

**State of North Carolina**

MAY 28, 2020

# STATE OF NORTH CAROLINA

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## SECTION I

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# GALLIARD CAPITAL MANAGEMENT

## WHO WE ARE

**\$96.1 B**

TOTAL AUM

**\$81.4 B**

TOTAL STABLE VALUE AUM

**90+**

STABLE VALUE SEPARATE  
ACCOUNTS

**104**

EMPLOYEES ON STAFF

SENIOR PROFESSIONALS AVERAGE  
YEARS OF EXPERIENCE:

Stable value portfolio management team – **21**

Fixed income team – **20**

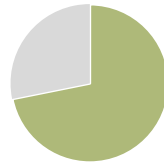
Contract management & negotiation team – **25**

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

**225+**

INSTITUTIONAL CLIENTS

CLIENT RELATIONSHIP TENURE



**~84%** of our clients have worked  
with Galliard for greater than **5 years**

**38** 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

**24** Fortune 100 clients; **62** Fortune 500 clients

## GALLIARD HIGHLIGHTS

Galliard is the **largest** stable value  
separate account manager<sup>1</sup> and  
advises the **largest** stable value  
collective fund<sup>2</sup> in the nation

<sup>1</sup>eVestment, Stable Value Fixed Income universe,  
as of December 31, 2018, Galliard ranked highest  
separate/segregated assets under management

<sup>2</sup>As ranked by the Hueler Analytics, Inc. © stable  
value universe; January 2018 monthly fund data

Galliard has been a signatory to the United  
Nations-supported **Principles for  
Responsible Investment** since 2017

## SECTION II

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# STABLE VALUE PORTFOLIO REVIEW

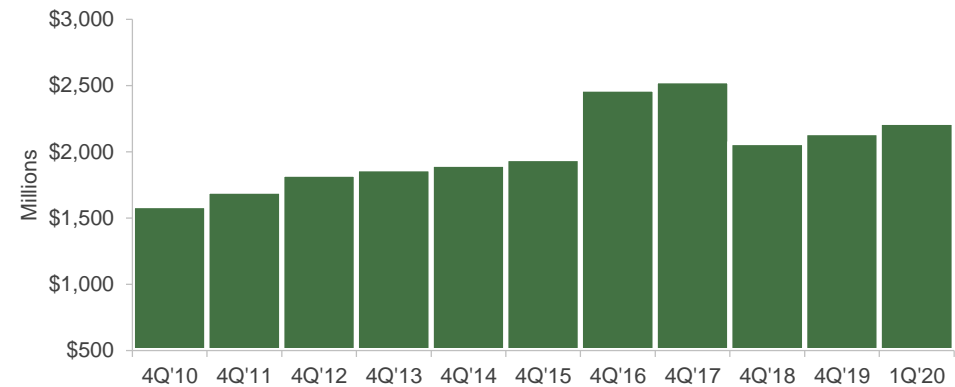
## PORTFOLIO CHARACTERISTICS

### STATE OF NORTH CAROLINA STABLE VALUE FUND

#### ACCOUNT SUMMARY

<b>Benchmark</b>	ICE BofAML US 3-Month Tsy Bill Index+150 bps, 3 Year Constant Maturity Treasury
<b>Galliard Inception Date</b>	December 1, 2010
<b>Net Asset Value</b>	\$2,221,844,921

#### HISTORICAL FUND ASSETS



#### PORTFOLIO CHARACTERISTICS

	Portfolio 12/31/19	Portfolio 3/31/20
<b>Average Quality - Book Value<sup>1</sup></b>	A+	AA-
<b>Average Quality - Market Value<sup>2</sup></b>	AA	AA
<b>Number of Contract Issuers</b>	5	5
<b>Blended Yield (after all fees)<sup>3</sup></b>	2.64%	2.47%
<b>Yield to Maturity</b>	2.13%	1.91%
<b>Effective Duration</b>	3.05 years	2.80 years
<b>Market/Book Value Ratio</b>	102.00%	102.54%

#### PORTFOLIO DISTRIBUTION

	% Portfolio 12/31/19	% Portfolio 3/31/20
<b>Liquidity Buffer: Cash &amp; Equivalents<sup>4</sup></b>	2.4	4.9
<b>Short Portfolio</b>	32.3	31.3
<b>Intermediate Portfolio</b>	65.3	63.8
<b>Total</b>	<b>100.0%<sup>5</sup></b>	<b>100.0%<sup>5</sup></b>

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.

