

EASTERN MICHIGAN UNIVERSITY
BOARD OF REGENTS
INVESTMENT PERFORMANCE ANALYSIS

1ST QUARTER 2023



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JUNE 16, 2023



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Q1 2023 MARKETS IN REVIEW



PROPRIETARY & CONFIDENTIAL

CALENDAR YEAR INDEX PERFORMANCE

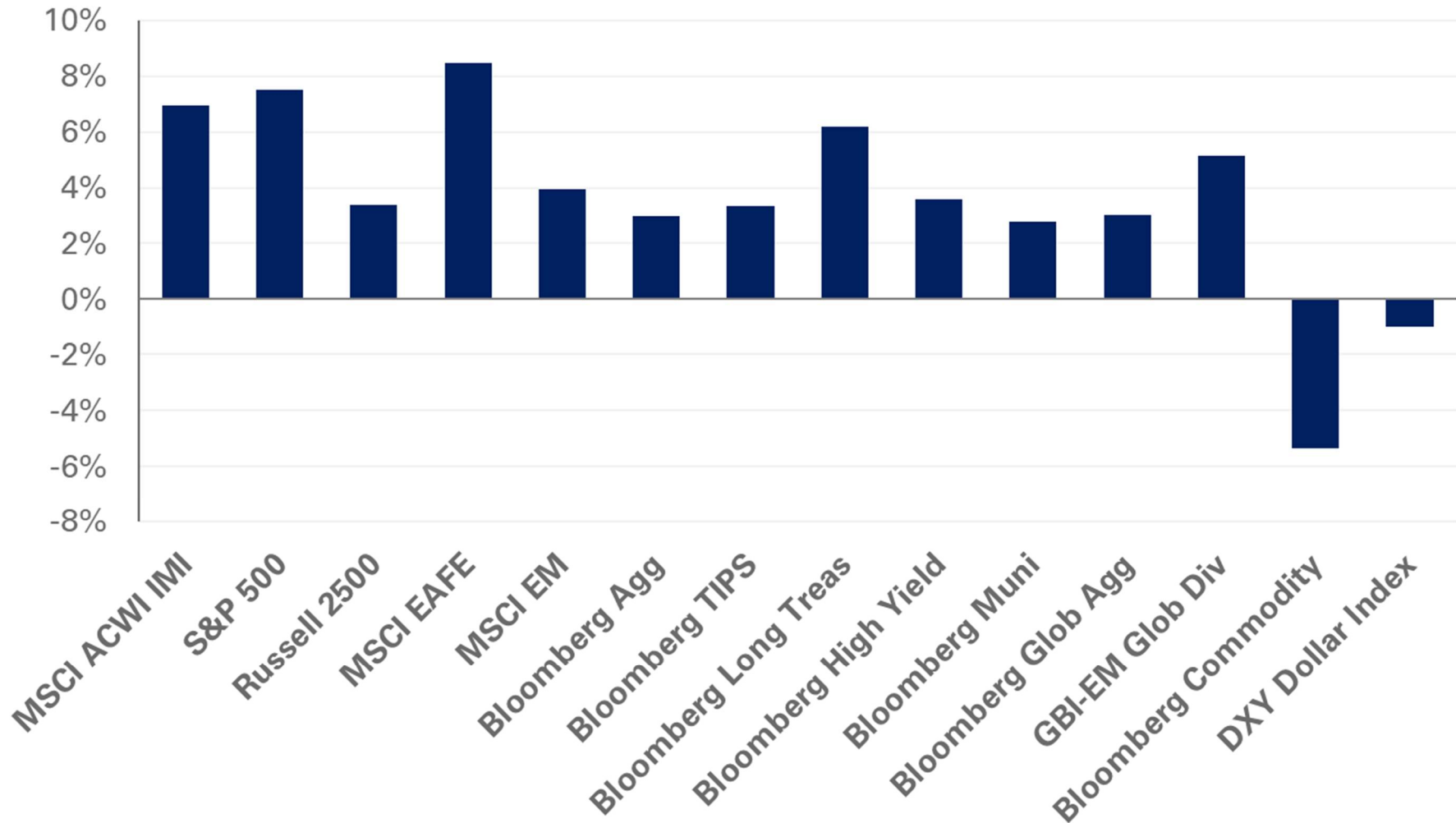
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Apr	YTD
S&P 500	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	18.4%	28.7%	-18.1%	1.6%	9.2%
Russell 1000	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	21.0%	26.5%	-19.1%	1.2%	8.8%
Russell 2000	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	20.0%	14.8%	-20.4%	-1.8%	0.9%
Russell 2500	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	20.0%	18.2%	-18.4%	-1.3%	2.0%
MSCI EAFE	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	7.8%	11.3%	-14.5%	2.8%	11.5%
MSCI EM	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	18.3%	-2.5%	-20.1%	-1.1%	2.8%
MSCI ACWI	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	16.3%	18.5%	-18.4%	1.4%	8.8%
Private Equity	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	17.2%	45.0%	-9.7%	-	-9.7%
BBG TIPS	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	11.0%	6.0%	-11.8%	0.1%	3.5%
BBG Municipal	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	5.2%	1.5%	-8.5%	-0.2%	2.5%
BBG Muni High Yield	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	4.9%	7.8%	-13.1%	0.6%	3.3%
BBG US Corporate HY	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	7.1%	5.3%	-11.2%	1.0%	4.6%
BBG US Agg Bond	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	7.5%	-1.5%	-13.0%	0.6%	3.6%
BBG Global Agg	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	9.2%	-4.7%	-16.2%	0.4%	3.5%
BBG Long Treasuries	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	17.7%	-4.6%	-29.3%	0.5%	6.7%
BBG US Long Credit	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	13.3%	-1.2%	-25.3%	0.9%	6.3%
BBG US STRIPS 20+ Yr	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	24.0%	-5.2%	-39.6%	0.1%	8.4%
JPM GBI-EM Global Div	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	2.7%	-8.7%	-11.7%	0.9%	6.1%
JPM EMBI Glob Div	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	5.3%	-1.8%	-17.8%	0.5%	2.4%
CS Hedge Fund	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	6.4%	8.2%	1.1%	-	0.2%
BBG Commodity	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-3.1%	27.1%	16.1%	-0.8%	-6.1%
Alerian Midstream	-	16.4%	-37.3%	33.8%	-2.4%	-13.3%	24.0%	-23.4%	38.4%	21.5%	2.4%	3.2%
FTSE NAREIT Equity REITs	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-8.0%	43.2%	-24.4%	0.8%	3.5%

