



## **WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND**

FOURTH QUARTER 2022 PORTFOLIO REVIEW

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# STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

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## GALLIARD CONTACTS

### Client Relationship Team

Tami Pearce  
Principal  
331.431.4606  
tami.pearse@galliard.com

Derek Schmidt  
Associate  
612.389.0498  
derek.d.schmidt@galliard.com

### Additional Contact(s)

Mike Norman  
Senior Managing Principal  
612.895.1276  
michael.d.norman@galliard.com

### Galliard Client Service

612.667.3220  
galliardclientservice@galliard.com

### Stable Value Audit Support

Galliard Stable Value Audit Team  
SVAudit@galliard.com

*The information contained in this report is for informational purposes only. It is intended to provide a summary of portfolio performance and characteristics, and an accounting based view of transactions and holdings. This is a standardized report and is not intended to be used for compliance purposes. Individual portfolio compliance requirements may not be captured in this report.*

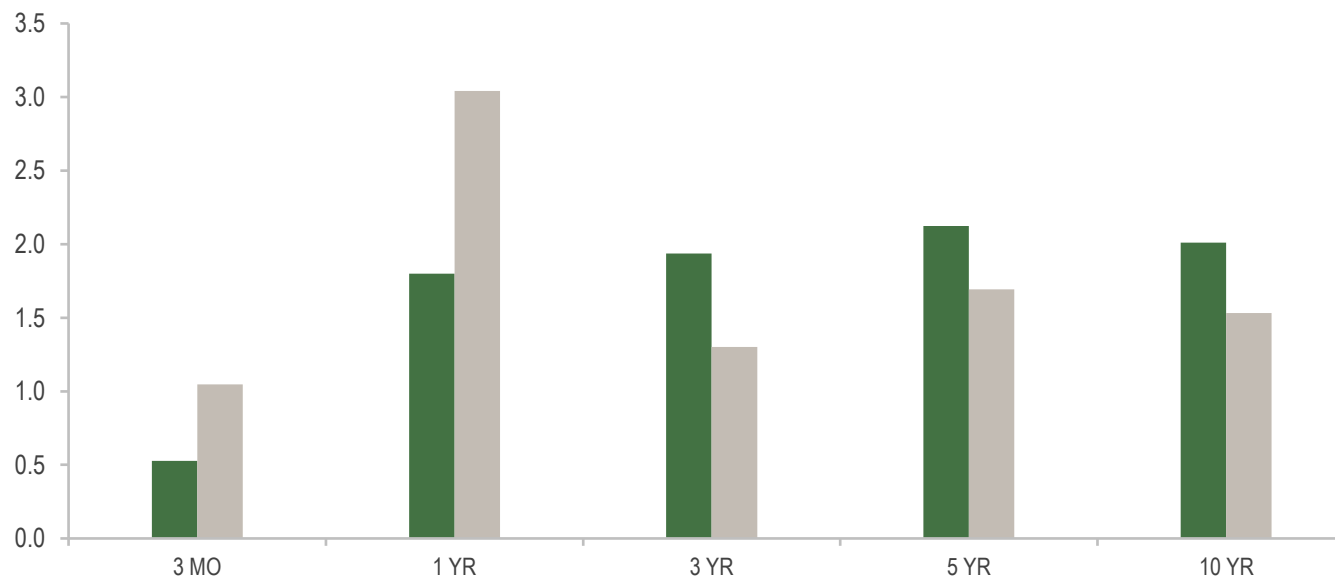
**STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND**

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# STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

ANNUALIZED INVESTMENT PERFORMANCE AS OF 12/31/22<sup>1</sup>



	3 Mo.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
■ Portfolio (net of all fees - NAV level) <sup>2</sup>	0.53	1.80	1.94	2.12	2.01
■ Linked Benchmark <sup>3</sup>	1.05	3.04	1.30	1.69	1.53
<b>Value Added (net of all fees - NAV level)<sup>4</sup></b>	<b>(0.52)</b>	<b>(1.24)</b>	<b>0.63</b>	<b>0.43</b>	<b>0.48</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, collective fund administrative fees, and plan administrative reimbursement.

3: Linked benchmark: 3 Year Constant Maturity Treasury Yield; Prior to 11/1/15 was the 5 Year Constant Maturity Treasury Yield.

4: May not add due to rounding.

# STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

## WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

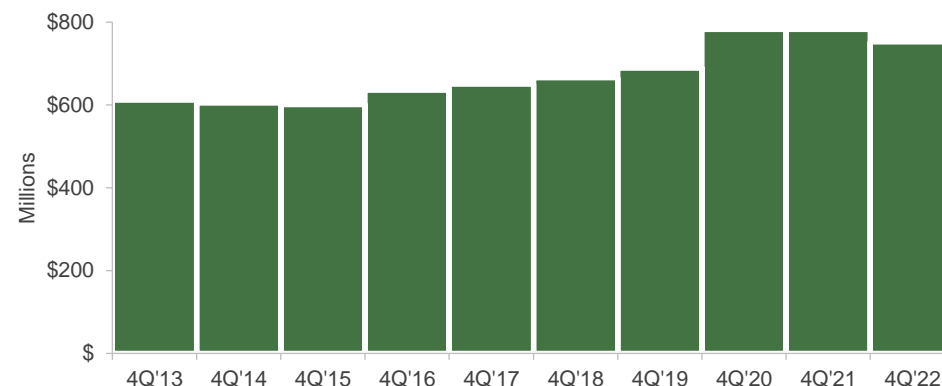
### ACCOUNT SUMMARY

<b>Benchmark</b>	3 Year Constant Maturity Treasury Yield
<b>Galliard Inception Date</b>	July 1, 1998
<b>Net Asset Value</b>	\$752,352,829

### PORTFOLIO CHARACTERISTICS

	Portfolio 9/30/22	Portfolio 12/31/22
<b>Average Quality - Book Value<sup>1</sup></b>	A+	A+
<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>	1.88%	2.14%
<b>Yield to Maturity</b>	4.95%	5.05%
<b>Effective Duration</b>	3.06 years	3.03 years
<b>Market/Book Value Ratio</b>	92.28%	92.76%

## HISTORICAL FUND ASSETS



## PORTFOLIO DISTRIBUTION

	% Portfolio 9/30/22	% Portfolio 12/31/22
<b>Liquidity Buffer: Cash &amp; Equivalents<sup>4</sup></b>	1.6	1.4
<b>Short Portfolio</b>	41.4	41.3
<b>Intermediate Portfolio</b>	57.0	57.3
<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, collective fund administrative fees, and plan administrative reimbursement.

