

August 2020



Stable Value Fund Review

North Carolina Supplemental
Retirement Plans

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Executive Summary

Stable Value Review – Executive Summary

- Callan held a conference call with Galliard on August 7th, 2020
- Callan maintains a positive opinion of Galliard's stable value strategy and the internally managed fixed income that underlies stable value accounts
- In 2019, Galliard underwent several organizational changes which warranted close monitoring of the firm
- Despite the founding partners' recent retirements, the fixed income and stable value teams have experienced a low degree of turnover since firm's inception
- Succession planning appears to have been effective through the leadership transition as the firm has displayed consistency in its investment process and performance
- A collaborative and structured process has aided in developing wrap contract solutions and maintaining a consistent investment approach
- North Carolina's stable value fund has performed in line with expectations and has consistently generated a crediting rate in line with peers
- Market to book ratios have increased and crediting rates have declined as a result of the Federal Reserve cutting rates in 1Q 2020; going forward, crediting rates are likely to trend downward due to increased cash allocations and a low interest rate environment

Callan

Galliard Stable Value

Galliard Stable Value – Organization

- In 2019, Galliard underwent several planned senior level retirements as well as operational changes
 - *Richard Merriam, Founding Managing Partner and Member of the Executive Operating Committee, retired in December 2019*
 - *Karl Tourville, Founding Managing Partner, President and Chairman of the Executive Operating Committee retired December 2019*
- Andrew Owen, President of Wells Fargo Funds, assumed the role of Co-President and Member of the Executive Operating Committee on January 1, 2020
- Galliard's previous revenue sharing agreement with Wells Fargo ended upon the retirement of the founding partners. The executive committee worked with Wells Fargo to renegotiate an incentive compensation structure for the investment team.
- Galliard's risk management, compliance and technology teams began reporting to Wells Fargo's risk and technology groups
- Callan maintains an "under review" status with respect to the organization
- Callan would apply a more positive opinion if Galliard continues to exhibit further stability among investment personnel, minimizes departures among leadership, and maintains stability at the firm
- While Wells Fargo may attempt to eliminate redundancies over time, any sweeping and immediate personnel cuts would be viewed negatively

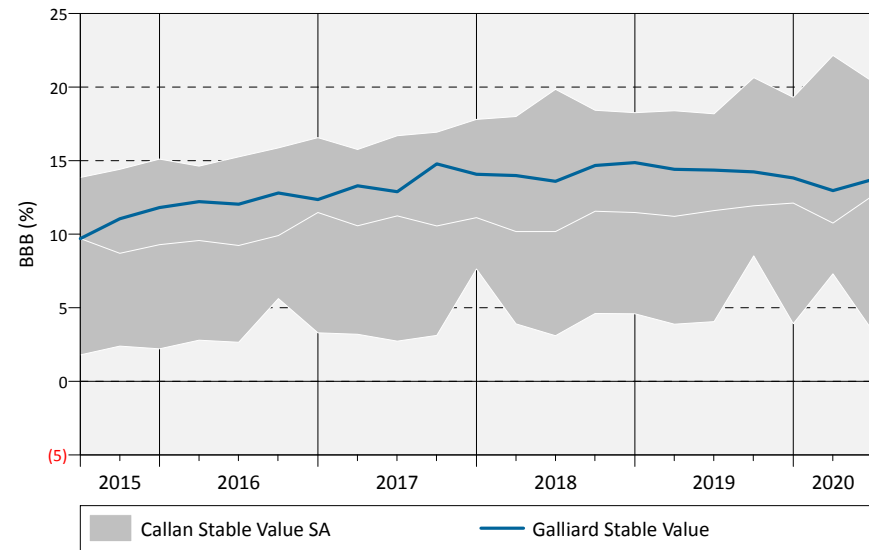
Galliard Stable Value – People

- Fixed income and dedicated stable value teams have experienced low turnover since firm's inception
- Ajay Mirza and Brandon Kanz remain key investment professionals acting as Chair and Vice-Chair of Investment Committee
- Leela Scattum, Head of Stable Value Contract Strategy, intends to retire by December 31, 2020; as a part of the firm's succession planning, Nick Gage has assumed leadership of the stable value strategy
- In 2Q20, Galliard hired two programmers as additions to the technology team and had a retirement within its operations group.
- Overall, Galliard maintains a deep stable value team comprised of eight wrap contract negotiating professionals, four external management oversight professionals, six contract administration professionals and 10 stable value accounting and operations professionals

