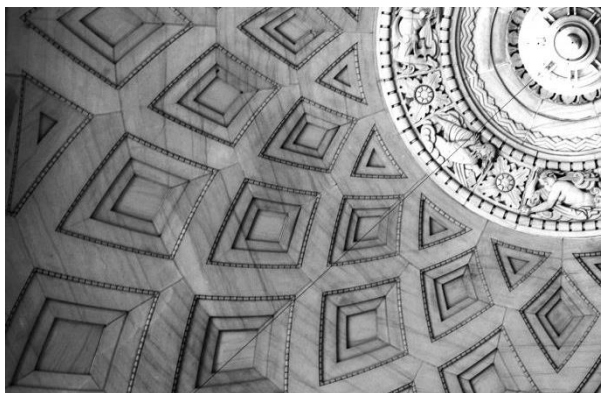




ARCHITECTS OF INVESTMENT SOLUTIONS



State of North Carolina

DECEMBER 3, 2020

STATE OF NORTH CAROLINA

TABLE OF CONTENTS

SECTION I:	Galliard Capital Management Firm Update
SECTION II:	State of North Carolina Stable Value Portfolio Review
SECTION III:	Investment Manager Performance & Positioning

SECTION I

GALLIARD CAPITAL MANAGEMENT

WHO WE ARE

\$95.8 B

TOTAL AUM

\$80.4 B

TOTAL STABLE VALUE AUM

90

STABLE VALUE SEPARATE ACCOUNTS

106

EMPLOYEES ON STAFF

SENIOR PROFESSIONALS AVERAGE YEARS OF EXPERIENCE:

Stable value portfolio management team – **22**

Fixed income team – **20**

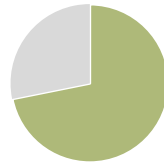
Contract management & negotiation team – **25**

Offer **separate account** and **collective fund** solutions for clients

220+

INSTITUTIONAL CLIENTS

CLIENT RELATIONSHIP TENURE



~85% of our clients have worked with Galliard for greater than **5 years**

43 of those relationships exceed **15 years** with Galliard

CLIENT TYPES

- Corporate
- Public Entities
- Taft-Hartley
- Operating Funds
- Healthcare
- Insurance Reserves
- Foundations / Endowments

FORTUNE 100 / 500

21 Fortune 100 clients; **57** Fortune 500 clients

GALLIARD FOCUS

Focusing *exclusively* on institutional

FIXED INCOME & STABLE VALUE solutions

Galliard is the **largest** stable value separate account manager¹ and advises the **largest** stable value collective fund² in the nation

¹eVestment, Stable Value Fixed Income universe, as of June 30, 2020, Galliard ranked highest separate/segregated assets under management

²As ranked by the Hueler Analytics, Inc. © stable value universe; March 2020 monthly fund data

Celebrating

25th year

firm anniversary

SECTION II

STABLE VALUE PORTFOLIO REVIEW

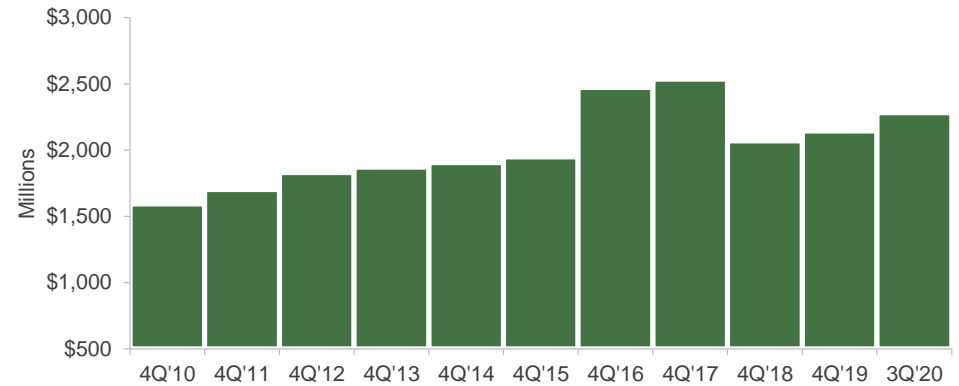
PORTFOLIO CHARACTERISTICS

STATE OF NORTH CAROLINA STABLE VALUE FUND

ACCOUNT SUMMARY

Benchmark	ICE BofAML US 3-Month Tsy Bill Index+150 bps, 3 Year Constant Maturity Treasury
Galliard Inception Date	December 1, 2010
Net Asset Value	\$2,282,778,013

HISTORICAL FUND ASSETS



PORTFOLIO CHARACTERISTICS

	Portfolio 6/30/20	Portfolio 9/30/20
Average Quality - Book Value¹	AA-	A+
Average Quality - Market Value²	AA	AA
Number of Contract Issuers	5	5
Blended Yield (after all fees)³	2.49%	2.36%
Yield to Maturity	0.98%	0.81%
Effective Duration	2.86 years	2.95 years
Market/Book Value Ratio	105.03%	105.03%

PORTFOLIO DISTRIBUTION

	% Portfolio 6/30/20	% Portfolio 9/30/20
Liquidity Buffer: Cash & Equivalents⁴	4.7	2.8
Short Portfolio	31.2	32.9
Intermediate Portfolio	64.0	64.3
Total	100.0%⁵	100.0%⁵

1: Average holdings quality of the contracts and other book value assets in the portfolio. The Weighted Average Quality of the portfolio has NOT been assessed by a nationally recognized statistical rating organization. The Weighted Average Quality shown represents an average quality of the individual holdings' Composite Ratings, as rated by S&P, Moody's and Fitch.