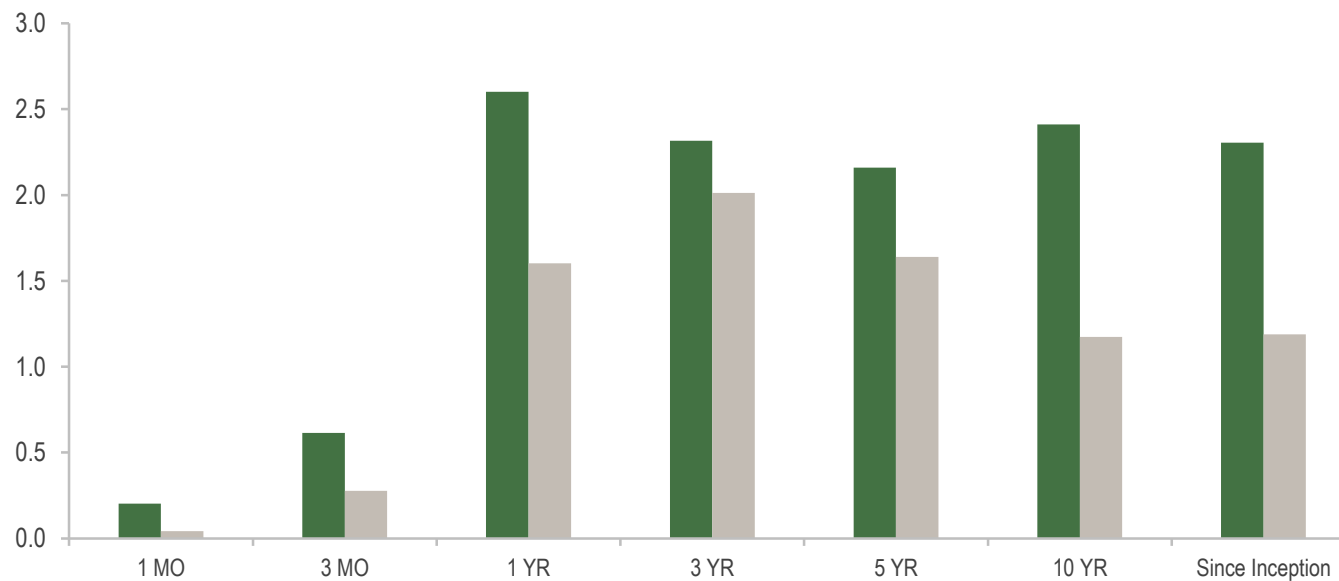
4: Includes Receivables and Payables.

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

## STABLE VALUE PORTFOLIO REVIEW

### ANNUALIZED INVESTMENT PERFORMANCE

ANNUALIZED INVESTMENT PERFORMANCE AS OF 3/31/20<sup>1</sup>



	1 Mo.	3 Mo.	1 Yr.	3 Yr.	5 Yr.	10 Yr.	Since Inception
Portfolio (net of all fees - NAV level) <sup>2,3</sup>	0.20	0.61	2.60	2.32	2.16	2.41	2.31
3 Year Constant Maturity Treasury	0.04	0.28	1.60	2.01	1.64	1.17	1.19
Benchmark <sup>4</sup>	0.42	0.95	3.80	3.36	2.72	2.16	2.19
<b>Value Added (net of all fees - NAV level)<sup>5</sup></b>	<b>0.16</b>	<b>0.34</b>	<b>1.00</b>	<b>0.30</b>	<b>0.52</b>	<b>1.24</b>	<b>1.12</b>

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.

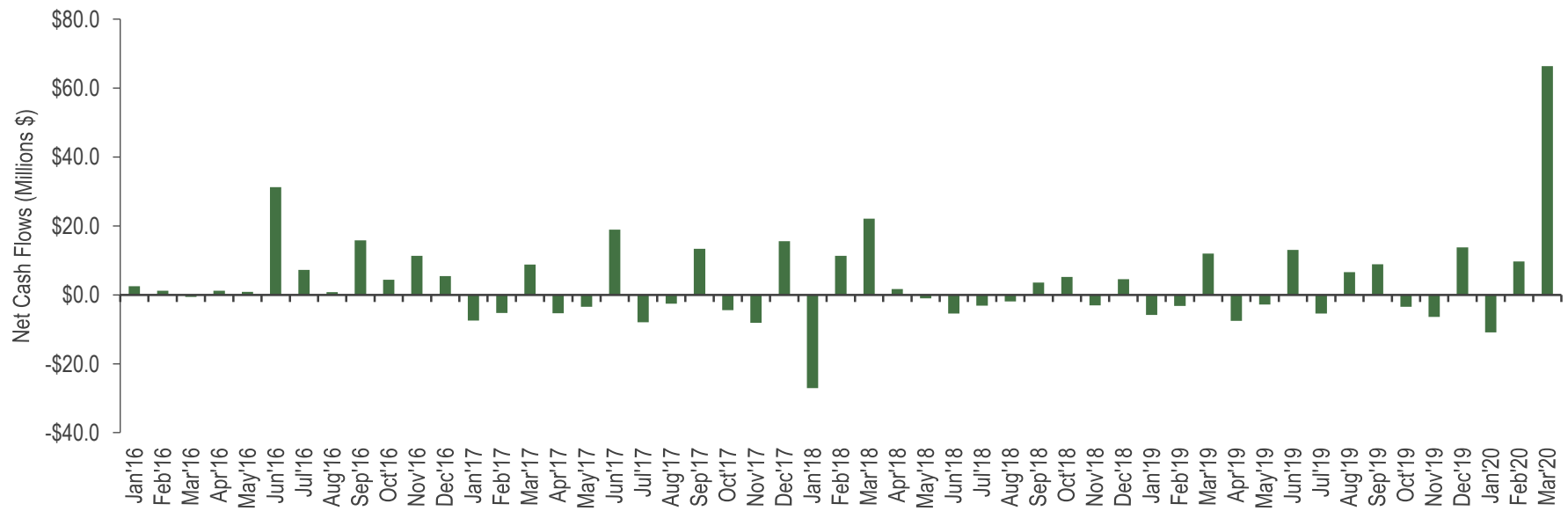
4: ICE BofAML US 3-Month Tsy Bill Index+150 bps

5: May not add due to rounding.