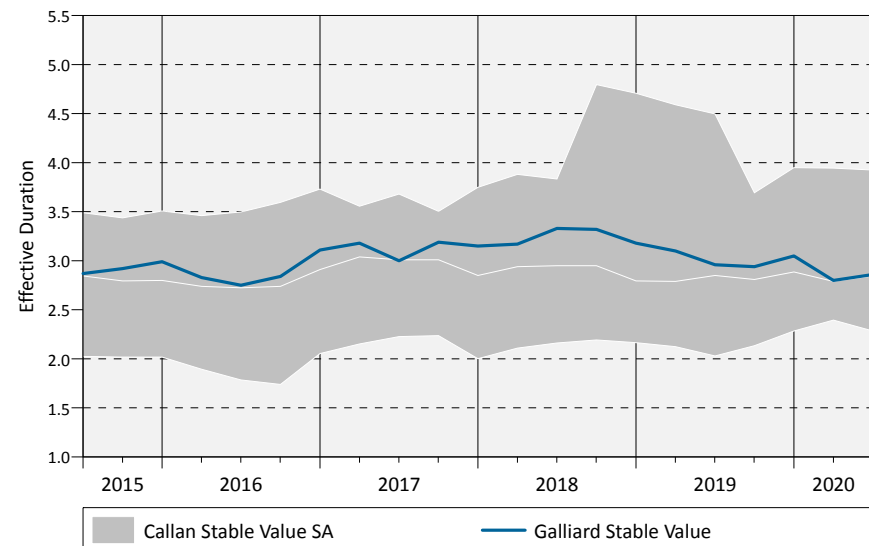
Galliard Stable Value – Process

- Galliard conducts a collaborative and structured process in implementing stable value portfolios
- Wrap negotiation has benefitted from the firm's dedicated resources and experience in wrap contract management as well as asset size
- Galliard has held slightly more corporate credit risk as exhibited by BBB-rated exposure relative to peers
- Duration has been held at an adequate level through multiple stages of the market cycle
- Galliard has effectively diversified risk utilizing subadvisors with complementing investing styles
- External management oversight, led by Elizabeth Smithley and Peter Schmit, appears to be thorough and robust

BBB Exposure
for 5 Years Ended June 30, 2020



Effective Duration
for 5 Years Ended June 30, 2020

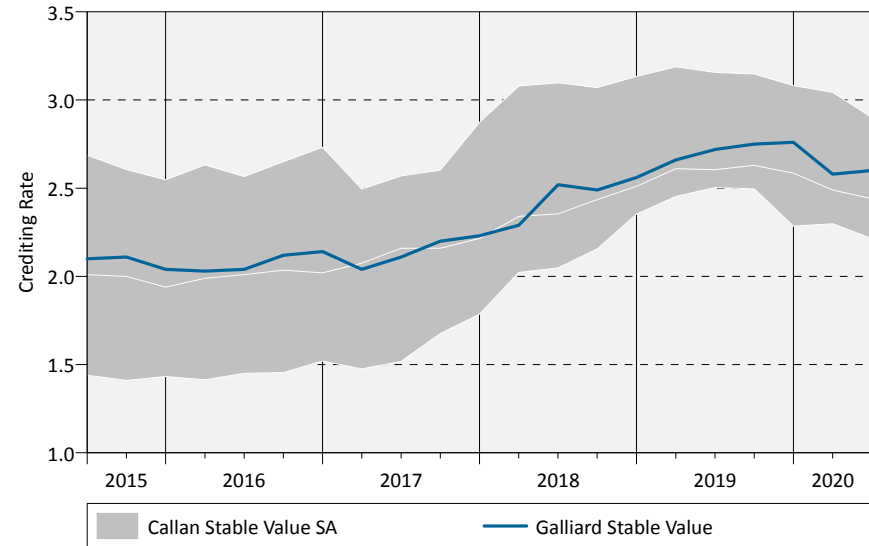


Callan Stable Value SA represents the stable value separate account peer group

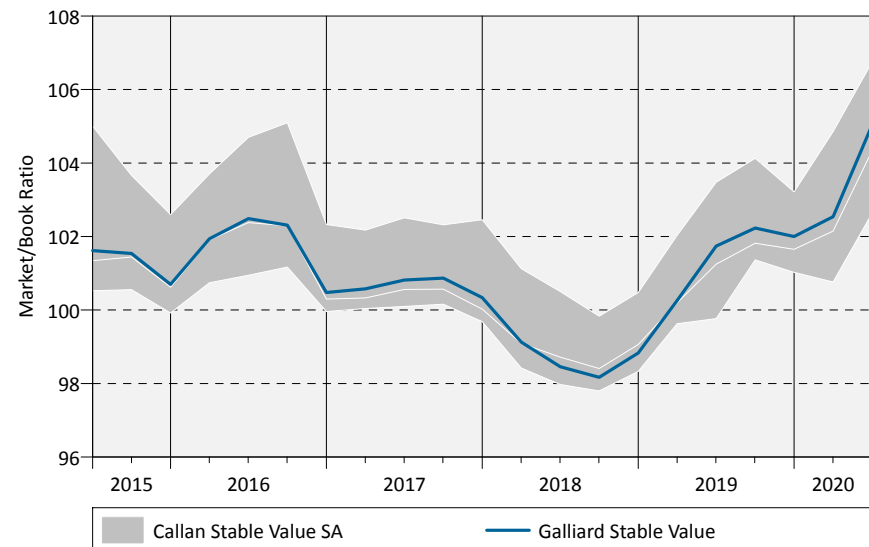
Galliard Stable Value – Performance

- The NCSRP stable value fund has produced a crediting rate above or in-line with the peer median
- Market to book value ratios started declining in 2016 as the Federal Reserve began raising interest rates, falling below 100% in 2018
- Market to book began increasing in December 2018 as the markets experienced a flight to quality and the Fed announced a pause to rate hikes
- Market to book increased and crediting rates decreased in 1Q 2020 as central banks cut interest rates to all time lows in order to support their economies through the Covid-19 crisis