2: Average holdings quality of the underlying assets of the portfolio. The Weighted Average Quality of the portfolio has NOT been assessed by a nationally recognized statistical rating organization. The Weighted Average Quality shown represents an average quality of the individual holdings' Composite Ratings, as rated by S&P, Moody's and Fitch.

3: Blended Yield is net of all fees, including book value contract fees, Galliard investment management fees, and, if applicable, external manager fees, Wells Fargo collective fund administrative fees, and plan administrative reimbursement.

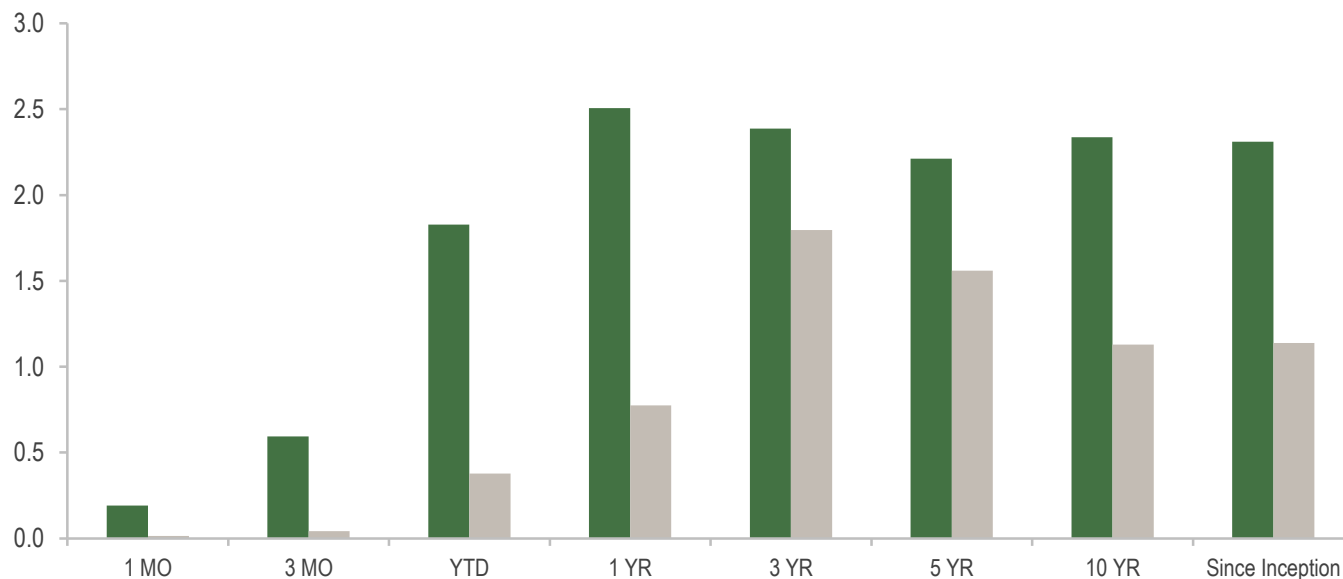
4: Includes Receivables and Payables.

5: Total % of portfolio may not add to 100% due to rounding.

STABLE VALUE PORTFOLIO REVIEW

ANNUALIZED INVESTMENT PERFORMANCE

ANNUALIZED INVESTMENT PERFORMANCE AS OF 9/30/20¹



	1 Mo.	3 Mo.	YTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	Since Inception
■ Portfolio (net of all fees - NAV level) ^{2,3}	0.19	0.59	1.83	2.51	2.39	2.21	2.34	2.31
■ 3 Year Constant Maturity Treasury	0.01	0.04	0.38	0.77	1.80	1.56	1.13	1.14
ICE BofA US 3-Month Tsy Bill Index+150 bps	0.14	0.41	1.77	2.63	3.22	2.73	2.16	2.16
Value Added (net of all fees - NAV level)⁴	0.18	0.55	1.45	1.73	0.59	0.65	1.21	1.17

1: Returns for periods of less than one year are not annualized.

2: Returns are net of all fees, including book value contract fees, Galliard investment management fees, and, if applicable, external manager fees, Wells Fargo collective fund administrative fees, and plan administrative reimbursement.

3: Galliard assumed management of this portfolio on December 1, 2010. Performance for periods referenced prior to this date include historical performance of another investment advisor.

4: May not add due to rounding.

STABLE VALUE PORTFOLIO REVIEW

HISTORICAL CASHFLOWS

HISTORICAL CASHFLOWS



	2016	2017	2018	2019	1Q'20	2Q'20	3Q'20	2020 YTD
Beginning Assets	\$1,948.6	\$2,472.8	\$2,535.1	\$2,069.8	\$2,143.4	\$2,221.8	\$2,242.5	\$2,143.4
Net Cash Flow (\$) ¹	\$81.5 ⁴	\$12.2	\$6.9 ³	\$19.8	\$65.2	\$7.1	\$26.9	\$99.2
Net Cash Flow (%)	4.18%	0.49%	0.27%	0.95%	3.04%	0.33%	1.26%	4.63%
Estimated Investment Earnings	\$46.9	\$50.1	\$51.6	\$53.9	\$13.2	\$13.6	\$13.4	\$40.2
Ending Assets ²	\$2,472.8	\$2,535.1	\$2,069.8	\$2,143.4	\$2,221.8	\$2,242.5	\$2,282.8	\$2,282.8

1: Contributions, Withdrawals and Investment Transfers

2: Cashflows may not net to final assets due to rounding.