## STABLE VALUE PORTFOLIO REVIEW

### HISTORICAL CASHFLOWS

#### HISTORICAL CASHFLOWS



	2016	2017	2018	2019	1Q'20
Beginning Assets	\$1,948.6	\$2,472.8	\$2,535.1	\$2,069.8	\$2,143.4
Net Cash Flow (\$) <sup>1</sup>	\$81.5 <sup>4</sup>	\$12.2	\$6.9 <sup>3</sup>	\$19.8	\$65.2
Net Cash Flow (%)	4.18%	0.49%	0.27%	0.95%	3.04%
Estimated Investment Earnings	\$46.9	\$50.1	\$51.6	\$53.9	\$13.2
Ending Assets <sup>2</sup>	\$2,472.8	\$2,535.1	\$2,069.8	\$2,143.4	\$2,221.8

1: Contributions, Withdrawals and Investment Transfers

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

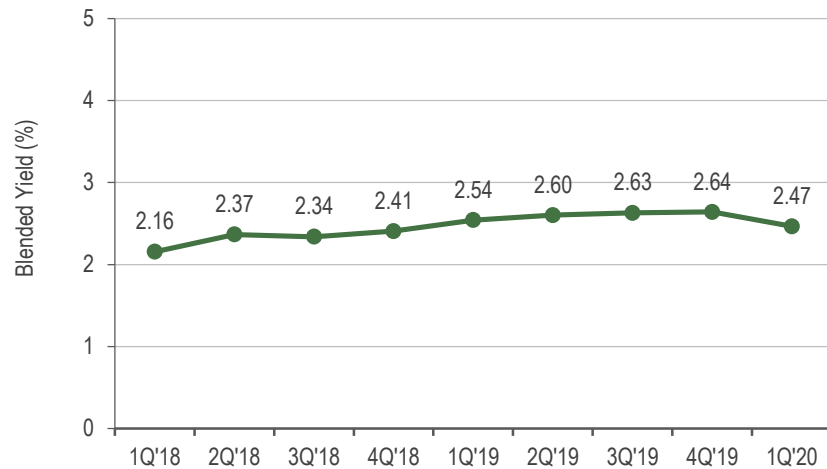
3: Excludes Prudential GoalMaker withdrawal of approximately \$523.8 M on 6/8/18 for illustrative purposes.

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.

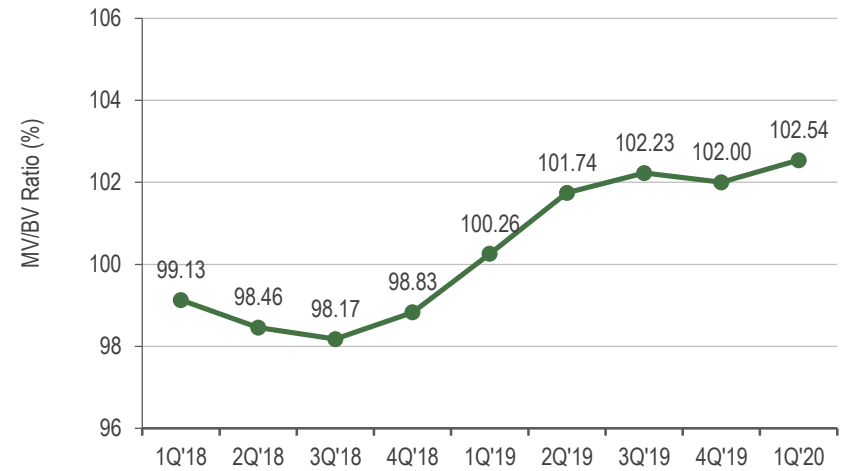
## STABLE VALUE PORTFOLIO REVIEW

### HISTORICAL STATS

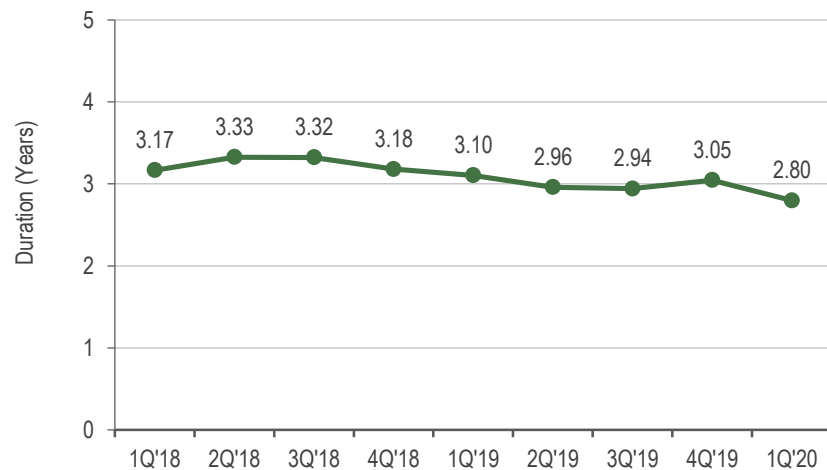
**HISTORICAL BLENDED YIELD<sup>1</sup>**