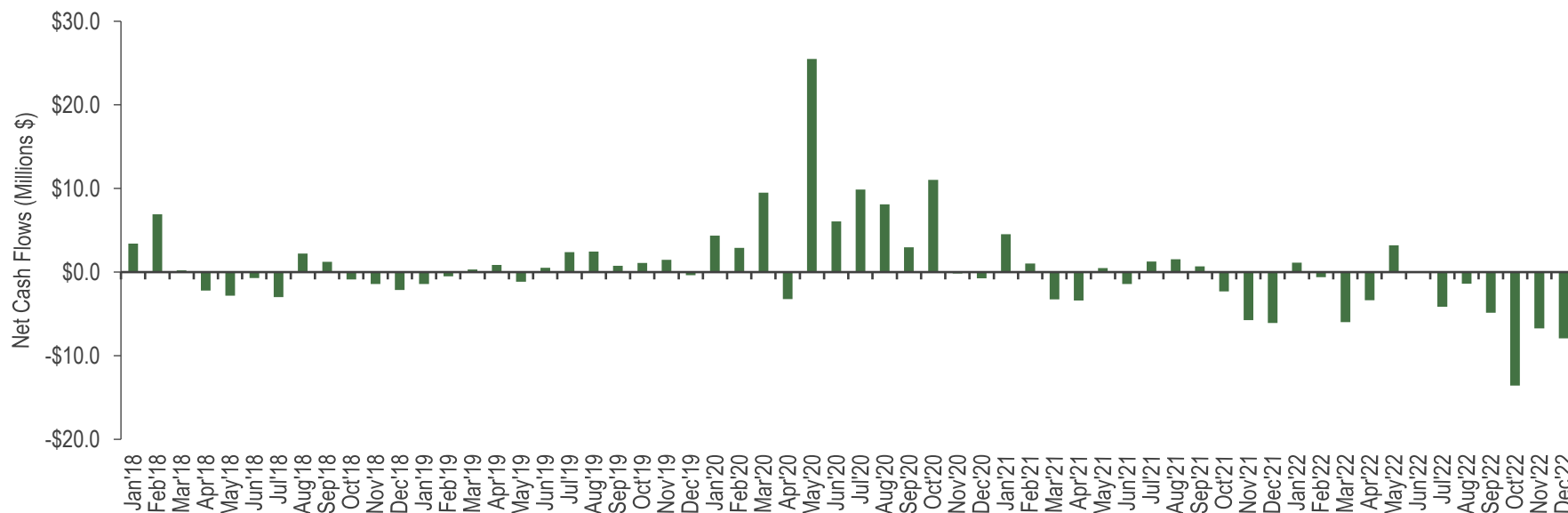
4: Includes Receivables and Payables.

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

# STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

## HISTORICAL CASHFLOWS



	2018	2019	2020	2021	1Q'22	2Q'22	3Q'22	4Q'22	2022 YTD
Beginning Assets	\$650.1	\$665.7	\$689.2	\$782.1	\$782.7	\$780.2	\$783.3	\$776.6	\$782.7
Net Cash Flow (\$)¹	\$0.9	\$6.4	\$76.1	-\$12.7	-\$5.5	-\$0.1	-\$10.4	-\$28.3	-\$44.2
Net Cash Flow (%)	0.13%	0.96%	11.04%	-1.62%	-0.70%	-0.01%	-1.33%	-3.64%	-5.65%
Estimated Investment Earnings	\$14.8	\$17.1	\$16.9	\$13.3	\$3.0	\$3.2	\$3.7	\$4.0	\$13.8
Ending Assets²	\$665.7	\$689.2	\$782.1	\$782.7	\$780.2	\$783.3	\$776.6	\$752.4	\$752.4

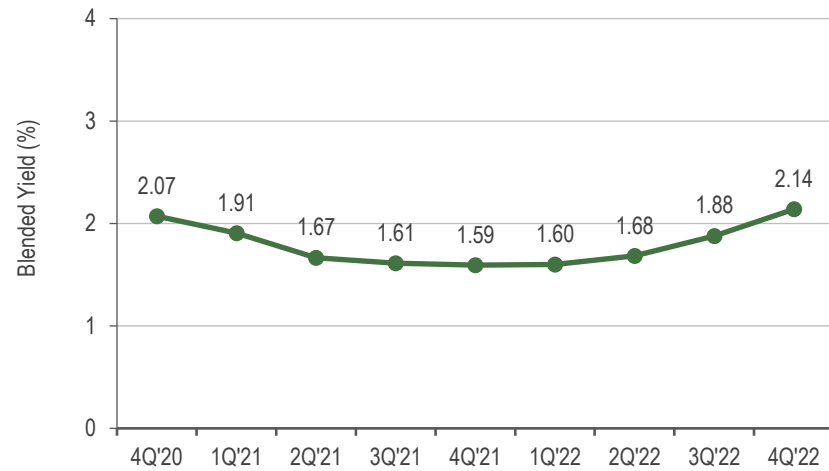
1: Contributions, Withdrawals and Investment Transfers

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

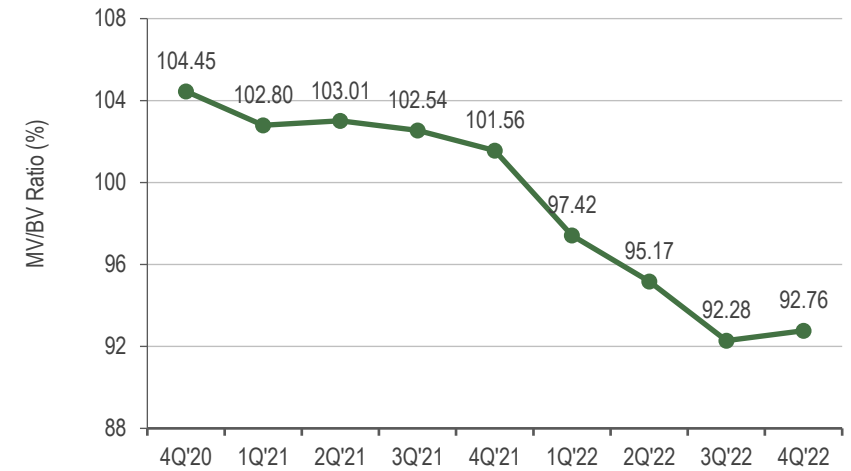
# STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