*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag
Source: FactSet, Barclays, Thomson One



EQUITIES HELD STRONG FOR THE QUARTER

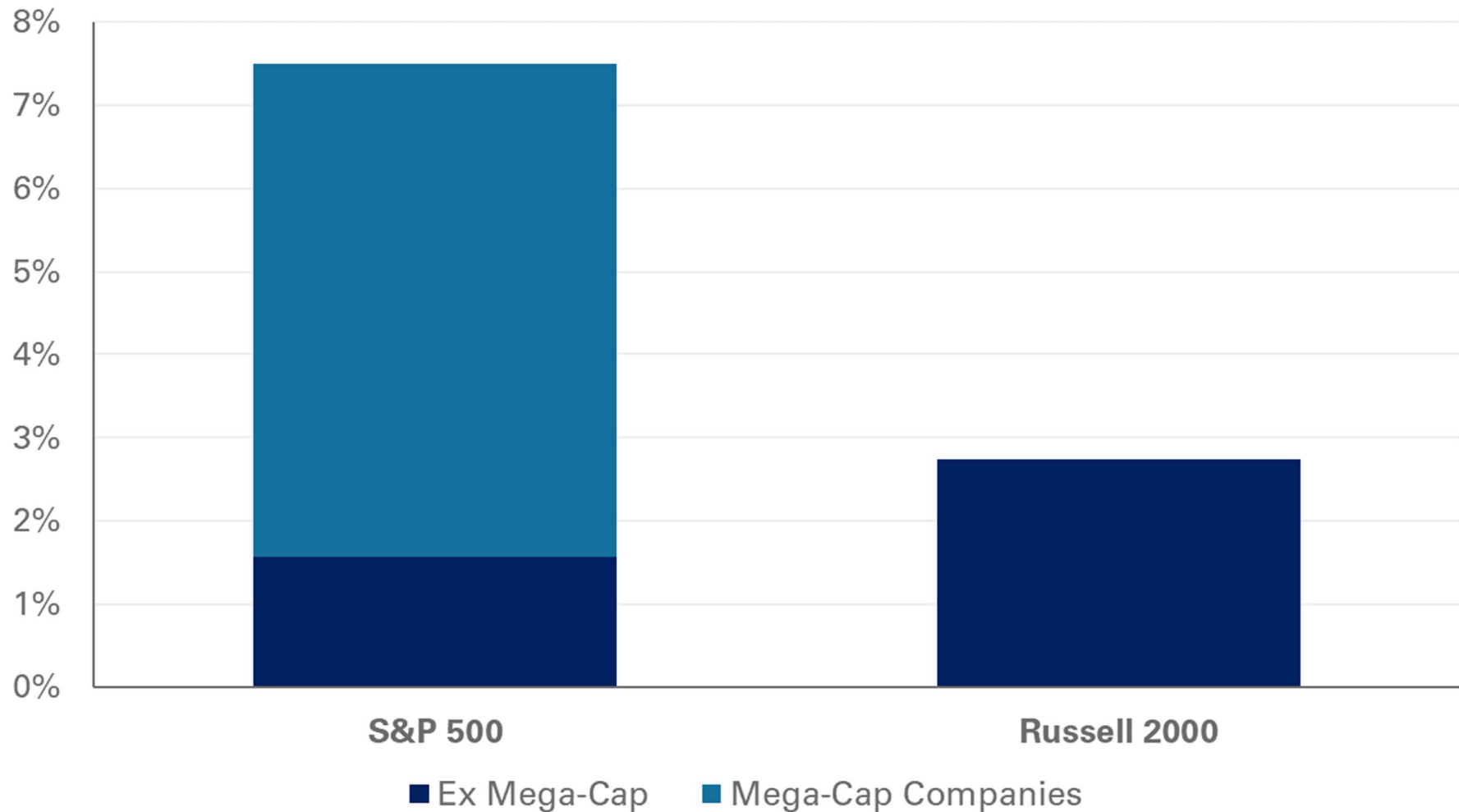
2023 FIRST QUARTER TOTAL RETURNS



Source: MSCI, S&P, Russell, MSCI, Bloomberg, JPM, FactSet