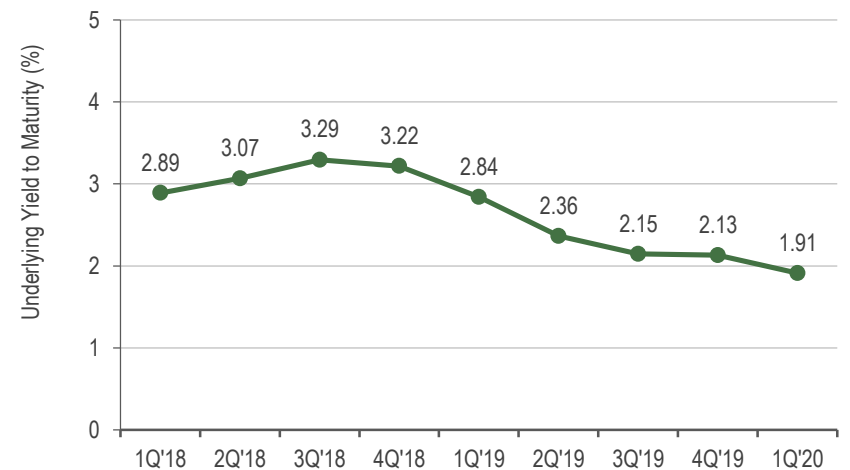
**HISTORICAL MARKET VALUE TO BOOK VALUE RATIO**



**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 SUMMARY<sup>1</sup>

	Contract Type <sup>2</sup>	% Portfolio 12/31/19	% Portfolio 3/31/20	Rating 12/31/19	Rating 3/31/20	Wrap fees (bps) 3/31/20
American General Life Ins. Co.	SBIC	20.0	19.4	A+	A+	16
Metropolitan Life Ins. Co.	SAGIC	10.5	10.2	AA-	AA-	18
Nationwide Life Ins. Co.	SBIC	17.8	17.6	A+	A+	16
Prudential Ins. Co. of America	SBIC	25.2	24.4	AA-	AA-	16
Transamerica Premier Life Ins. Co.	SBIC	24.2	23.5	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 HOLDINGS

Asset ID	Security Description	Contract <sup>1</sup> Type	Manager	Book Value (\$)	Market Value (\$)	Market/Book Value Ratio (%)	% of Portfolio	Crediting Rate (%) <sup>2</sup>	UCA Yield (%)	Effective Duration (yrs)	Galliard Composite Rating	Wrap Fees (bps)
<b>LIQUIDITY BUFFER</b>												
	Cash Receivable / (Payable)			-1,325,719	-1,325,719	100.0	-0.1	0.88	0.88	0.10	AAA	
9983008\$P	WF/BlackRock Short Term Investment Fund S			111,023,841	111,023,841	100.0	5.0	0.88	0.88	0.10	AAA	
<b>TOTAL LIQUIDITY BUFFER</b>				109,698,122	109,698,122	100.0	4.9	0.88	0.88	0.10	AAA	
<b>SHORT PORTFOLIO</b>												
946996EE1	American General Life Ins. Co.	SBIC	Galliard	208,461,134	213,607,361	102.5	9.4	2.62	1.94	1.84	A+	16.0
896994GW4	Nationwide Life Ins. Co.	SBIC	Galliard	182,351,593	186,420,944	102.2	8.2	2.71	1.94	1.84	A+	16.0
744999CV3	Prudential Ins. Co. of America	SBIC	Galliard	105,654,294	109,690,366	103.8	4.8	2.87	1.94	1.84	AA-	16.0
600996QF2	Transamerica Premier Life Ins. Co.	SBIC	Galliard	198,468,875	202,814,292	102.2	8.9	2.32	1.94	1.84	A+	16.0
<b>TOTAL SHORT PORTFOLIO</b>				694,935,896	712,532,964	102.5	31.3	2.60	1.94	1.84	A+	
<b>INTERMEDIATE PORTFOLIO</b>												
590994VM8	Metropolitan Life Ins. Co.	SAGIC	Dodge & Cox	227,094,151	232,025,247	102.2	10.2	2.97	2.27	3.19	AA-	18.0
946996EE1	American General Life Ins. Co.	SBIC	Payden & Rygel	222,203,062	227,688,532	102.5	10.0	2.62	1.77	3.49	A+	16.0
896994GW4	Nationwide Life Ins. Co.	SBIC	Galliard	207,669,147	212,303,484	102.2	9.3	2.71	2.07	3.26	A+	16.0
744999CV3	Prudential Ins. Co. of America	SBIC	Jennison Assoc.	222,112,898	230,597,777	103.8	10.0	2.87	1.38	4.13	AA-	16.0
744999CV3	Prudential Ins. Co. of America	SBIC	PGIM	215,292,676	223,517,017	103.8	9.7	2.87	2.55	3.33	AA-	16.0
600996QF2	Transamerica Premier Life Ins. Co.	SBIC	Galliard	101,549,753	103,773,154	102.2	4.6	2.32	2.07	3.26	A+	16.0
600996QF2	Transamerica Premier Life Ins. Co.	SBIC	TCW	221,289,217	226,134,279	102.2	10.0	2.32	1.79	3.50	A+	16.0
<b>TOTAL INTERMEDIATE PORTFOLIO</b>				1,417,210,904	1,456,039,490	102.7	63.8	2.70	1.98	3.47	A+	
<b>TOTAL PORTFOLIO</b>				2,221,844,921	2,278,270,576	102.5	100.0	2.58	1.91	2.80	AA-	