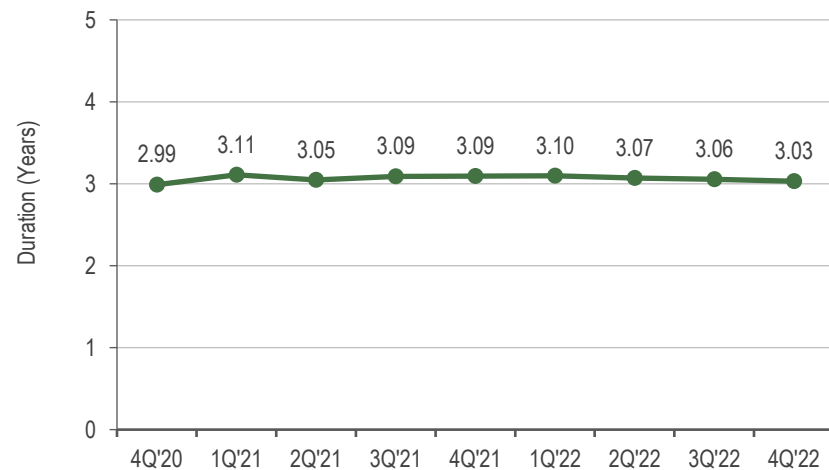
### HISTORICAL BLENDED YIELD<sup>1</sup>



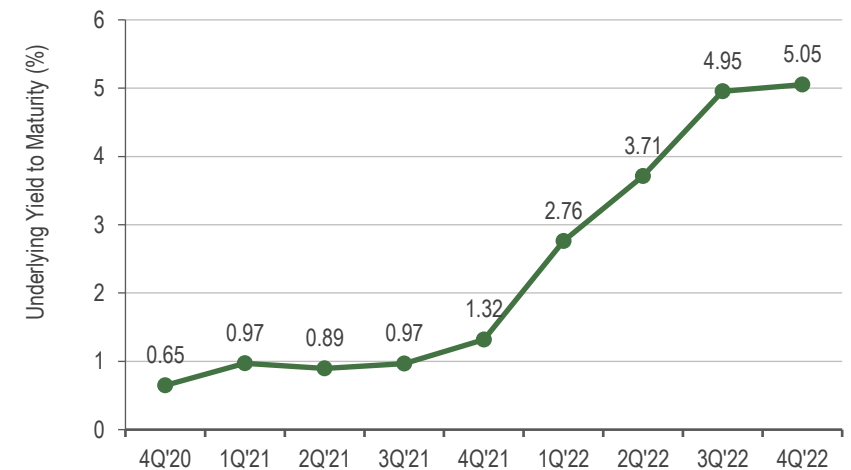
### HISTORICAL MARKET VALUE TO BOOK VALUE RATIO



### HISTORICAL DURATION



### HISTORICAL UNDERLYING YIELD TO MATURITY



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

# STABLE VALUE PORTFOLIO REVIEW - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

## CONTRACT ISSUER DISTRIBUTION & RATING SUMMARY<sup>1</sup>

	Contract Type <sup>2</sup>	% Portfolio 9/30/22	% Portfolio 12/31/22	Rating 9/30/22	Rating 12/31/22	Wrap Fees (bps) 12/31/22
American General Life Ins. Co.	SBIC	19.7	19.8	A+	A+	15
Nationwide Life Ins. Co.	SBIC	20.0	20.1	A+	A+	15
Prudential Ins. Co. of America	SBIC	19.8	19.9	AA-	AA-	15
Transamerica Life Ins. Co.	SBIC	21.7	21.7	A+	A+	15
Voya Ret. Ins. and Annuity Co.	SBIC	17.1	17.2	A	A	15

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 - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

## MANAGER DISTRIBUTION

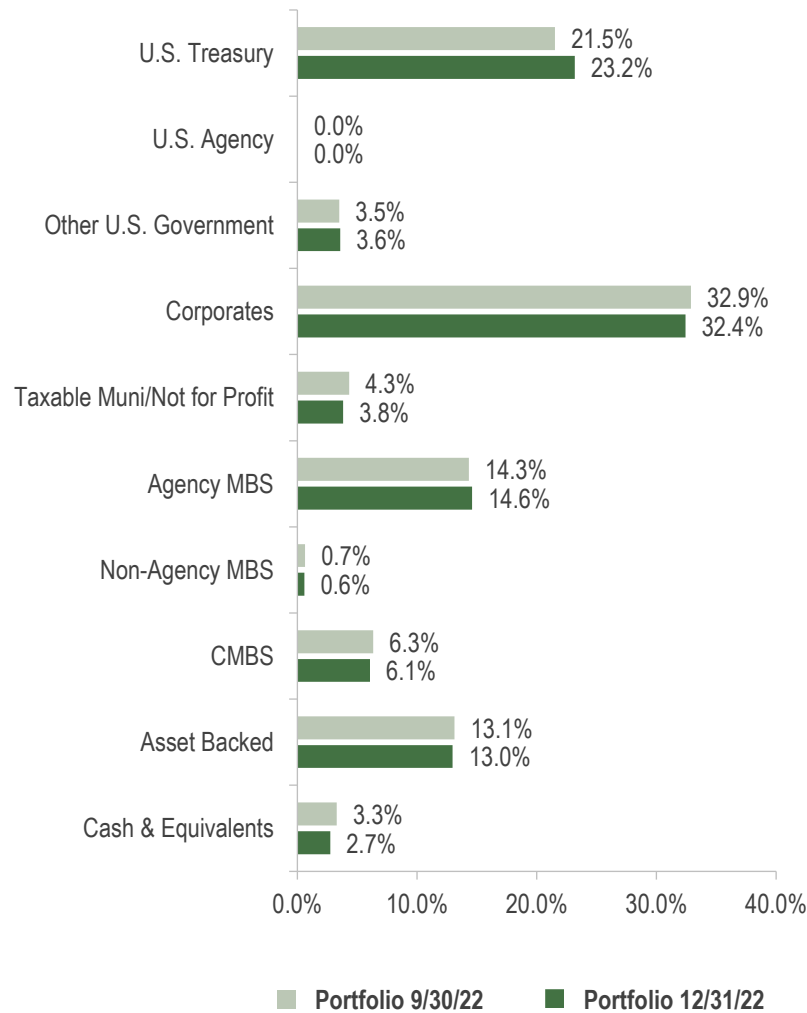
	Strategy	Benchmark	% of Portfolio 9/30/22	% of Portfolio 12/31/22
Liquidity Buffer: Cash & Equivalents	STIF/Money Market		1.6	1.4
Galliard	Short	Bloomberg U.S. 1-3 Year Government/Credit Bond Index	41.4	41.3
Galliard	Intermediate	Bloomberg U.S. Intermediate Government/Credit Bond Index	27.8	27.9
Dodge & Cox	Intermediate	Bloomberg U.S. Intermediate Aggregate Bond Index	9.9	10.0
Jennison Assoc.	Intermediate	Bloomberg U.S. Intermediate Government/Credit Bond Index	9.3	9.3
TCW	Intermediate	Bloomberg U.S. Intermediate Government/Credit Bond Index	10.0	10.0
Total			100% <sup>1</sup>	100% <sup>1</sup>