Crediting Rate
for 5 Years Ended June 30, 2020



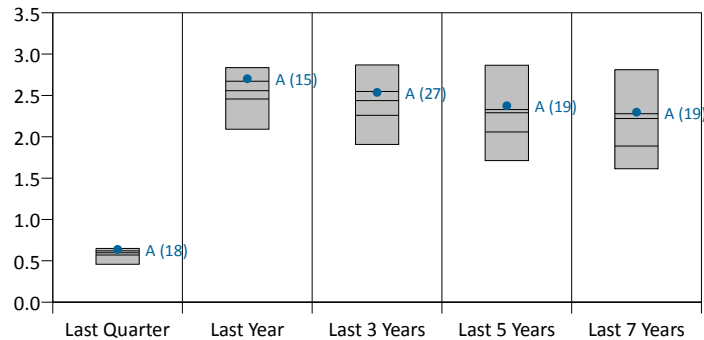
Market/Book Ratio
for 5 Years Ended June 30, 2020



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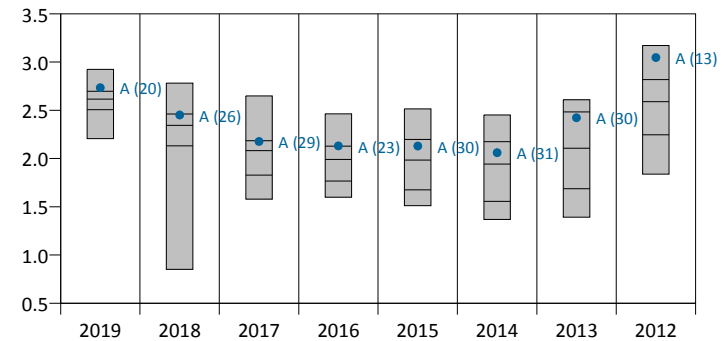
Galliard Stable Value – Performance

Returns
for Periods Ended June 30, 2020
Group: Callan Stable Value SA



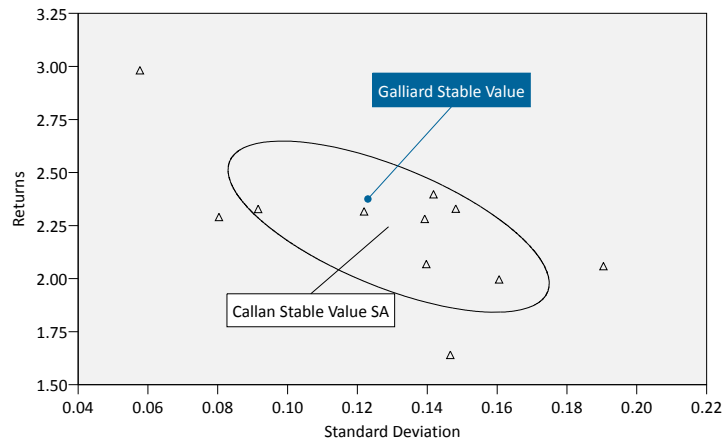
| | | | | | |
|-----------------------|------|------|------|------|------|
| 10th Percentile | 0.65 | 2.84 | 2.87 | 2.87 | 2.81 |
| 25th Percentile | 0.62 | 2.67 | 2.55 | 2.33 | 2.28 |
| Median | 0.60 | 2.56 | 2.44 | 2.29 | 2.22 |
| 75th Percentile | 0.57 | 2.46 | 2.26 | 2.06 | 1.89 |
| 90th Percentile | 0.46 | 2.09 | 1.91 | 1.71 | 1.61 |
| Galliard Stable Value | 0.64 | 2.70 | 2.54 | 2.38 | 2.30 |

Calendar Year Returns
for Periods Ended December 31, 2019
Group: Callan Stable Value SA

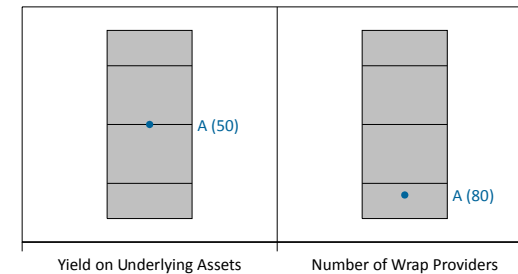


| | | | | | | | | |
|-----------------------|------|------|------|------|------|------|------|------|
| 10th Percentile | 2.93 | 2.78 | 2.65 | 2.46 | 2.52 | 2.45 | 2.61 | 3.17 |
| 25th Percentile | 2.70 | 2.46 | 2.18 | 2.13 | 2.20 | 2.18 | 2.48 | 2.82 |
| Median | 2.62 | 2.34 | 2.08 | 1.99 | 1.98 | 1.94 | 2.11 | 2.59 |
| 75th Percentile | 2.51 | 2.13 | 1.83 | 1.77 | 1.68 | 1.56 | 1.69 | 2.25 |
| 90th Percentile | 2.21 | 0.85 | 1.58 | 1.60 | 1.51 | 1.37 | 1.39 | 1.84 |
| Galliard Stable Value | 2.74 | 2.45 | 2.18 | 2.13 | 2.13 | 2.06 | 2.42 | 3.05 |

Scatter Chart
for 5 Year Ended June 30, 2020



Portfolio Characteristics For Periods Ended June 30, 2020
Group: Callan Stable Value SA