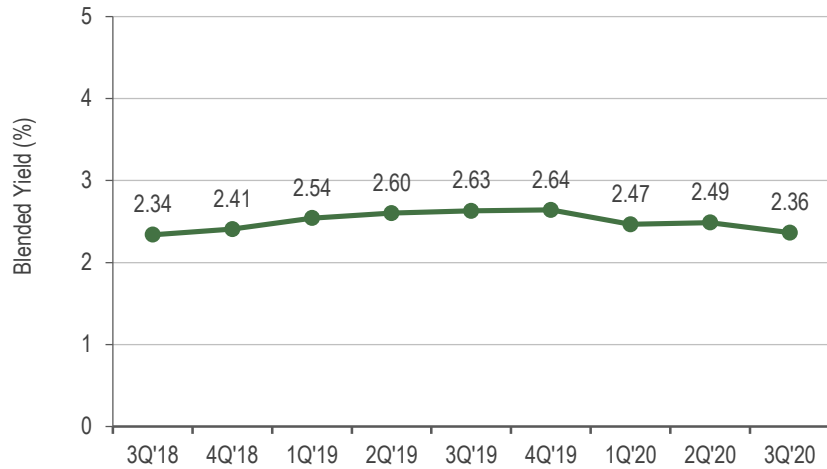
3: Excludes Prudential GoalMaker withdrawal of approximately \$523.8 M on 6/8/18 for illustrative purposes.

4: Approximately \$395.8 M of new inflow and transfer activity related to the 1/4/16 merger of North Carolina 457 plan assets have been removed for illustrative purposes.

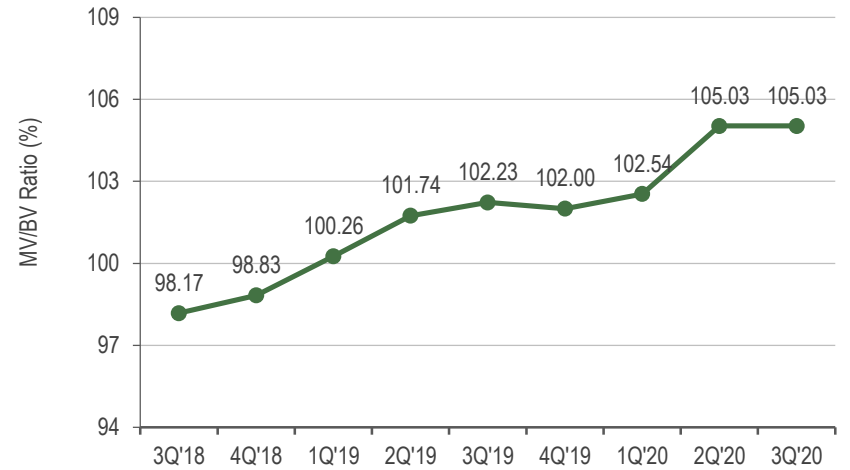
STABLE VALUE PORTFOLIO REVIEW

HISTORICAL STATS

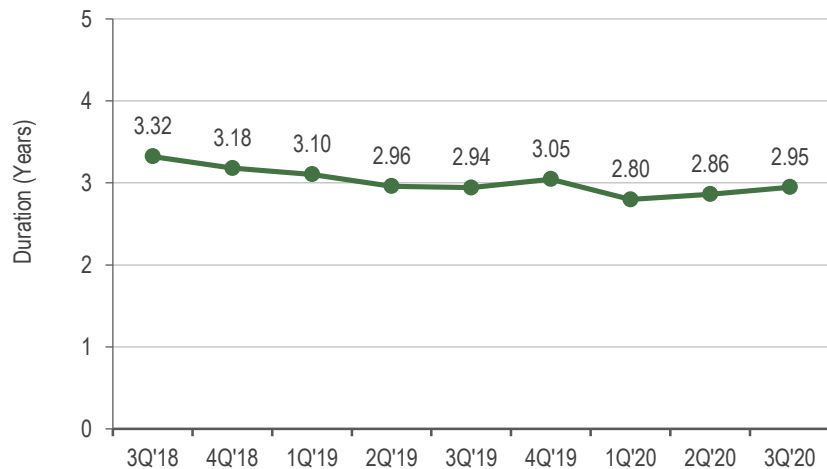
HISTORICAL BLENDED YIELD¹



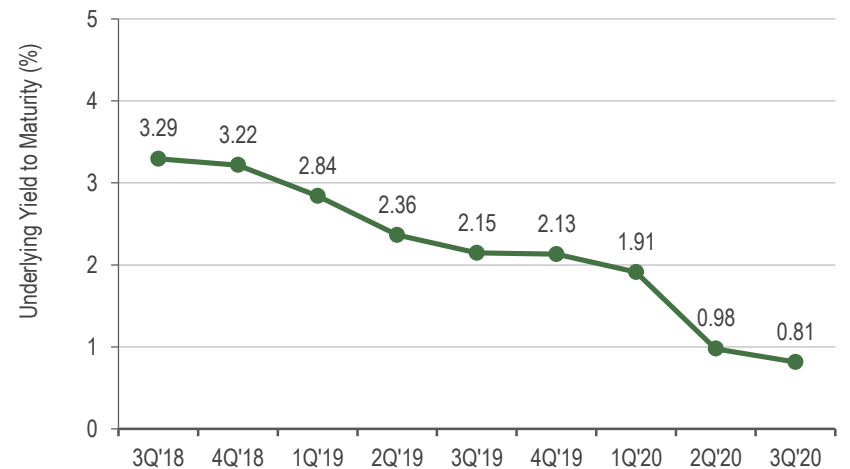
HISTORICAL MARKET VALUE TO BOOK VALUE RATIO



HISTORICAL DURATION



HISTORICAL UNDERLYING YIELD TO MATURITY



1: Blended Yield is net of all fees, including book value contract fees, Galliard investment management fees, and, if applicable, external manager fees, Wells Fargo collective fund administrative fees, and plan administrative reimbursement.