<sup>1</sup>: Total % of portfolio may not add to 100% due to rounding.

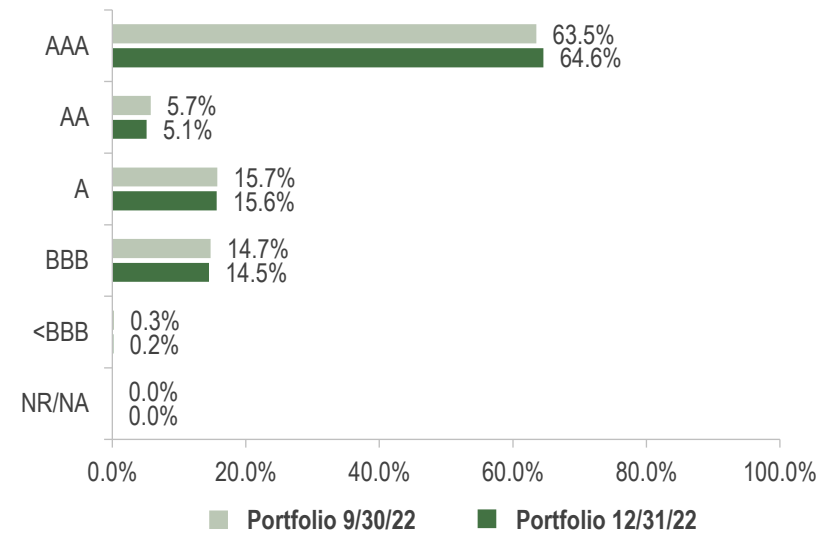
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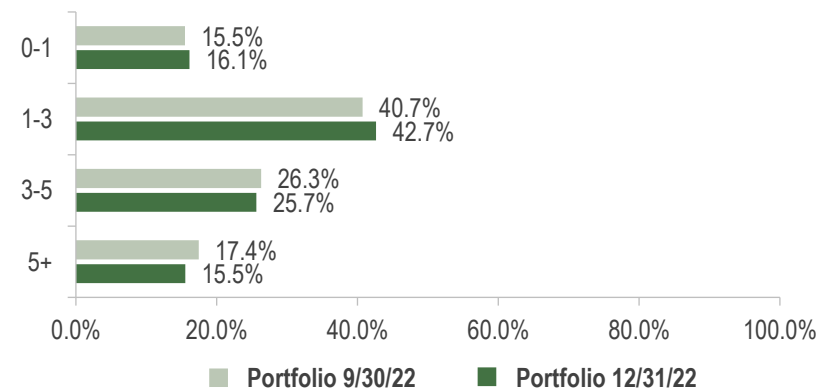
## UNDERLYING FIXED INCOME ASSET ALLOCATION<sup>1</sup>



## UNDERLYING QUALITY DISTRIBUTION<sup>1</sup>



## UNDERLYING DURATION DISTRIBUTION



<sup>1</sup>: Market Value. Total % of portfolio may not add to 100% due to rounding. The external managers provide holdings and the securities are classified using Galliard's analytics methodology for comparability across managers. The quality distribution shown represents the distribution of 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. Distributions represent the portfolio positions for reporting purposes only. Investment guideline compliance is reported in the appendix or separately through your Galliard relationship manager.

## WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND PORTFOLIO TRANSACTIONS

Period: 10/1/2022 - 12/31/2022

Asset ID	Security Description	Book Value	Settle Date	Galliard Composite Rating
<b>PURCHASES</b>				
9983008\$P	Short-Term Investment Fund A S	3,500,000	10/5/2022	AAA
9983008\$P	Short-Term Investment Fund A S	5,750,000	10/19/2022	AAA
9983008\$P	Short-Term Investment Fund A S	7,500,000	11/2/2022	AAA
9983008\$P	Short-Term Investment Fund A S	4,500,000	11/16/2022	AAA
9983008\$P	Short-Term Investment Fund A S	6,000,000	12/14/2022	AAA
<b>TOTAL PURCHASES</b>		<b>27,250,000</b>		
<b>SALES</b>				
946996EP6	American General Life Ins. Co.	703,000	10/5/2022	A+
896994DP2	Nationwide Life Ins. Co.	711,000	10/5/2022	A+
744999ZU0	Prudential Ins. Co. of America	704,000	10/5/2022	AA-
600996CC4	Transamerica Life Ins. Co.	772,000	10/5/2022	A+
75999UNG9	Voya Ret. Ins. and Annuity Co.	610,000	10/5/2022	A
946996EP6	American General Life Ins. Co.	1,155,000	10/19/2022	A+
896994DP2	Nationwide Life Ins. Co.	1,168,000	10/19/2022	A+
744999ZU0	Prudential Ins. Co. of America	1,157,000	10/19/2022	AA-
600996CC4	Transamerica Life Ins. Co.	1,268,000	10/19/2022	A+
75999UNG9	Voya Ret. Ins. and Annuity Co.	1,002,000	10/19/2022	A
946996EP6	American General Life Ins. Co.	1,507,000	11/2/2022	A+
896994DP2	Nationwide Life Ins. Co.	1,523,000	11/2/2022	A+
744999ZU0	Prudential Ins. Co. of America	1,510,000	11/2/2022	AA-
600996CC4	Transamerica Life Ins. Co.	1,653,000	11/2/2022	A+

## WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND PORTFOLIO TRANSACTIONS

Period: 10/1/2022 - 12/31/2022

Asset ID	Security Description	Book Value	Settle Date	Galliard Composite Rating
75999UNG9	Voya Ret. Ins. and Annuity Co.	1,307,000	11/2/2022	A
946996EP6	American General Life Ins. Co.	904,000	11/16/2022	A+
896994DP2	Nationwide Life Ins. Co.	914,000	11/16/2022	A+
744999ZU0	Prudential Ins. Co. of America	906,000	11/16/2022	AA-
600996CC4	Transamerica Life Ins. Co.	992,000	11/16/2022	A+
75999UNG9	Voya Ret. Ins. and Annuity Co.	784,000	11/16/2022	A
946996EP6	American General Life Ins. Co.	1,206,000	12/14/2022	A+
896994DP2	Nationwide Life Ins. Co.	1,219,000	12/14/2022	A+
744999ZU0	Prudential Ins. Co. of America	1,208,000	12/14/2022	AA-
600996CC4	Transamerica Life Ins. Co.	1,321,000	12/14/2022	A+
75999UNG9	Voya Ret. Ins. and Annuity Co.	1,046,000	12/14/2022	A
<b>TOTAL SALES</b>		<b>27,250,000</b>		

# WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND PORTFOLIO HOLDINGS

December 31, 2022

Asset ID	Security Description	Manager	Book Value (\$)	Market Value (\$)	Market/Book Value Ratio (%)	% of Portfolio	Crediting Rate (%) <sup>1</sup>	UCA Yield (%)	Effective Duration (yrs)	Galliard Composite Rating	Wrap Fees (bps)
<b>LIQUIDITY BUFFER</b>											
	Cash Receivable / (Payable)		-427,591	-427,591	100.0	-0.1	4.44	4.44	0.10	AAA	
9983008\$P	Short-Term Investment Fund A S		11,168,437	11,168,437	100.0	1.5	4.44	4.44	0.10	AAA	
<b>TOTAL LIQUIDITY BUFFER</b>			10,740,845	10,740,845	100.0	1.4	4.44	4.44	0.10	AAA	
<b>SHORT PORTFOLIO</b>											
946996EP6	American General Life Ins. Co.	Galliard	62,172,994	57,730,799	92.9	8.3	2.28	5.18	1.85	A+	15.0
896994DP2	Nationwide Life Ins. Co.	Galliard	63,131,108	58,365,158	92.5	8.4	2.08	5.18	1.85	A+	15.0
744999ZU0	Prudential Ins. Co. of America	Galliard	62,711,960	58,018,779	92.5	8.3	2.12	5.18	1.85	AA-	15.0
600996CC4	Transamerica Life Ins. Co.	Galliard	68,384,380	63,434,512	92.8	9.1	2.23	5.18	1.85	A+	15.0
75999UNG9	Voya Ret. Ins. and Annuity Co.	Galliard	54,280,708	50,321,591	92.7	7.2	2.19	5.18	1.85	A	15.0
<b>TOTAL SHORT PORTFOLIO</b>			310,681,150	287,870,839	92.7	41.3	2.18	5.18	1.85	A+	

1: Crediting rates are net of wrap fees and any other fees being netted out of the rates.

# WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND PORTFOLIO HOLDINGS

December 31, 2022

Asset ID	Security Description	Manager	Book Value (\$)	Market Value (\$)	Market/Book Value Ratio (%)	% of Portfolio	Crediting Rate (%) <sup>1</sup>	UCA Yield (%)	Effective Duration (yrs)	Galliard Composite Rating	Wrap Fees (bps)
<b>INTERMEDIATE PORTFOLIO</b>											
946996EP6	American General Life Ins. Co.	Dodge & Cox	15,313,919	14,219,755	92.9	2.0	2.28	5.11	4.18	A+	15.0
946996EP6	American General Life Ins. Co.	TCW	15,303,121	14,209,729	92.9	2.0	2.28	4.90	4.22	A+	15.0
946996EP6	American General Life Ins. Co.	Galliard	41,822,032	38,833,892	92.9	5.6	2.28	5.04	3.82	A+	15.0
946996EP6	American General Life Ins. Co.	Jennison Assoc.	14,079,688	13,073,709	92.9	1.9	2.28	4.70	3.86	A+	15.0
896994DP2	Nationwide Life Ins. Co.	Galliard	46,913,152	43,371,543	92.5	6.2	2.08	5.04	3.82	A+	15.0
896994DP2	Nationwide Life Ins. Co.	Jennison Assoc.	11,219,204	10,372,233	92.5	1.5	2.08	4.70	3.86	A+	15.0
896994DP2	Nationwide Life Ins. Co.	Dodge & Cox	14,867,274	13,744,901	92.5	2.0	2.08	5.11	4.18	A+	15.0
896994DP2	Nationwide Life Ins. Co.	TCW	14,865,654	13,743,402	92.5	2.0	2.08	4.90	4.22	A+	15.0
744999ZU0	Prudential Ins. Co. of America	Dodge & Cox	15,346,920	14,198,401	92.5	2.0	2.12	5.11	4.18	AA-	15.0
744999ZU0	Prudential Ins. Co. of America	TCW	15,325,555	14,178,635	92.5	2.0	2.12	4.90	4.22	AA-	15.0
744999ZU0	Prudential Ins. Co. of America	Galliard	40,717,273	37,670,110	92.5	5.4	2.12	5.04	3.82	AA-	15.0
744999ZU0	Prudential Ins. Co. of America	Jennison Assoc.	15,384,548	14,233,213	92.5	2.0	2.12	4.70	3.86	AA-	15.0
600996CC4	Transamerica Life Ins. Co.	Galliard	45,264,255	41,987,892	92.8	6.0	2.23	5.04	3.82	A+	15.0
600996CC4	Transamerica Life Ins. Co.	Dodge & Cox	16,909,280	15,685,335	92.8	2.2	2.23	5.11	4.18	A+	15.0
600996CC4	Transamerica Life Ins. Co.	Jennison Assoc.	16,556,108	15,357,727	92.8	2.2	2.23	4.70	3.86	A+	15.0
600996CC4	Transamerica Life Ins. Co.	TCW	16,151,862	14,982,741	92.8	2.1	2.23	4.90	4.22	A+	15.0
75999UNG9	Voya Ret. Ins. and Annuity Co.	Galliard	35,258,391	32,686,720	92.7	4.7	2.19	5.04	3.82	A	15.0
75999UNG9	Voya Ret. Ins. and Annuity Co.	Jennison Assoc.	13,079,231	12,125,260	92.7	1.7	2.19	4.70	3.86	A	15.0
75999UNG9	Voya Ret. Ins. and Annuity Co.	TCW	13,777,190	12,772,312	92.7	1.8	2.19	4.90	4.22	A	15.0
75999UNG9	Voya Ret. Ins. and Annuity Co.	Dodge & Cox	12,776,176	11,844,309	92.7	1.7	2.19	5.11	4.18	A	15.0
<b>TOTAL INTERMEDIATE PORTFOLIO</b>			<b>430,930,833</b>	<b>399,291,821</b>	<b>92.7</b>	<b>57.3</b>	<b>2.18</b>	<b>4.97</b>	<b>3.96</b>	<b>A+</b>	
<b>TOTAL PORTFOLIO</b>			<b>752,352,829</b>	<b>697,903,506</b>	<b>92.8</b>	<b>100.0</b>	<b>2.21</b>	<b>5.05</b>	<b>3.03</b>	<b>A+</b>	

