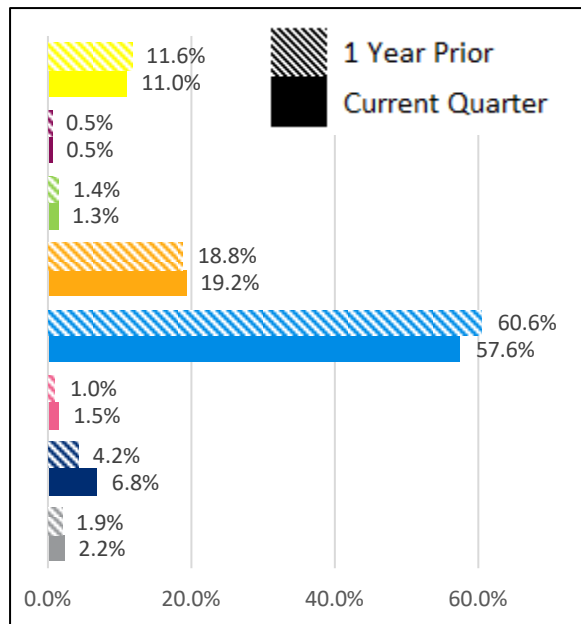
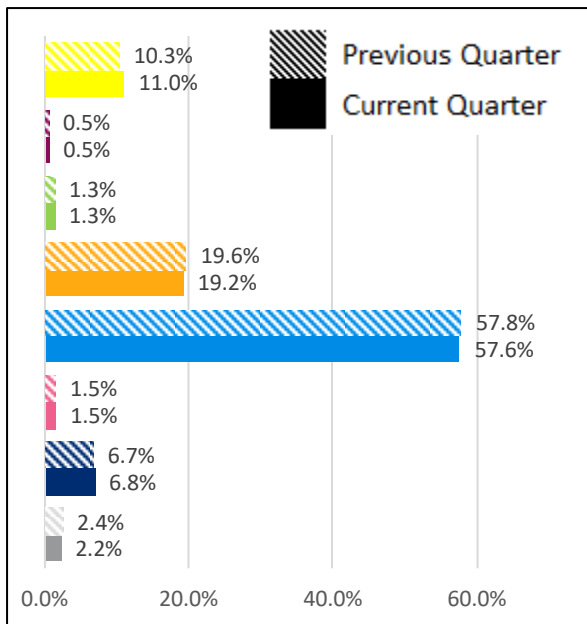
- The chart below shows the study's total AUM (black line), and portfolio type breakdown (colored areas) over time.



2024-Q1 Weights	
Cap Efficient / Multi Sector	11.0%
High Yield	0.5%
Credit	1.3%
Core Fixed Income	19.2%
MBS / Securitized	57.6%
CLO / Bank Loan	1.5%
Short Duration	6.8%
Government	2.2%

SEPARATE ACCOUNT ALLOCATION CHANGES

While some changes can be attributed to asset growth, periodic comparisons can indicate potential reallocations or new purchases



ALLOCATION COMMON BENCHMARK PERFORMANCE

Using common benchmarks for the categories, a proxy for the industry's SA Q1 MV performance is estimated at -0.54% while the stable value proxy was 0.52%

- 1-Year MV performance is estimated at 2.26%, while the stable value proxy was 1.99%

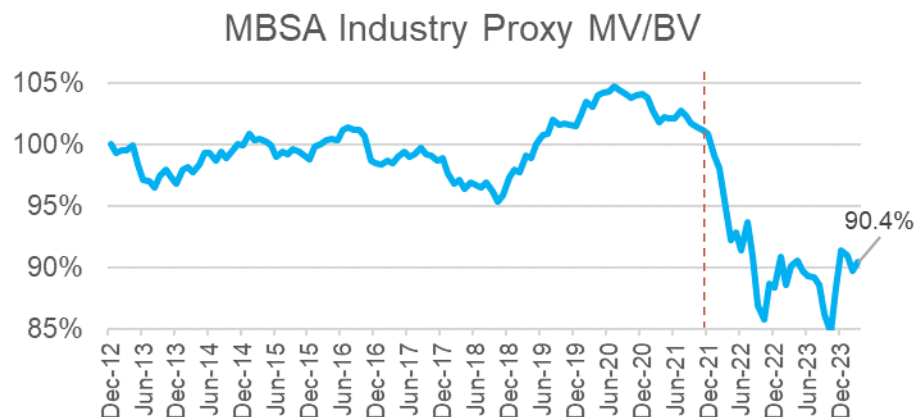
	Benchmark	Quarter	1-Year	3-Year	5-Year	Weights
Cap Efficient / Multi Sector	[Proxied By Blend of Below]	0.19%	4.39%	0.06%	1.82%	10.97%
High Yield	<i>Bloomberg High Yield</i>	0.89%	9.45%	1.35%	3.78%	0.51%
Credit	<i>Bloomberg US Credit</i>	-0.41%	4.15%	-1.86%	1.39%	1.30%
Core Fixed Income	<i>Bloomberg US Agg</i>	-0.78%	1.70%	-2.46%	0.36%	19.15%
MBS / Securitized	<i>Bloomberg US Securitized</i>	-0.91%	1.61%	-2.71%	-0.25%	57.57%
CLO / Bank Loan	<i>JPM AAA CLOIE</i>	1.84%	8.77%	4.13%	3.65%	1.49%
Short Duration	<i>ICE BofA USD 3M DOR</i>	1.30%	5.34%	2.59%	2.15%	6.85%
Government	<i>BofA / ML 1-3Y Treasury</i>	0.30%	2.97%	0.08%	1.15%	2.17%
Industry Proxy MV Performance using rolling weights:		-0.54%	2.26%	-2.02%	0.32%	
Industry Proxy Stable Value Performance:		0.52%	1.99%	1.95%	2.17%	