STABLE VALUE PORTFOLIO REVIEW

CONTRACT ISSUERS

CONTRACT ISSUER DISTRIBUTION & RATING SUMMARY¹

	Contract Type ²	% Portfolio 6/30/20	% Portfolio 9/30/20	Rating 6/30/20	Rating 9/30/20	Wrap fees (bps) 9/30/20
American General Life Ins. Co.	SBIC	19.4	19.7	A+	A+	16
Metropolitan Life Ins. Co.	SAGIC	10.2	10.1	AA-	AA-	18
Nationwide Life Ins. Co.	SBIC	17.6	19.8	A+	A+	16
Prudential Ins. Co. of America	SBIC	24.6	24.3	AA-	AA-	16
Transamerica Premier Life Ins. Co.	SBIC	23.5	23.2	A+	A+	16

1: The quality rating shown represents the individual holdings' Composite Ratings, as rated by S&P, Moody's and Fitch. Ratings shown as NR/NA are not rated or not available security ratings.

2: SBIC = Security Backed Investment Contract. SAGIC = Separate Account GIC

STABLE VALUE PORTFOLIO REVIEW

CONTRACT ISSUER CREDIT REVIEW PROCESS

OVERSIGHT

Galliard Credit Working Group

- MEMBERSHIP: includes all analysts and traders from both the Credit Sector Team and Structured Sector Team
- Reports contract issuer credit oversight to Galliard's Stable Value Strategy Committee

CREDIT REVIEW PROCESS

Approved Issuer List

- The Credit Working Group maintains an approved list of contract issuers on an ongoing basis
- All contracts used in stable value accounts must be written by an approved issuer

Credit Working Group Review, Approval & Monitoring

- Meets monthly to review issuer credit quality and firm-wide exposure to approved contract issuers
- Oversees analysts' due diligence and formal credit reviews for each issuer
- Fundamental analysis of issuers includes:
 - Financial statements and ratios
 - Business model and product mix
 - Industry, economic, and regulatory environment
 - Regulatory ratios
 - Ratings agency analysis
 - Other third party research services (e.g. ALIRT, SNL)
 - Periodic due diligence calls and/or on-site visits

STABLE VALUE PORTFOLIO REVIEW HOLDINGS

Asset ID	Security Description	Contract ¹ Type	Manager	Book Value (\$)	Market Value (\$)	Market/Book Value Ratio (%)	% of Portfolio	Crediting Rate (%) ²	UCA Yield (%)	Effective Duration (yrs)	Galliard Composite Rating	Wrap Fees (bps)
LIQUIDITY BUFFER												
	Cash Receivable / (Payable)			-1,389,122	-1,389,122	100.0	-0.1	0.16	0.16	0.10	AAA	
9983008\$P	WF/BlackRock Short Term Investment Fund S			65,603,037	65,603,037	100.0	2.9	0.16	0.16	0.10	AAA	
TOTAL LIQUIDITY BUFFER				64,213,915	64,213,915	100.0	2.8	0.16	0.16	0.10	AAA	
SHORT PORTFOLIO												
946996EE1	American General Life Ins. Co.	SBIC	Galliard	223,224,055	233,089,662	104.4	9.8	2.52	0.53	1.86	A+	16.0
896994GW4	Nationwide Life Ins. Co.	SBIC	Galliard	195,017,865	202,890,647	104.0	8.5	2.28	0.53	1.86	A+	16.0
744999CV3	Prudential Ins. Co. of America	SBIC	Galliard	107,662,466	114,918,933	106.7	4.7	2.76	0.53	1.86	AA-	16.0
600996QF2	Transamerica Premier Life Ins. Co.	SBIC	Galliard	224,251,087	234,989,767	104.8	9.8	2.44	0.53	1.86	A+	16.0
TOTAL SHORT PORTFOLIO				750,155,474	785,889,009	104.8	32.9	2.47	0.53	1.86	A+	
INTERMEDIATE PORTFOLIO												
590994VM8	Metropolitan Life Ins. Co.	SAGIC	Dodge & Cox	231,264,572	245,134,909	106.0	10.1	2.77	1.13	3.24	AA-	18.0
946996EE1	American General Life Ins. Co.	SBIC	Payden & Rygel	227,044,436	237,078,888	104.4	9.9	2.52	1.07	3.63	A+	16.0
896994GW4	Nationwide Life Ins. Co.	SBIC	Galliard	257,130,510	267,510,750	104.0	11.3	2.28	0.93	3.23	A+	16.0
744999CV3	Prudential Ins. Co. of America	SBIC	Jennison Assoc.	224,385,614	239,509,238	106.7	9.8	2.76	0.76	4.37	AA-	16.0
744999CV3	Prudential Ins. Co. of America	SBIC	PGIM	222,604,653	237,608,240	106.7	9.8	2.76	1.23	3.75	AA-	16.0
600996QF2	Transamerica Premier Life Ins. Co.	SBIC	Galliard	79,823,635	83,646,138	104.8	3.5	2.44	0.93	3.23	A+	16.0
600996QF2	Transamerica Premier Life Ins. Co.	SBIC	TCW	226,155,205	236,985,068	104.8	9.9	2.44	0.82	3.68	A+	16.0
TOTAL INTERMEDIATE PORTFOLIO				1,468,408,624	1,547,473,231	105.4	64.3	2.57	0.99	3.62	A+	
TOTAL PORTFOLIO				2,282,778,013	2,397,576,155	105.0	100.0	2.47	0.81	2.95	A+	

1: SAGIC = Separate Account GIC. SBIC = Security Backed Investment Contract.
2: Crediting rates are net of wrap fees and any other fees being netted out of the rates.