1: Crediting rates are net of wrap fees and any other fees being netted out of the rates.



# MARKET REVIEW

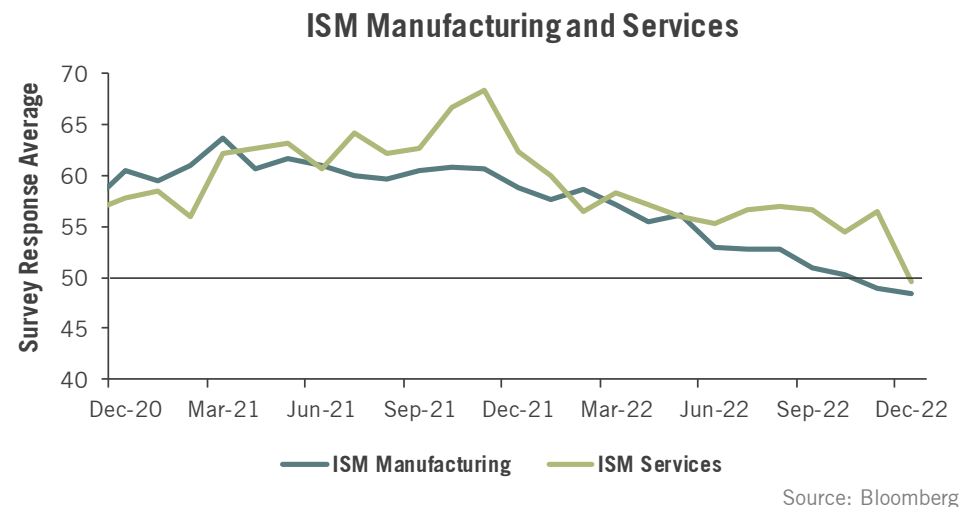
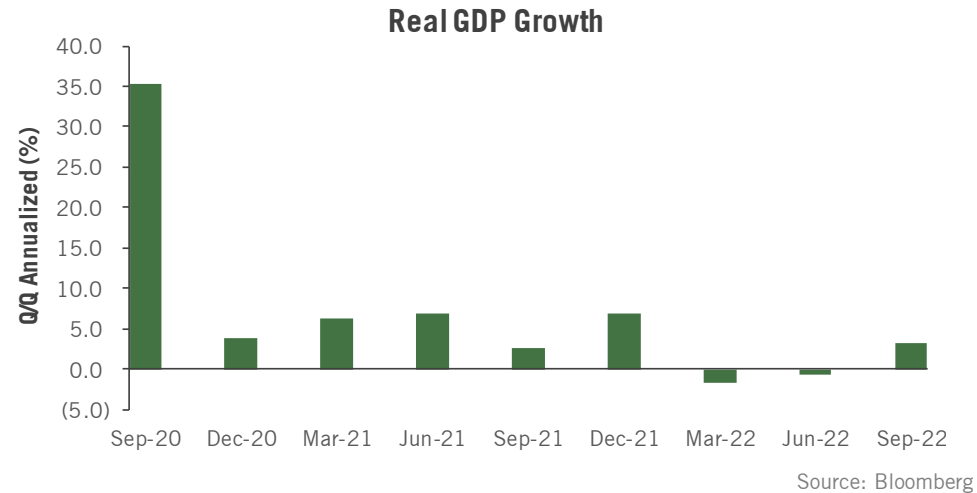
## FOURTH QUARTER 2022

### 3Q22 GDP GROWTH REBOUNDS...

- The economic engine in the U.S. remains intact for the time being. 3Q GDP growth beat expectations, coming in at 3.2% q/q annualized with the largest positive contribution coming from a narrowing trade deficit. Behind the headline number, however, measures of domestic demand, such as residential investment and consumer spending, were less optimistic.
- 4Q GDP is expected to be approximately 1.0%-2.0% q/q annualized, bringing full-year 2022 growth to ~2.0%. Looking ahead, estimates are for GDP to remain positive through early 2023 before the economy slips into a recession in the back half of the year, resulting in full-year GDP growth that is barely positive.
- The probability of a recession in the next year has increased to 65% according to Bloomberg, supported by a deeply inverted yield curve and slowing economic activity (see below). Discussions about recession will continue into the new year.

### ...AMID HEADWINDS FROM HIGHER RATES AND INFLATION

- The labor market remains tight, with another with 263k, 256k, and 223k jobs added in October, November, and December respectively. Notably, job creation has exceeded expectations in just about every month since May. Still, negative real wages, equity markets down ~20% as measured by the S&P 500, and meaningfully higher mortgage rates put pressure on consumers this year.
- Personal savings measured as a percentage of disposable income plummeted in 2022, from 7.5% at the end of 2021 to only 2.4% in November. This marks the lowest savings rate since spring of 2005. After a spike to 1.3% m/m in October, retail sales growth was -0.6% m/m in November. Retail sales ex-autos shows a similar pattern, rising by 1.2% m/m in October before falling -0.2% m/m in November.
- Businesses are not expanding at the same rate that they were previously, with a number of activity measures now in contractionary territory. The ISM Manufacturing PMI dipped to 49.0 in November and 48.4 in December, the first contractionary readings since May 2020. The ISM Services PMI had been a bright spot, measuring 54.4 and 56.5 in October and November before falling to 49.6 in December.