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 3/31/20	Per \$1000	Est. Annual Revenue
Investment Management Fees paid to Galliard	0.062%	\$0.62	\$1,377,646
Investment Management fees paid to Non-Affiliated Investment Advisors	0.056%	\$0.56	\$1,238,934
Investment Contract Fees* <sup>1</sup>	0.154%	\$1.54	\$3,424,854
Acquired Fund Fees <sup>2</sup>	0.004%	\$0.04	\$88,819
-Investment Contract Fees	None	None	None
-Other Acquired Fund Fees and Non-Affiliated Investment Management Fees paid to Non-Affiliated Investment Advisors <sup>3</sup>	0.004%	\$0.04	\$88,819
12b-1 Distribution Fee	None	None	None
Other Expenses <sup>4</sup>	0.002%	\$0.02	\$39,993
Total Annual Fund Operating Expenses <sup>5</sup>	<b>0.278%</b>	<b>\$2.78</b>	<b>\$6,170,246</b>

\*Changes have occurred to the fee schedule structure since the prior period. Please contact your Galliard representative if you have additional questions.

- 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

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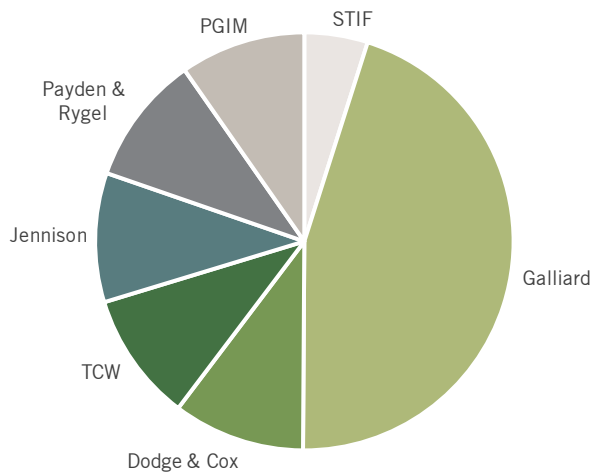
## STATE OF NORTH CAROLINA STABLE VALUE FUND MANAGER STYLES

	Investment Approach	Sector Rotation	Active Duration/ Yield Curve Mgmt.	Issue Selection	SECTOR EMPHASIS
<b>GALLIARD</b>					Diversified high quality spread sector emphasis, multi-sector relative value
<b>DODGE &amp; COX</b>					Corporate credit, Agency MBS
<b>TCW</b>					Duration, multi-sector relative value
<b>JENNISON</b>					Credit, yield-curve positioning
<b>PAYDEN &amp; RYGEL</b>					Corporate credit, structured credit, multi-sector relative value
<b>PGIM</b>					Multi-sector relative value, Agency MBS, global focus