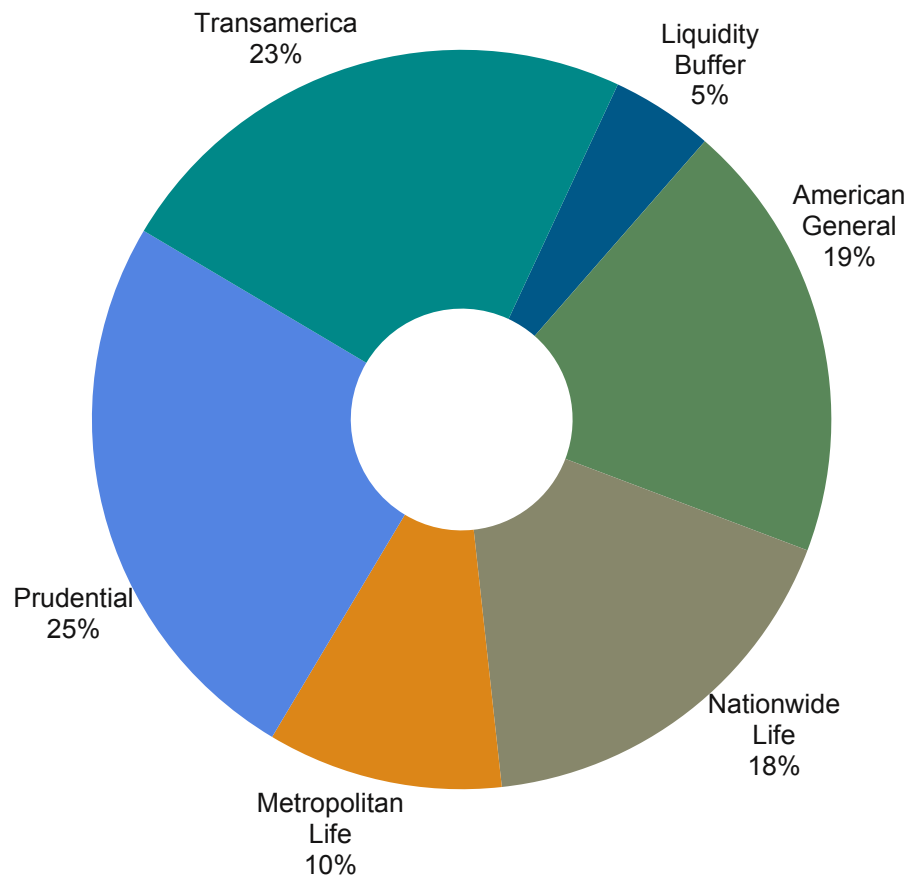
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|-----------------------|------|-------|
| 25th Percentile | 1.18 | 12.00 |
| Median | 0.98 | 9.00 |
| 75th Percentile | 0.90 | 5.75 |
| 90th Percentile | 0.83 | 1.50 |
| Galliard Stable Value | 0.98 | 5.00 |

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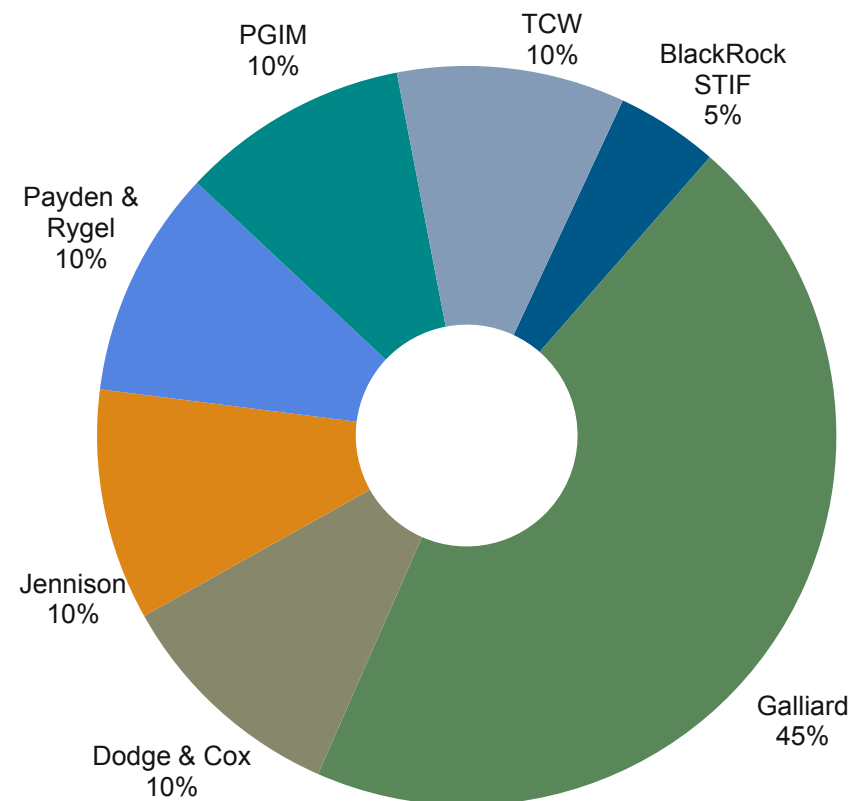
Galliard Stable Value – Performance