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# MARKET REVIEW

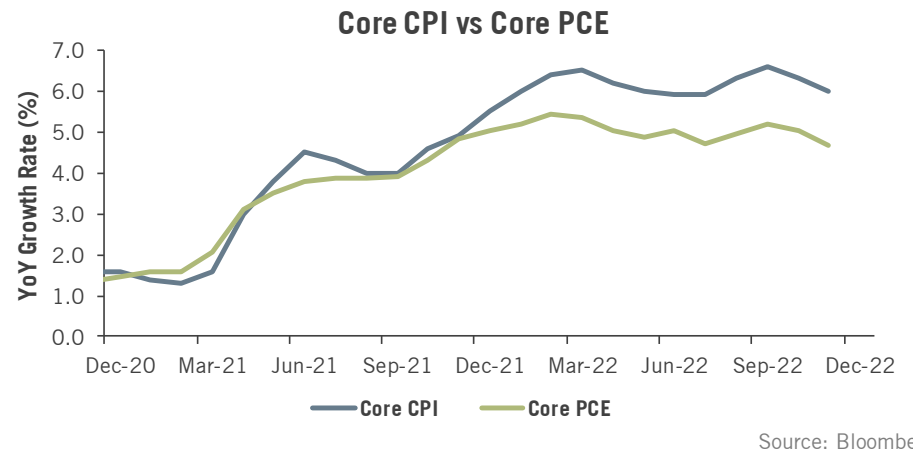
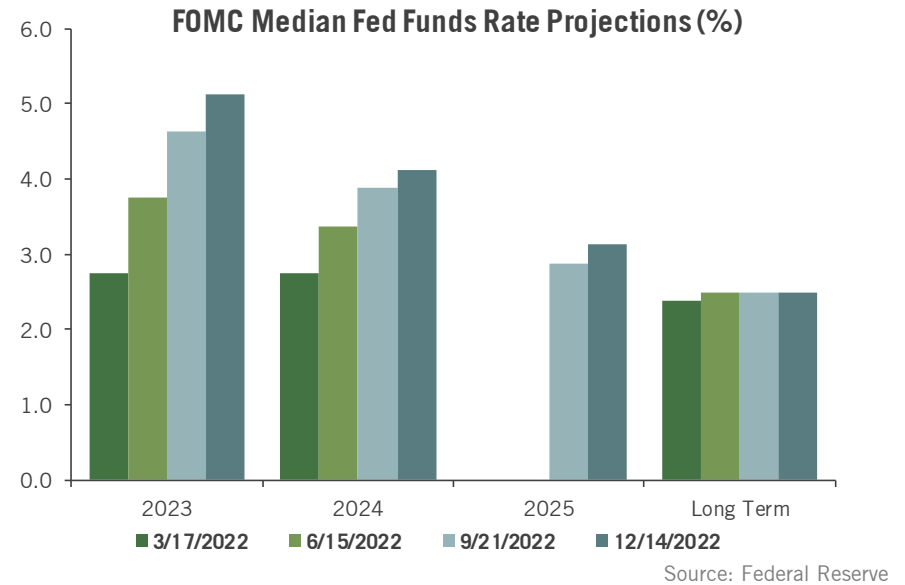
## FOURTH QUARTER 2022

### FED REMAINS HAWKISH...

- The Fed increased its policy rate by another 75 bps in November, the fourth such rate increase in as many meetings, before downshifting slightly to a 50 bps increase in December. This brings the total rate increase to 425 bps: the fastest, most aggressive monetary policy tightening in 40 years.
- The Fed's message has consistently been hawkish despite market sentiment that begs for a policy pivot. In post-policy meeting press conferences, Chair Powell has stressed that additional policy tightening will be appropriate in order to achieve the Fed's inflation target. More importantly, Powell suggested that the pace of rate hikes is perhaps less important than the terminal rate and the length of time monetary policy will remain restrictive.
- Furthermore, the recently released December meeting minutes clearly stated that "No participants anticipated that it would be appropriate to begin reducing the federal funds rate target in 2023." However, market pricing indicates another 75 bps of tightening through early 2023 followed by rate cuts in the back half of the year as a result of economic weakness, ending the year closer to 4.50%.

### ...WHILE INFLATION SHOWS SIGNS OF WEAKENING

- There are early signs that inflation is finally heading in the right direction across many key measures. Headline CPI increased by 7.1% y/y and 0.1% m/m in November, down from 8.2% y/y and 0.4% m/m in September, while core CPI increased by 6.0% y/y and 0.2% m/m in November, down from 6.6% y/y and 0.6% m/m at the end of the third quarter.
- Similarly, headline PCE decelerated to 5.5% y/y and 0.1% m/m in November, down from 6.3% y/y and 0.3% m/m in September, and core PCE fell to 4.7% y/y and 0.2% m/m from 5.2% y/y and 0.5% m/m for the same time periods.
- Inflation expectations briefly shot higher in October on hopes that a policy pivot was at hand, but retreated in November and December with continued hawkish Fed messaging. 5-year and 10-year breakeven rates ended the year at 2.38% and 2.30% respectively.