## STATE OF NORTH CAROLINA STABLE VALUE FUND

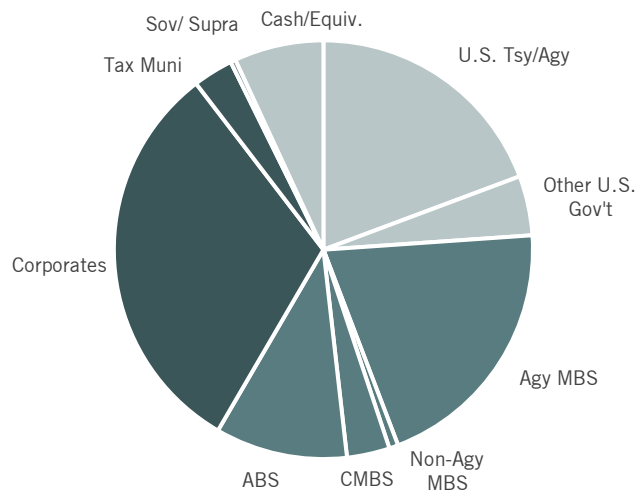
### PORTFOLIO AS OF 3/31/20

#### MANAGER ALLOCATION



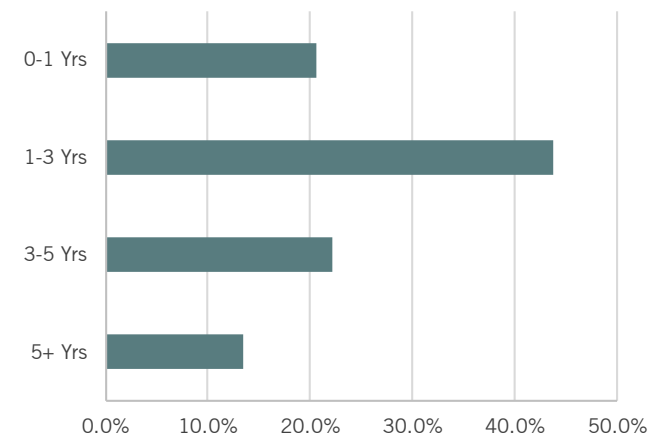
STIF	4.9%
Galliard	45.2%
Dodge & Cox	10.2%
TCW	10.0%
Jennison	10.0%
Payden & Rygel	10.0%
PGIM	9.7%
<b>TOTAL EXT. MANAGER</b>	<b>49.9%</b>
<b>TOTAL PORTFOLIO</b>	<b>100%</b>

#### UNDERLYING FIXED INCOME SECTOR ALLOCATION



U.S. Tsy/Agy	19.3%
Other U.S. Gov't	4.6%
Agy MBS	20.3%
Non-Agy MBS	0.7%
CMBS	3.3%
ABS	10.2%
Corporates	31.2%
Tax Muni	3.1%
Sov/ Supra	0.4%
Cash/Equiv.	6.9%

#### UNDERLYING DURATION DISTRIBUTION



0-1 Yrs	20.6%
1-3 Yrs	43.8%
3-5 Yrs	22.2%
5+ Yrs	13.4%

# STATE OF NORTH CAROLINA STABLE VALUE FUND

## MARKET VALUE PERFORMANCE SUMMARY AS OF 3/31/20<sup>1</sup>

	1 Month	3 Month	1 Year	3 Year	5 Year	Since Inception	Inception Date
SHORT DURATION							
Galliard (before fees)	-0.86	0.74	3.81	-	-	3.82	6/1/2018
Bloomberg Barclays U.S. 1-3 Yr. Government/Credit	0.31	1.69	4.53	-	-	3.97	
Value Added <sup>2</sup>	-1.17	-0.95	-0.72	-	-	-0.15	
INTERMEDIATE DURATION							
Dodge & Cox (before fees)	-1.56	0.66	5.38	3.67	2.85	2.88	3/1/2015
Bloomberg Barclays U.S. Intermediate Aggregate	-0.04	2.49	6.88	3.87	2.82	2.87	
Value Added <sup>2</sup>	-1.52	-1.83	-1.50	-0.20	-0.02	0.01	
Galliard (before fees)	-1.44	1.34	5.99	-	-	5.75	6/1/2018
Bloomberg Barclays U.S. Intermediate Aggregate	-0.04	2.49	6.88	-	-	6.05	
Value Added <sup>2</sup>	-1.40	-1.15	-0.89	-	-	-0.31	
Jennison (before fees) <sup>3</sup>	0.74	3.80	8.32	4.49	3.18	6.84	5/1/2018
Bloomberg Barclays U.S. Intermediate Govt/Credit	-0.44	2.40	6.88	3.79	2.76	6.09	
Value Added <sup>2</sup>	1.18	1.40	1.43	0.69	0.41	0.75	
Payden & Rygel (before fees)	-0.53	2.03	6.44	3.84	2.72	2.52	7/1/2009
Bloomberg Barclays U.S. Intermediate Aggregate <sup>4</sup>	-0.04	2.49	6.88	3.83	2.64	2.10	
Value Added <sup>2</sup>	-0.50	-0.46	-0.44	0.01	0.08	0.42	
PGIM (before fees)	-2.53	-0.21	4.61	3.39	-	3.06	2/1/2016
Bloomberg Barclays U.S. Intermediate Aggregate	-0.04	2.49	6.88	3.87	-	3.11	
Value Added <sup>2</sup>	-2.49	-2.69	-2.27	-0.48	-	-0.05	
TCW (before fees)	-0.50	2.25	6.66	-	-	6.20	6/1/2018
Bloomberg Barclays U.S. Intermediate Govt/Credit	-0.44	2.40	6.88	-	-	6.03	
Value Added <sup>2</sup>	-0.06	-0.15	-0.23	-	-	0.16	

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

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#### **GALLIARD SHORT** -95 Q1 2020

- Overweight to spread securities drove underperformance, as all spread sectors underperformed US Treasuries
- A high quality bias in corporate securities proved beneficial

#### **GALLIARD INTERMEDIATE** -115 Q1 2020

- Overweight to spread securities drove underperformance, as all spread sectors underperformed US Treasuries
- Security selection in Agency MBS also detracted from returns
- A high quality bias in corporate securities proved beneficial