STABLE VALUE PORTFOLIO REVIEW EXPENSES

TOTAL ANNUAL FUND OPERATING EXPENSES

Total Annual Operating Expenses are deducted directly from the Fund's net asset value and reduce the investment option's rate of return.

Expense	Expense Ratio 9/30/20	Per \$1000	Est. Annual Revenue
Investment Management Fees paid to Galliard	0.060%	\$0.60	\$1,361,472
Investment Management fees paid to Non-Affiliated Investment Advisors	0.055%	\$0.55	\$1,261,392
Investment Contract Fees ¹	0.158%	\$1.58	\$3,595,955
Acquired Fund Fees ²	0.002%	\$0.02	\$52,482
-Investment Contract Fees	None	None	None
-Other Acquired Fund Fees and Non-Affiliated Investment Management Fees paid to Non-Affiliated Investment Advisors ³	0.002%	\$0.02	\$52,482
12b-1 Distribution Fee	None	None	None
Other Expenses ⁴	0.002%	\$0.02	\$41,090
Total Annual Fund Operating Expenses⁵	0.277%	\$2.77	\$6,312,392

1: These are fees paid to create and maintain the investments used by a stable value fund.

2: These are fees borne indirectly by the Fund when it acquires an interest in another fund which pays its own separate fees.

3: Includes audit fees for the cost of producing a report by a qualified auditor.

4: NC's administrative fee of 0.025% which ordinarily is included in the Other Expenses, is waived for 2020.

5: Total Annual Fund Operating Expenses are reflected daily in the Fund's net asset value (NAV).

Excluding STIF or money market allocations, non-affiliated investment advisors include Dodge & Cox , Jennison Assoc., Payden & Rygel, PGIM, TCW.

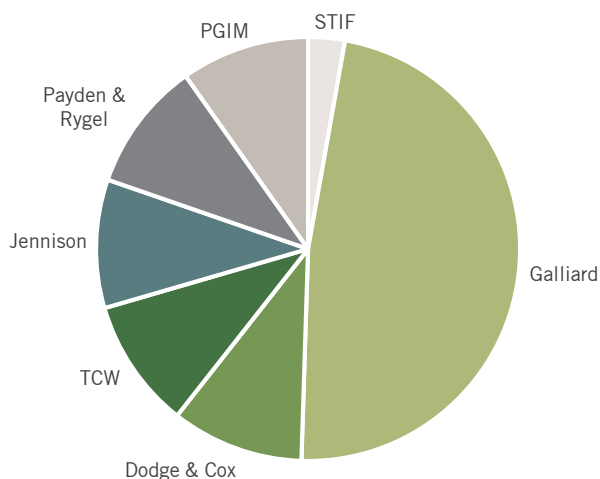
SECTION III

STATE OF NORTH CAROLINA STABLE VALUE FUND MANAGER STYLES

	Investment Approach	Sector Rotation	Active Duration/ Yield Curve Mgmt.	Issue Selection	SECTOR EMPHASIS
GALLIARD	 Bottom Up Top Down	 Low High	 Low High	 Less More Important	Diversified high quality spread sector emphasis, multi-sector relative value
DODGE & COX	 Bottom Up Top Down	 Low High	 Low High	 Less More Important	Corporate credit, Agency MBS
TCW	 Bottom Up Top Down	 Low High	 Low High	 Less More Important	Duration, multi-sector relative value
JENNISON	 Bottom Up Top Down	 Low High	 Low High	 Less More Important	Credit, yield-curve positioning
PAYDEN & RYGEL	 Bottom Up Top Down	 Low High	 Low High	 Less More Important	Corporate credit, structured credit, multi-sector relative value
PGIM	 Bottom Up Top Down	 Low High	 Low High	 Less More Important	Multi-sector relative value, Agency MBS, global focus