Diversification by Wrap Issuers and Subadvisors as of June 30, 2020

Wrap Issuer Exposure



Subadvisor Exposure



Galliard Stable Value – Performance

Subadvisor performance for periods ended June 30, 2020

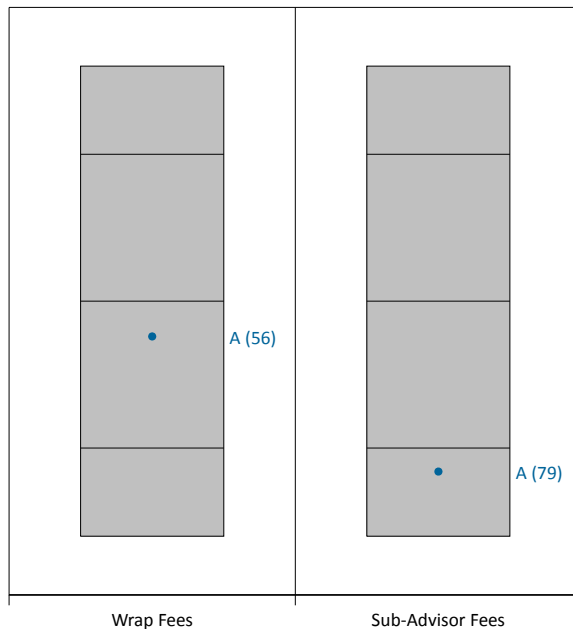
| Manager | 1 month | 1-quarter | 1-years | 3-years | 5-years | Since Inception | Inception Date |
|---|---------|-----------|---------|---------|---------|--------------------------|-----------------------|
| Galliard | 0.46% | 2.60% | 4.81% | - | - | 4.63% | June 1, 2018 |
| <i>BB 1-3 yr Gov't/Credit Index</i> | 0.20% | 1.17% | 4.20% | - | - | 4.07% | - |
| Galliard | 0.77% | 3.43% | 6.89% | - | - | 6.75% | June 1, 2018 |
| Dodge & Cox | 0.82% | 4.10% | 7.14% | 4.69% | 3.92% | 3.52% | Mar 1, 2015 |
| PGIM Fixed Income | 0.97% | 4.45% | 6.42% | 4.52% | - | 3.90% | Feb 1, 2016 |
| <i>BB Intermediate Aggregate Index</i> | 0.41% | 2.13% | 6.60% | 4.28% | 3.40% | 6.38% / 3.14% / 3.43% | - |
| Payden & Rygel | 0.81% | 2.90% | 6.95% | 4.68% | 3.28% | 2.73% | July 1, 2009 |
| ¹ <i>Linked Benchmark</i> | 0.41% | 2.13% | 6.60% | 4.45% | 3.04% | 2.25% | - |
| Jennison | 0.61% | 3.28% | 9.02% | 5.22% | 4.07% | 7.62% | ¹ See Note |
| TCW | 0.96% | 3.47% | 7.54% | - | - | 7.18% | June 1, 2018 |
| <i>BB Intermediate Gov't/Credit Index</i> | 0.62% | 2.81% | 7.12% | 3.79% | 2.76% | 6.73% / 6.70% | - |

¹Payden Linked BM: Bloomberg Barclays U.S. Intermediate Aggregate Bond Index. Prior to June 1, 2018 benchmark was Bloomberg Barclays U.S. 1-3 Year Government/Credit Bond Index. Performance inception: June 1, 2018. Prior to June 1, 2018 returns are linked to Wells Fargo Fixed Income Fund N (Jennison).

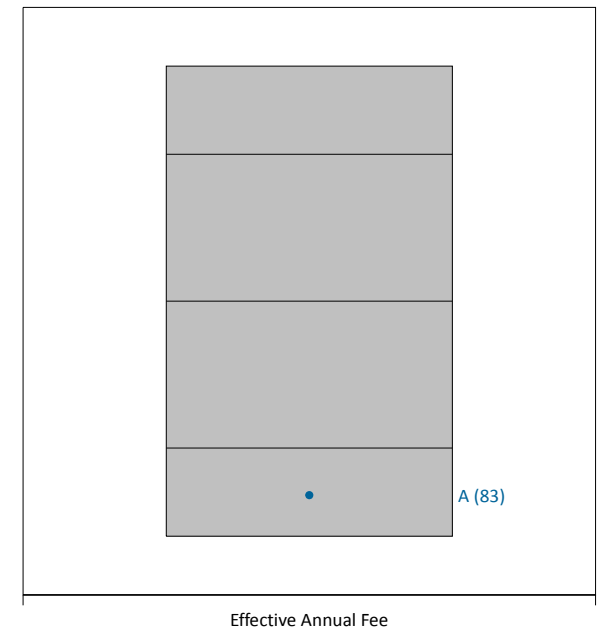
Galliard Stable Value - Fees

Wrap/Subadvisor and Management Fee Comparison

Fee Comparison
Ended June 30, 2020
Group: Callan Stable Value SA



Management Fee Comparison
Ended June 30, 2020
Group: Callan Stable Value SA



- Galliard recently reduced the management fee to 0.062% which is competitive among reported management fee schedules.
- Galliard has also been assertive in negotiating wrap contract fees—they expect fees to remain between 15-16 bps for the foreseeable future.

Callan Stable Value SA represents the stable value separate account peer group

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Stable Value Trends

Factors Impacting Stable Value Environment

Current Rate Environment

- A period of rising interest rates and increased allocations to spread product helped increase crediting rates from 2017 through 2019.
- Going forward, crediting rates may trend downward.
 - The Covid-19 crisis has spurred central banks to support their economies by lowering interest rates to all time lows.
 - Cash allocations within stable value funds have increased due to the flight to quality, lowering average yields within SV funds.

Wrap Capacity

- Wrap coverage and investment guidelines tightened after the 2008 financial crisis.
- Insurance companies have since become the dominant players within the wrap industry.
 - Increased competition has helped wrap fees decline to 16-17 bps from the 25-30 bps range immediately after the GFC.
 - Investment guideline negotiation leverage has shifted back in favor of stable value managers.
- Wrap coverage has remained robust through the Covid-19 crisis, however, vigilance of the health of the wrap provider community is prudent.