#### **DODGE & COX** -183 Q1 2020

- The overweight to Corporate securities detracted from relative performance as spreads widened
- Short benchmark-relative duration positioning also detracted

#### **JENNISON** +140 Q1 2020

- The underweight to Credit and the high quality bias within Corporate positioning benefited performance
- Yield curve positioning was also beneficial

#### **PAYDEN & RYGEL** -46 Q1 2020

- The overweight to Corporates detracted from relative performance but was partially offset by security selection within the sector
- The portfolio's allocation and security selection in Agency MBS and Securitized Credit contributed positively to performance

#### **PGIM** -269 Q1 2020

- Sector allocations favoring (overweight) spread sectors were the primary driver of underperformance for the quarter, whereas the underweight in Agency MBS added to relative performance
- Security selection also detracted from relative performance led by underperformance in Corporates

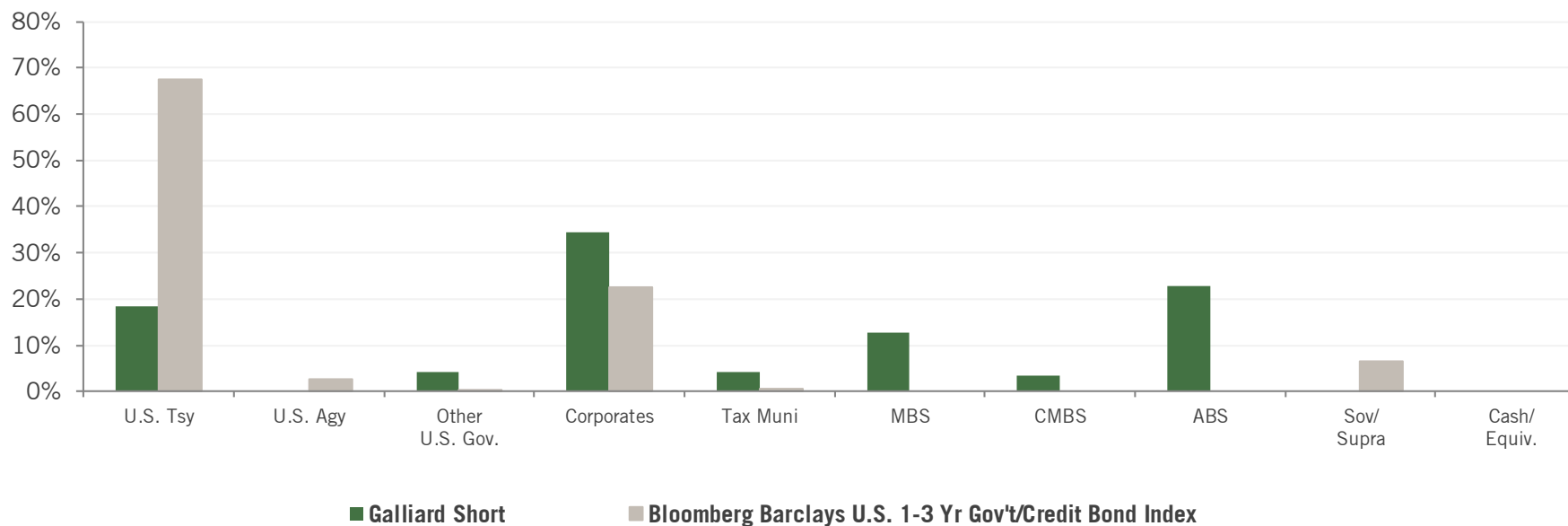
#### **TCW** -15 Q1 2020

- The underweight to Corporate securities and defensive selection within the sector benefited performance
- The out-of-benchmark holdings in Agency MBS, ABS, and CMBS was detrimental to relative performance as Treasuries outperformed spread sectors