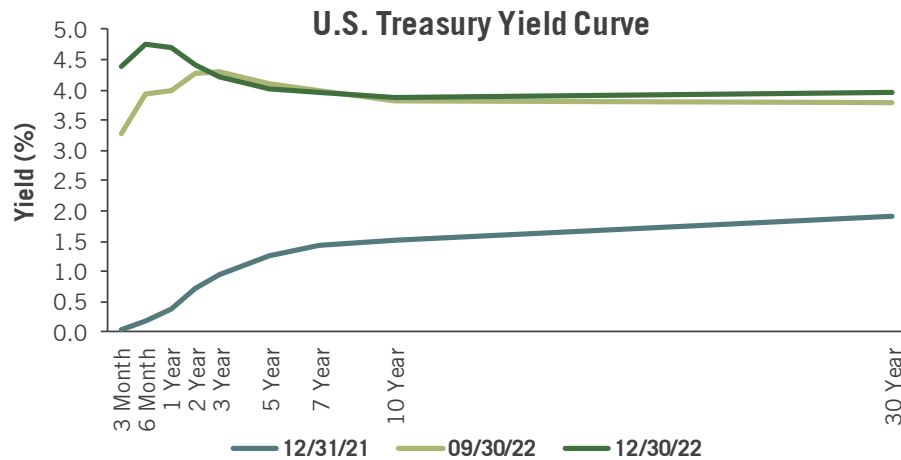


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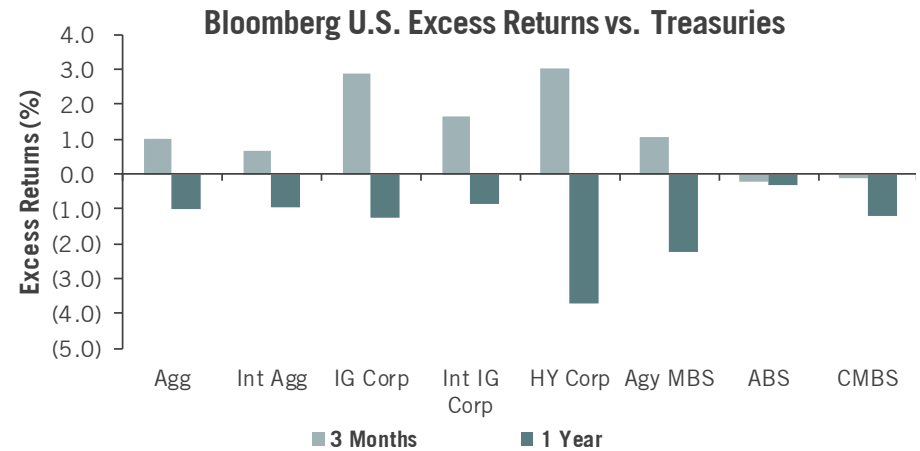
# MARKET REVIEW

## FOURTH QUARTER 2022

### NON-TREASURY SECTORS RECOVER WHILE YIELD CURVE REACHES LARGEST INVERSION IN 40 YEARS



Source: Bloomberg



Source: Bloomberg

- While the curve sold off only slightly during the fourth quarter, 2-year Treasury rates rose 370 bps and 10-year Treasury rates rose 237 bps for the full year. This resulted in 133 bps of curve flattening and the most deeply inverted yield curve in 40 years. In early December, the curve was inverted by 84 bps, the largest inversion since 1981, before ending the year inverted by 55 bps. Reflecting tighter financial conditions and the effects of quantitative tightening, 10-year real yields ended the year a whopping 268 bps higher than at the end of 2021. Considering all of this, it should come as no surprise that fixed income returns were truly dismal in 2022. The annual total return for the Bloomberg U.S. Aggregate Index, -13%, was the worst on record going back to inception in 1976.
- Excess returns were positive for the quarter for most major fixed income spread sectors. Exceptions were ABS and CMBS, which just slightly underperformed like-duration Treasuries. Within IG Corporates, longer bonds outperformed short/intermediate maturities, while BBB issuers outperformed higher quality names.
- Corporates spreads recovered somewhat during the quarter after hitting year-to-date wides in September. For the year, spreads were wider by ~30-50 bps across maturities. Investment grade new issue supply through November was off 2021's pace by ~13% (SIFMA).
- Agency MBS ended the year on a positive note, despite having one of the worst excess return performances on record over the first three-quarters of the year as tighter financial conditions and persistent hawkish Fed messaging weighed heavily on the sector in 2022. Mortgage rates, as measured by the Freddie Mac Weekly Survey rate, ended December at ~6.4%. With financing rates more than double what they were at the beginning of the year, housing activity continues to grind to a halt.
- All things considered, short duration high quality ABS fared relatively well in 2022 despite historic monetary policy tightening. ABS new supply registered \$55 billion in the fourth quarter and \$277 billion year-to-date, down only 4% vs. 2021 (Citi Research). Over the coming year, some credit deterioration is expected, particularly at the lower end of the spectrum, as the economy cools and unemployment increases.
- CMBS new supply measured a paltry \$6.8 billion for 4Q while year-to-date volume was \$68 billion, approximately 40% lower than in 2021 (BofA). As with residential housing markets, commercial real estate activity has slowed considerably. With financing rates substantially higher year-to-date and questions surrounding rent growth and valuation, transaction volumes have slowed and some properties with near term maturities may find refinancing existing debt to be a challenge.

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## APPENDIX - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

### CALENDAR YEAR INVESTMENT PERFORMANCE

	2018	2019	2020	2021	2022
Portfolio (net of all fees - NAV level) <sup>1</sup>	2.26	2.56	2.31	1.70	1.80
Linked Benchmark <sup>2</sup>	2.63	1.94	0.43	0.46	3.04
<b>Value Added (net of all fees – NAV level)<sup>3</sup></b>	<b>(0.37)</b>	<b>0.62</b>	<b>1.88</b>	<b>1.24</b>	<b>(1.24)</b>

### MARKET INDICES

ICE BofA U.S. 3 Month Treasury Bill	1.87	2.28	0.67	0.05	1.46
Consumer Price Index	1.67	2.29	1.36	7.04	6.84

### GUIDELINE COMPLIANCE

We have not become aware of any investment guideline compliance issues occurring in the portfolio during the quarter.

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

2: Linked benchmark: 3 Year Constant Maturity Treasury Yield; Prior to 11/1/15 was the 5 Year Constant Maturity Treasury Yield.

3: May not add due to rounding.

## APPENDIX - WISCONSIN DEFERRED COMPENSATION PROGRAM - STABLE VALUE FUND

Fourth Quarter 2022

### 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 12/31/22	Per \$1000
Investment Management Fees paid to Galliard	0.075%	\$0.75
Investment Management fees paid to Non-Affiliated Investment Advisors	None	None
Investment Contract Fees <sup>1</sup>	0.148%	\$1.48
Acquired Fund Fees <sup>2</sup>	0.051%	\$0.51
- Investment Contract Fees	None	None
- Other Acquired Fund Fees and Non-Affiliated Investment Management Fees paid to Non-Affiliated Investment Advisors <sup>3</sup>	0.051%	\$0.51
12b-1 Distribution Fee	None	None
Other Expenses	None	None
<b>Total Annual Fund Operating Expenses<sup>4</sup></b>	<b>0.274%</b>	<b>\$2.74</b>

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: 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., TCW.