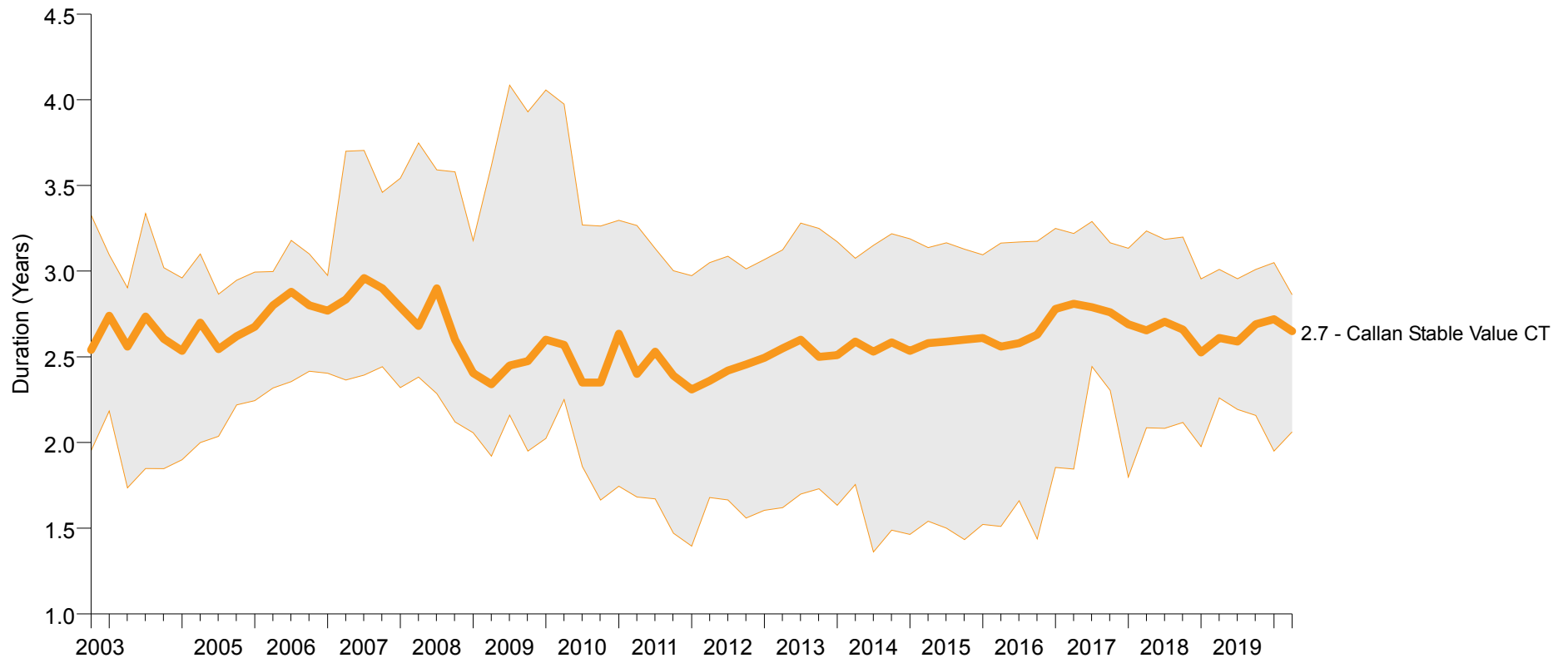
Financial Health of Wrap Issuers

| Issuers | Ratings | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|
| | S&P | | Moody's | | Fitch | |
| | June 2019 | June 2020 | June 2019 | June 2020 | June 2019 | June 2020 |
| American General Life ¹ | A+ | A+ | A2 | A2 | A+ | A+ |
| Jackson National Life | AA- | A+ | A1 | A1 | AA- | A+ |
| Lincoln Financial | AA- | AA- | A1 | A1 | A+ | A+ |
| Mass Mutual | AA+ | AA+ | Aa3 | Aa3 | AA+ | AA+ |
| Metropolitan Life ¹ | AA- | AA- | Aa3 | Aa3 | AA- | AA- |
| New York Life | AA+ | AA+ | Aaa | Aaa | AAA | AAA |
| Pacific Life | AA- | AA- | A1 | A1 | A+ | AA- |
| Principal Life | A+ | A+ | A1 | A1 | AA- | AA- |
| Protective Life | AA- | AA- | A1 | A1 | A+ | A+ |
| Prudential ¹ | AA- | AA- | Aa3 | Aa3 | AA- | AA- |
| RGA | AA- | AA- | A1 | A1 | A | A |
| Royal Bank of Canada | AA- | AA- | Aa2 | Aa2 | AA | AA |
| State Street Bank | AA- | AA- | Aa3 | Aa3 | AA | AA |
| Transamerica ¹ | AA- | A+ | A1 | A1 | A+ | A+ |
| Voya Financial | A | A+ | A2 | A2 | A | A |

| | |
|----------------|--|
| | Sector outlook - Stable value managers maintain a positive outlook on wrap providers' financial stability, while the major rating agencies maintain a negative-to-stable outlook on the insurance sector as a whole. |
| Moody's | Negative - Unprecedented economic disruption from the COVID-19 pandemic and a prolonged low-rate environment are negative though the industry has strong capital position. |
| S&P | Stable - Asset risk is the immediate risk, but life insurers' capital buffers will help cushion the blow. Manageable impact from moderate pandemic stress, gradual impact from lower interest rate. The following would trigger a negative sector outlook: higher than expected corporate downgrades or default, substantial reserve increase due to lower interest rates, higher than expected loss due to hedge breakage from equity market volatility, significant mortality rate increase. |
| Fitch | Negative - Increased uncertainties due to the material disruption in the financial markets, a spike in mortality risk, the severity of which at this point is highly uncertain, increased concern over protracted low interest rate environment |