## STATE OF NORTH CAROLINA STABLE VALUE FUND

### SHORT DURATION PORTFOLIO AS OF 3/31/20

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



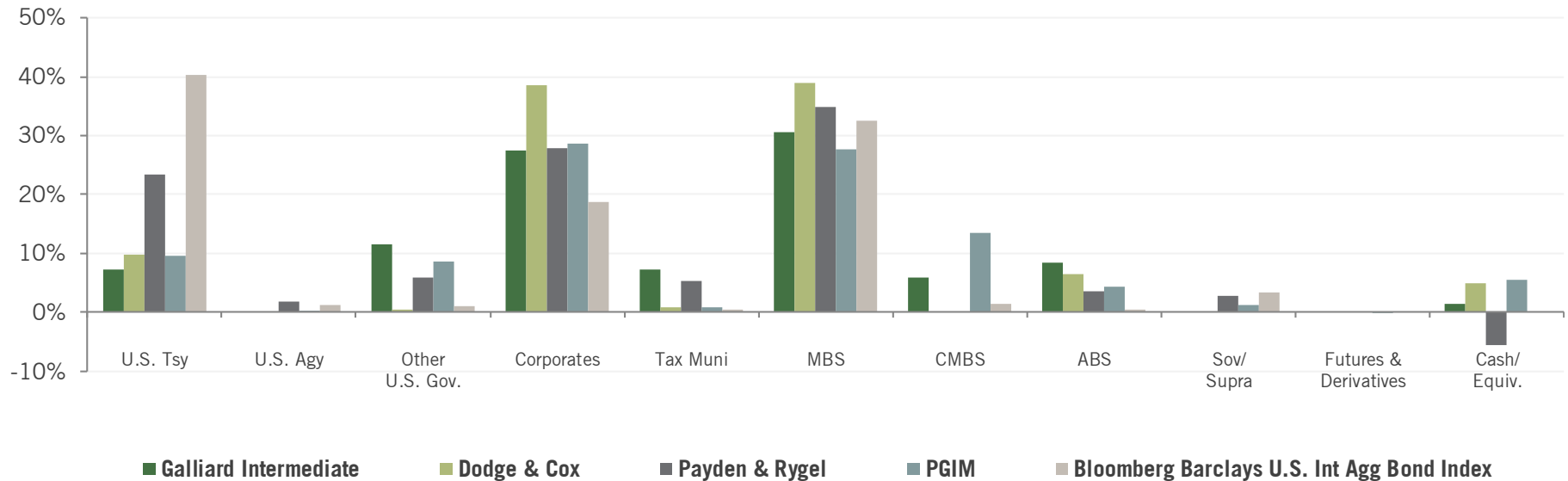
Characteristic	Galliard Short	Bloomberg Barclays U.S. 1-3 Yr Gov't/ Credit Bond Index
Weighted Average Quality <sup>1</sup>	AA	AA+
Effective Duration	1.84 Yrs	1.83 Yrs
Yield to Maturity	1.94%	0.97%

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 3/31/20

#### BLOOMBERG BARCLAYS U.S. INTERMEDIATE AGGREGATE BOND INDEX



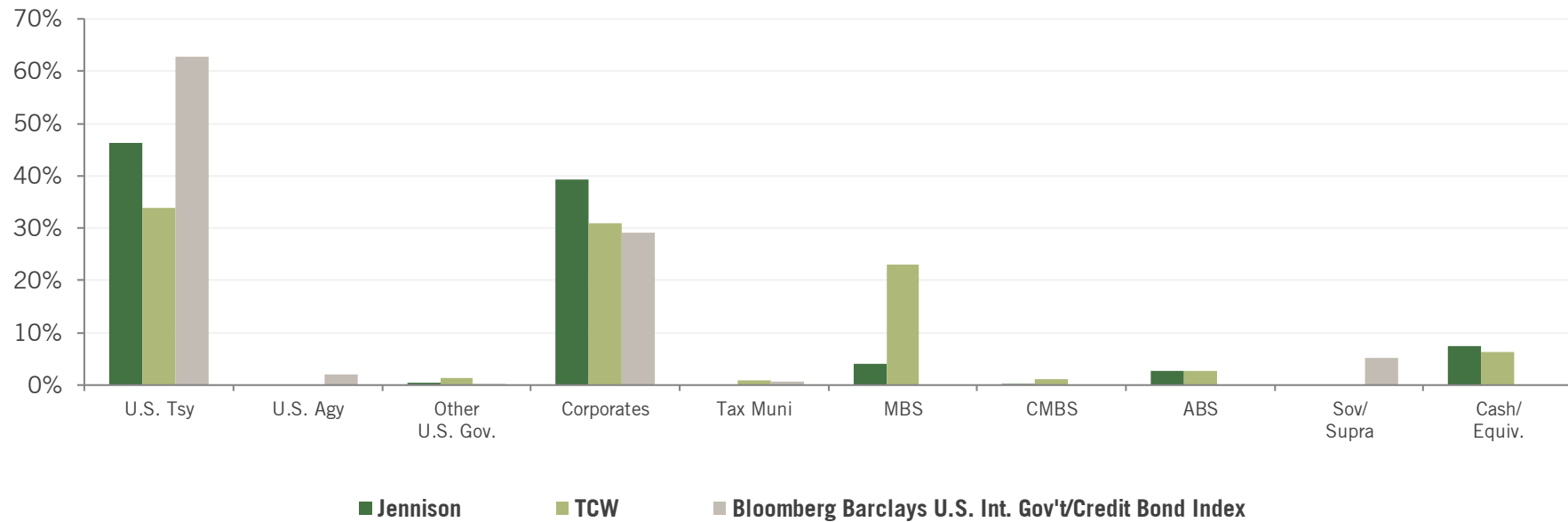
Characteristic	Galliard Intermediate	Dodge & Cox	Payden & Rygel	PGIM	Bloomberg Barclays U.S. Int Agg Bond Index
Weighted Average Quality <sup>1</sup>	AA	AA-	AA	AA-	AA+
Effective Duration	3.26 Yrs	3.19 Yrs	3.49 Yrs	3.33 Yrs	3.19 Yrs
Yield to Maturity	2.07%	2.27%	1.77%	2.55%	1.37%

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 3/31/20

#### 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 <sup>1</sup>	AA	AA	AA
Effective Duration	4.13 Yrs	3.50 Yrs	3.91 Yrs
Yield to Maturity	1.38%	1.79%	1.33%

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.