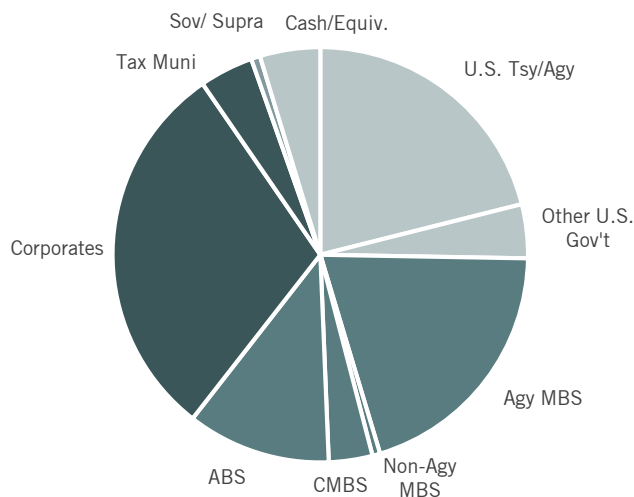
STATE OF NORTH CAROLINA STABLE VALUE FUND PORTFOLIO AS OF 9/30/20

MANAGER ALLOCATION



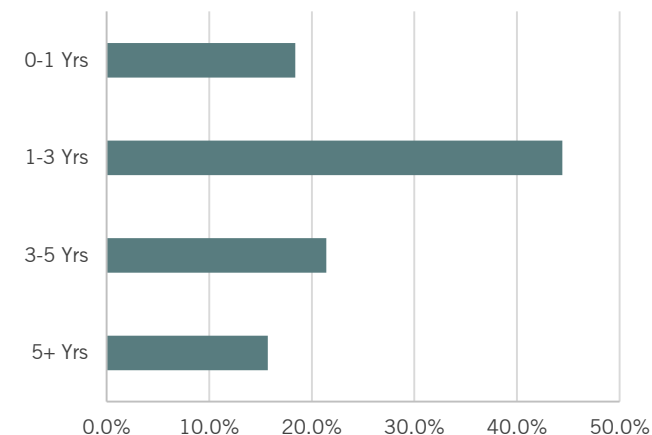
STIF	2.8%
Galliard	47.7%
Dodge & Cox	10.1%
TCW	9.9%
Jennison	9.8%
Payden & Rygel	9.9%
PGIM	9.8%
TOTAL EXT. MANAGER	49.5%
TOTAL PORTFOLIO	100%

UNDERLYING FIXED INCOME SECTOR ALLOCATION



U.S. Tsy/Agy	21.1%
Other U.S. Gov't	4.2%
Agy MBS	20.1%
Non-Agy MBS	0.6%
CMBS	3.4%
ABS	11.2%
Corporates	29.9%
Tax Muni	4.2%
Sov/ Supra	0.7%
Cash/Equiv.	4.7%

UNDERLYING DURATION DISTRIBUTION



0-1 Yrs	18.4%
1-3 Yrs	44.4%
3-5 Yrs	21.4%
5+ Yrs	15.7%

STATE OF NORTH CAROLINA STABLE VALUE FUND
MARKET VALUE PERFORMANCE SUMMARY AS OF 9/30/20¹

	3 Month	YTD	1 Year	3 Year	5 Year	Since Inception	Inception Date
SHORT DURATION							
Galliard (before fees)	0.49	3.87	4.47	-	-	4.35	6/1/2018
Bloomberg Barclays U.S. 1-3 Yr. Government/Credit	0.23	3.12	3.73	-	-	3.73	
Value Added²	0.26	0.75	0.74	-	-	0.62	
INTERMEDIATE DURATION							
Dodge & Cox (before fees)	1.07	5.91	6.63	4.72	4.01	3.55	3/1/2015
Bloomberg Barclays U.S. Intermediate Aggregate	0.48	5.16	5.66	4.20	3.27	3.08	
Value Added²	0.59	0.74	0.97	0.52	0.74	0.47	
Galliard (before fees)	0.90	5.75	6.26	-	-	6.41	6/1/2018
Bloomberg Barclays U.S. Intermediate Aggregate	0.48	5.16	5.66	-	-	5.89	
Value Added²	0.42	0.59	0.60	-	-	0.52	
Jennison (before fees) ³	0.57	7.81	8.16	5.19	3.99	7.06	5/1/2018
Bloomberg Barclays U.S. Intermediate Govt/Credit	0.61	5.92	6.32	4.43	3.39	6.28	
Value Added²	(0.05)	1.89	1.84	0.76	0.60	0.78	
Payden & Rygel (before fees)	0.80	5.82	6.30	4.81	3.42	2.74	7/1/2009
Bloomberg Barclays U.S. Intermediate Aggregate ⁴	0.48	5.16	5.66	4.50	3.08	2.24	
Value Added²	0.32	0.66	0.64	0.31	0.34	0.50	
PGIM (before fees)	0.98	5.26	5.90	4.56	-	3.91	2/1/2016
Bloomberg Barclays U.S. Intermediate Aggregate	0.48	5.16	5.66	4.20	-	3.35	
Value Added²	0.50	0.09	0.24	0.36	-	0.56	
TCW (before fees)	0.89	6.75	7.09	-	-	6.79	6/1/2018
Bloomberg Barclays U.S. Intermediate Govt/Credit	0.61	5.92	6.32	-	-	6.24	
Value Added²	0.28	0.82	0.78	-	-	0.55	

1: Returns for periods of less than one year are not annualized.

2: May not add due to rounding.

3: Performance inception: May 1, 2018. Prior to May 1, 2018 returns are linked to Wells Fargo Fixed Income Fund N (Jennison)

4: Linked Benchmark: Bloomberg Barclays U.S. Intermediate Aggregate Bond Index. Prior to Jun 1, 2018 benchmark was Bloomberg Barclays U.S. 1-3 Year Government/Credit Bond Index.

STATE OF NORTH CAROLINA STABLE VALUE FUND PERFORMANCE COMMENTARY – EXCESS RETURN

GALLIARD SHORT +26 Q3 2020

- General overweight to spread assets continued to drive relative performance
- Overweight allocations to Taxable Municipals and Corporates helped, as did out-of-index positioning in ABS, Agency RMBS, and CMBS
- No material detractors over the quarter

GALLIARD INTERMEDIATE +42 Q3 2020

- General overweight to spread assets continued to drive relative performance
- Overweight allocations to Taxable Municipals, Corporates, ABS, CMBS, and SBA securitizations all proved helpful
- Security selection in Agency RMBS, with a focus on lower coupons, also added to returns
- Detracting from performance was a higher quality bias in Corporate security selection

DODGE & COX +59 Q3 2020

- The overweight to Corporate securities benefited performance, while security selection within Corporates was a modest detractor
- Security selection within Agency RMBS contributed positively to performance over the quarter

JENNISON -5 Q3 2020

- While the overweight to Corporates contributed positively to performance, the high quality bias in the space detracted
- The out-of-benchmark allocation to ABS and Agency RMBS slightly added to performance