Source: Goldman Sachs Asset Management, Bloomberg Barclays as of 6/30/19; ¹ Wrap provider within Supplemental Retirement Plans

Duration has Increased

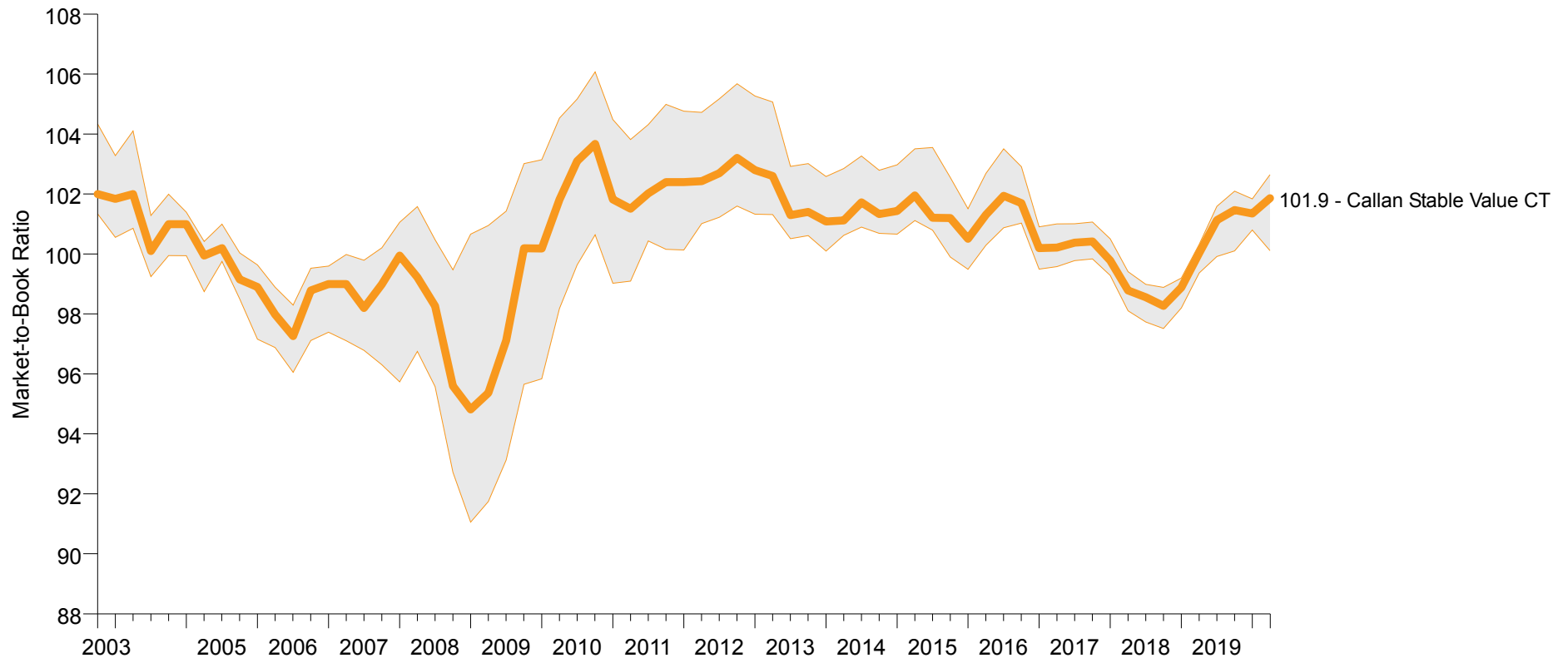


Wrap issuers keep a close a eye on interest rate risk.

- After stable value funds experienced volatility in 2008, wrap providers pushed for tighter guidelines.
- More recently, wrap providers have allowed more leeway on duration.

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Market-to-Book Ratios Have Increased