INDUSTRY MV/BV RATIO DEVELOPMENTS

Ratios decreased to start 2024 and slight rebound in March wasn't enough to bring the QoQ change positive. Overall, ratios decreased ~1% from Q4 to Q1.

- MBSA requested and compiled market value and book value data from carriers (each provided in the aggregate) to begin monitoring the overall MV/BV ratios of BOLI allocations
- Additionally, using our proxy MV and BV performance monitoring from the prior page, we calculate a proxy overall MV/BV ratio for the industry

	Carrier Aggregate MV/BV	MBSA Industry Proxy MV/BV
12/31/2021	100.9%	100.9%
3/31/2022	95.1%	95.5%
6/30/2022	91.1%	91.2%
9/30/2022	86.5%	86.7%
12/31/2022	88.2%	88.2%
3/31/2023	89.9%	90.2%
6/30/2023	89.1%	89.3%
9/30/2023	85.9%	86.2%
12/31/2023	91.2%	91.4%
3/31/2024	90.2%	90.4%



- As of 2024-Q1, the total MV in the carrier aggregate values above was ~51 billion
- The aggregate carrier ratios compare closely to our industry proxy MV and stable value performance values

SA BOLI RISK-WEIGHT

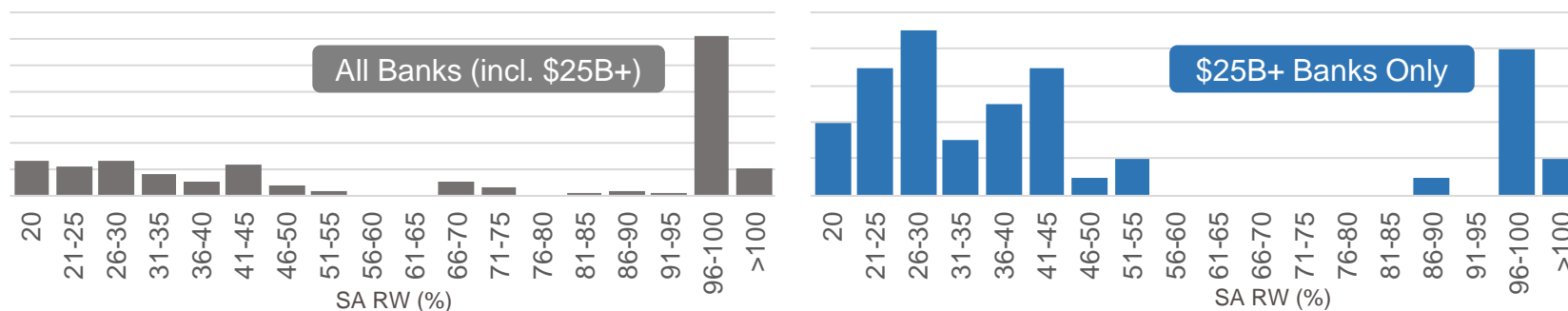
Large banks (\$25B+ Assets) own over 95% of SA BOLI, and achieve an average SA RWA% of ~31.6%. Meanwhile, many smaller banks default to 100%.

- Exposure and RWA data from call reports includes Hybrid BOLI. MBSA's process below attempts to calculate the value for SA BOLI only. Based on available parameters², some banks are excluded.

	Total Banks	Own BOLI	Own SA BOLI	Parameters Available	SA BOLI (\$B)	SA BOLI Only RW %			
						Weighted Average	Average	Mode	Median
All Banks	4,559	3,103	353	157	\$ 88.9	32.0%	81.6%	100%	70%
\$25B+	86	72	58	53	\$ 86.4	31.6%	47.5%	100%	34%

- Using the Q1 category weights and proxy portfolios, MBSA estimates the industry average could be ~29% using the Basel III Standardized Approach.
- The histograms below demonstrate the large banks do mostly achieve RW% between 20%-40%

Frequency of Bank SA RW%



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
 - Data included in the study is Market Value. In bank call reports, wrapped BOLI is reported at Book value.
2. MBSA's SA RW% process excludes banks that report SA BOLI on Schedule RC-F line 5, but not on Schedule RC-R Part II line 8a.

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

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