PAYDEN & RYGEL +32 Q3 2020

- The overweight to Corporates contributed positively to performance
- Security selection within Taxable Municipals also aided positive relative performance

PGIM +50 Q3 2020

- Allocation decisions favoring spread sectors were the primary driver of outperformance led by the overweight to CMBS and Corporates
- The impact of security selection was also positive as selection within Agency RMBS, Corporates, and ABS contributed positively
- Security selection within CMBS detracted

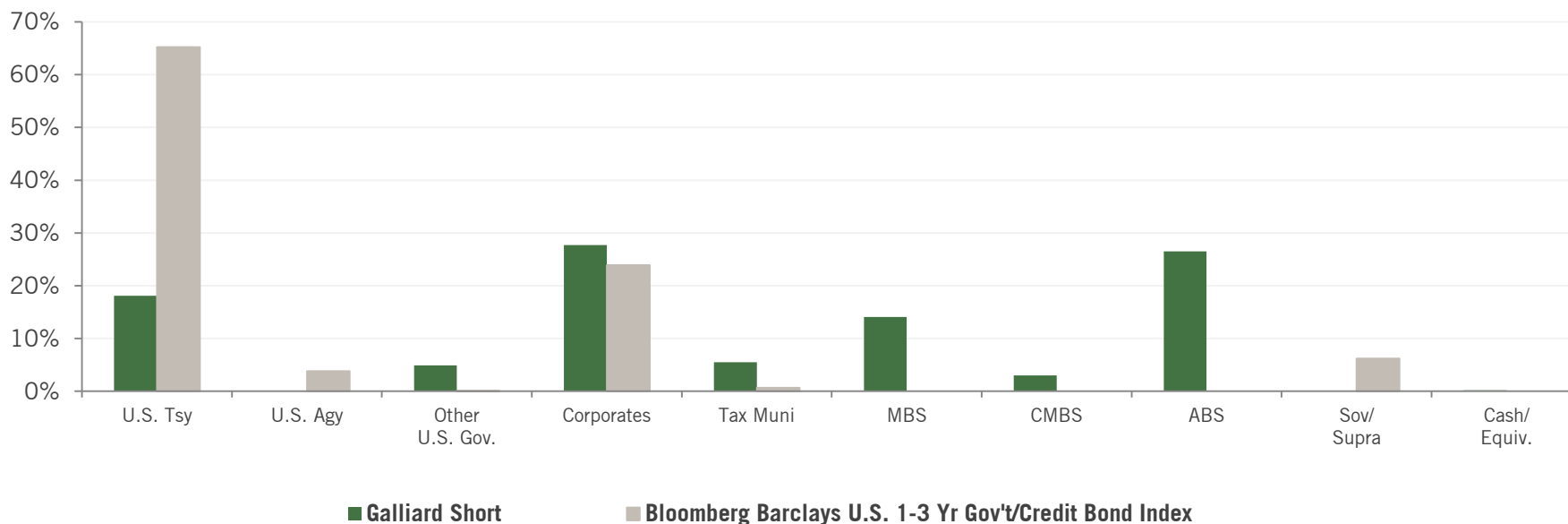
TCW +28 Q3 2020

- Defensive security selection within Corporates benefited performance over the quarter
- The out-of-benchmark allocations to ABS and CMBS also added to performance

Before fees.

STATE OF NORTH CAROLINA STABLE VALUE FUND SHORT DURATION PORTFOLIO AS OF 9/30/20

BLOOMBERG BARCLAYS U.S. 1-3 YEAR GOVERNMENT/CREDIT BOND INDEX



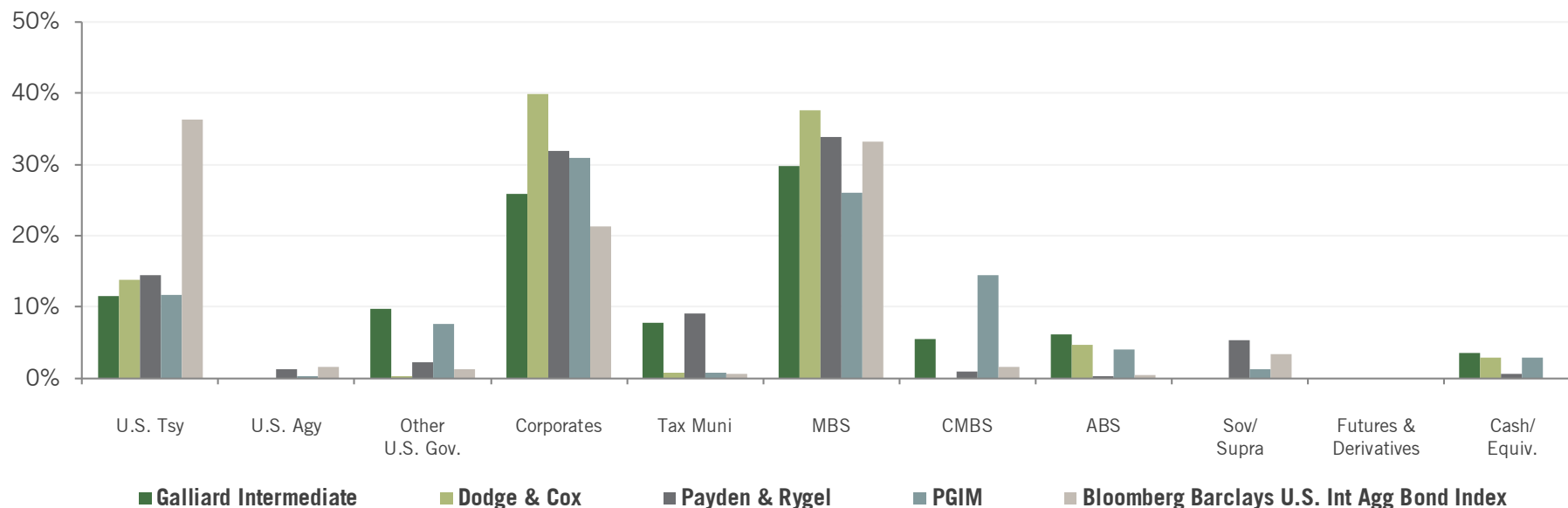
Characteristic	Galliard Short	Bloomberg Barclays U.S. 1-3 Yr Gov't/ Credit Bond Index
Weighted Average Quality ¹	AA	AA
Effective Duration	1.86 Yrs	1.84 Yrs
Yield to Maturity	0.53%	0.32%