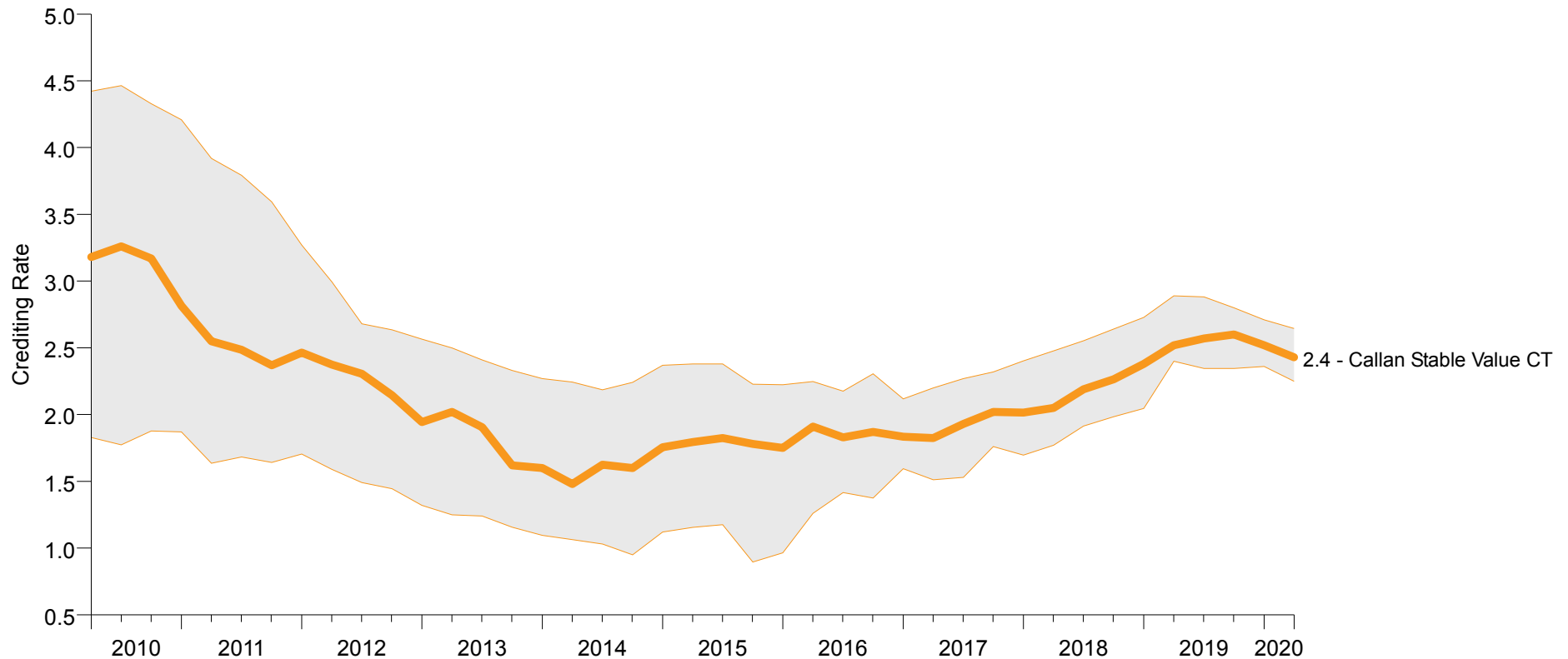


Market-to-book value ratio is a measure of the overall health of a stable value fund.

- Market-to-book may increase above par (100) during a declining rate environment.
- Gradual changes in interest rates are manageable.

Callan Stable Value CT represents the stable value collective trust universe

Crediting Rates May Return to Historic Lows



Post-GFC, crediting rates were impacted by strict investment guidelines and declining rates.

- A period of rising interest rates and increased allocations to spread product helped increase crediting rates.
- However, a return to low interest rates due to the Covid-19 crisis indicate a potential decline in crediting rates.
- Some investment managers have renegotiated broader guidelines, resulting in more parity among the peers.

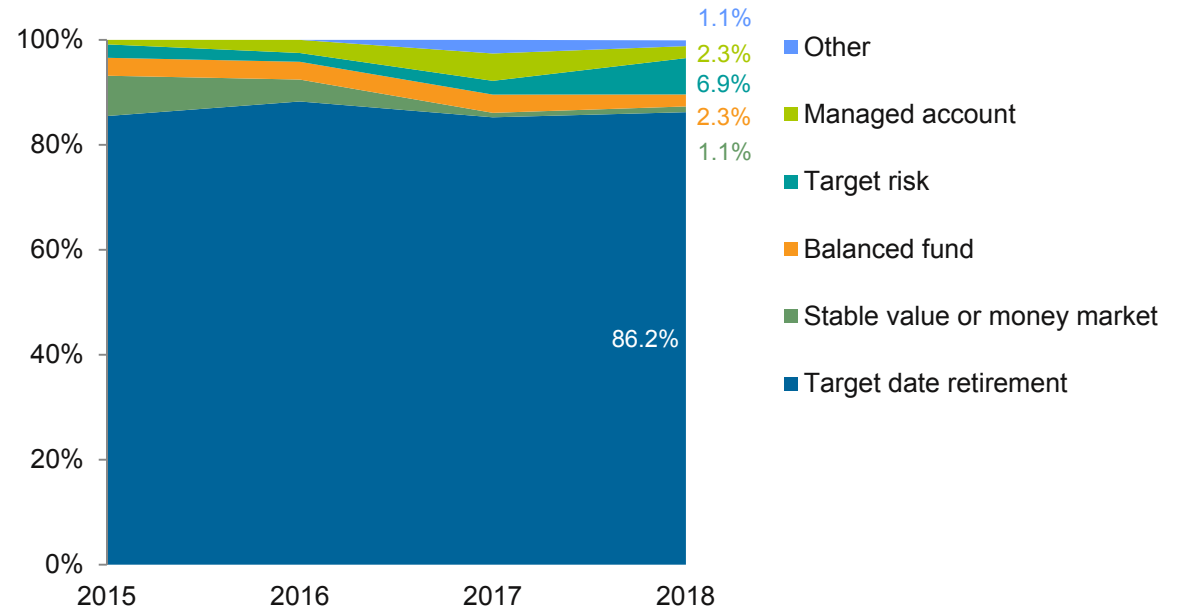
Callan Stable Value CT represents the stable value collective trust universe

Stable Value as Qualified Default Investment Alternative

A key provision of the Pension Protection Act provides relief to DC fiduciaries that default participant assets into QDIAs under regulation 404(c)(5).

Target date and managed account options have slowly replaced stable value as a QDIA.

Current default investment alternative for non-participant directed monies



Source: Callan 2018 Defined Contribution Trends Survey