1: The Weighted Average Quality of the portfolio has NOT been assessed by a nationally recognized statistical rating organization. The Weighted Average Quality shown represents an average quality of the individual holdings' Composite Ratings, as rated by S&P, Moody's and Fitch.

STATE OF NORTH CAROLINA STABLE VALUE FUND

INTERMEDIATE DURATION PORTFOLIOS AS OF 9/30/20

BLOOMBERG BARCLAYS U.S. INTERMEDIATE AGGREGATE BOND INDEX

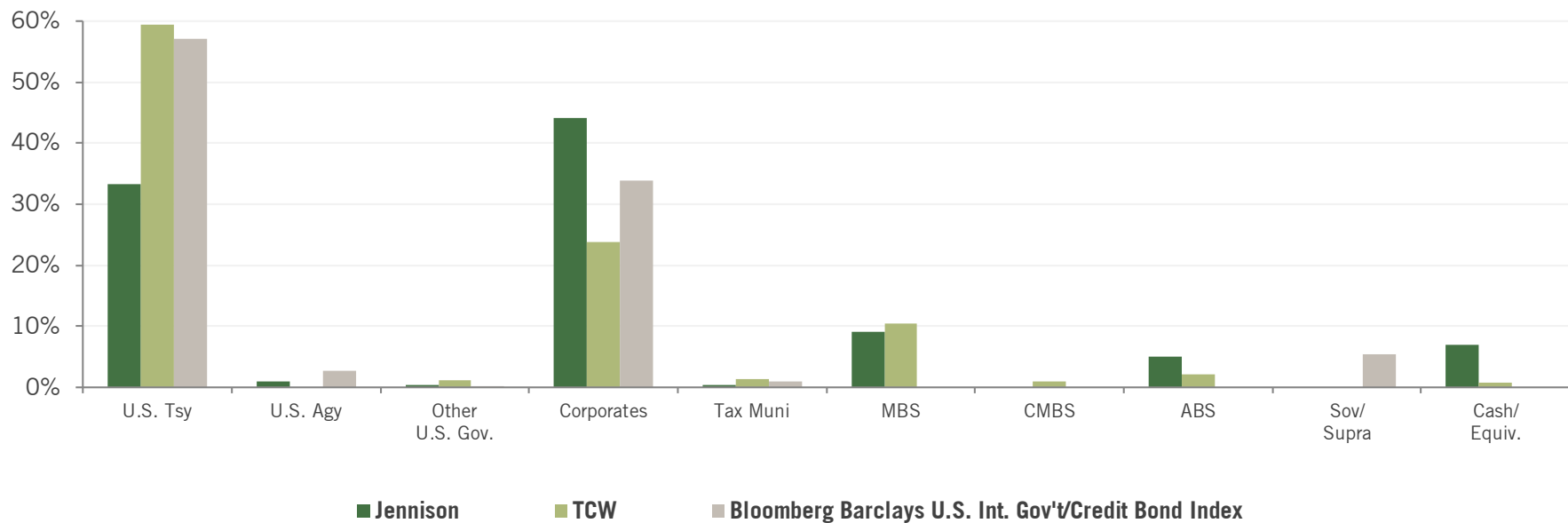


Characteristic	Galliard Intermediate	Dodge & Cox	Payden & Rygel	PGIM	Bloomberg Barclays U.S. Int Agg Bond Index
Weighted Average Quality ¹	AA	AA-	AA	AA-	AA+
Effective Duration	3.23 Yrs	3.24 Yrs	3.63 Yrs	3.75 Yrs	3.42 Yrs
Yield to Maturity	0.93%	1.13%	1.07%	1.23%	0.90%

1: The Weighted Average Quality of the portfolio has NOT been assessed by a nationally recognized statistical rating organization. The Weighted Average Quality shown represents an average quality of the individual holdings' Composite Ratings, as rated by S&P, Moody's and Fitch.

STATE OF NORTH CAROLINA STABLE VALUE FUND INTERMEDIATE DURATION PORTFOLIOS AS OF 9/30/20

BLOOMBERG BARCLAYS U.S. INTERMEDIATE GOVERNMENT/CREDIT BOND INDEX



Characteristic	Jennison	TCW	Bloomberg Barclays U.S. Int Gov't/Credit Bond Index
Weighted Average Quality ¹	AA	AA+	AA
Effective Duration	4.37 Yrs	3.68 Yrs	4.05 Yrs
Yield to Maturity	0.76%	0.82%	0.68%

1: The Weighted Average Quality of the portfolio has NOT been assessed by a nationally recognized statistical rating organization. The Weighted Average Quality shown represents an average quality of the individual holdings' Composite Ratings, as rated by S&P, Moody's and Fitch.