MEGA-CAPS SUPPORTED EQUITY MARKETS

CONTRIBUTION TO QUARTERLY RETURN



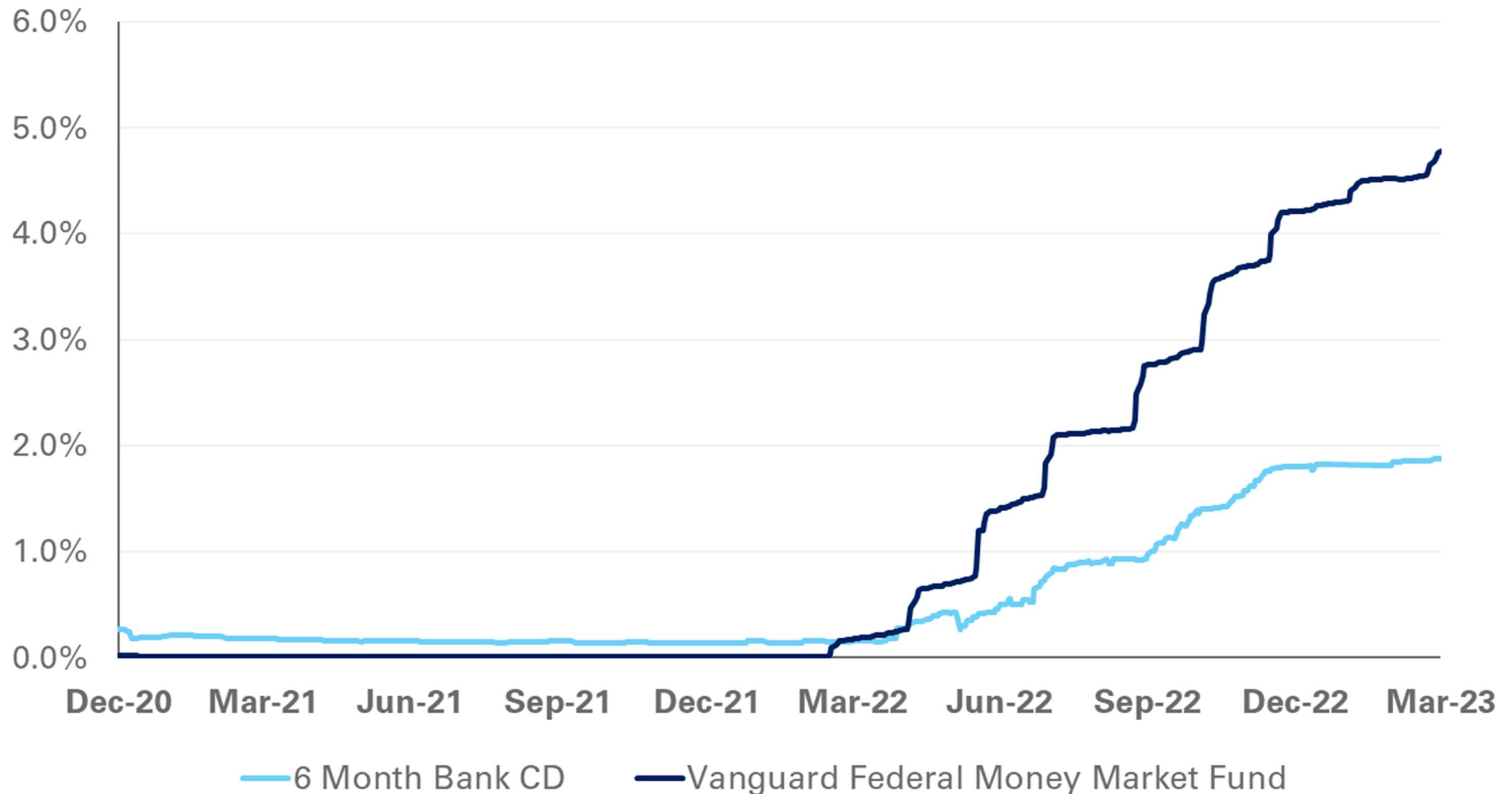
Mega-Cap companies represent Alphabet, Amazon, Apple, Microsoft, Meta Platforms, Tesla, and Nvidia

Sources: S&P, Russell, FactSet



BANK DEPOSIT RATES ARE BELOW MARKET

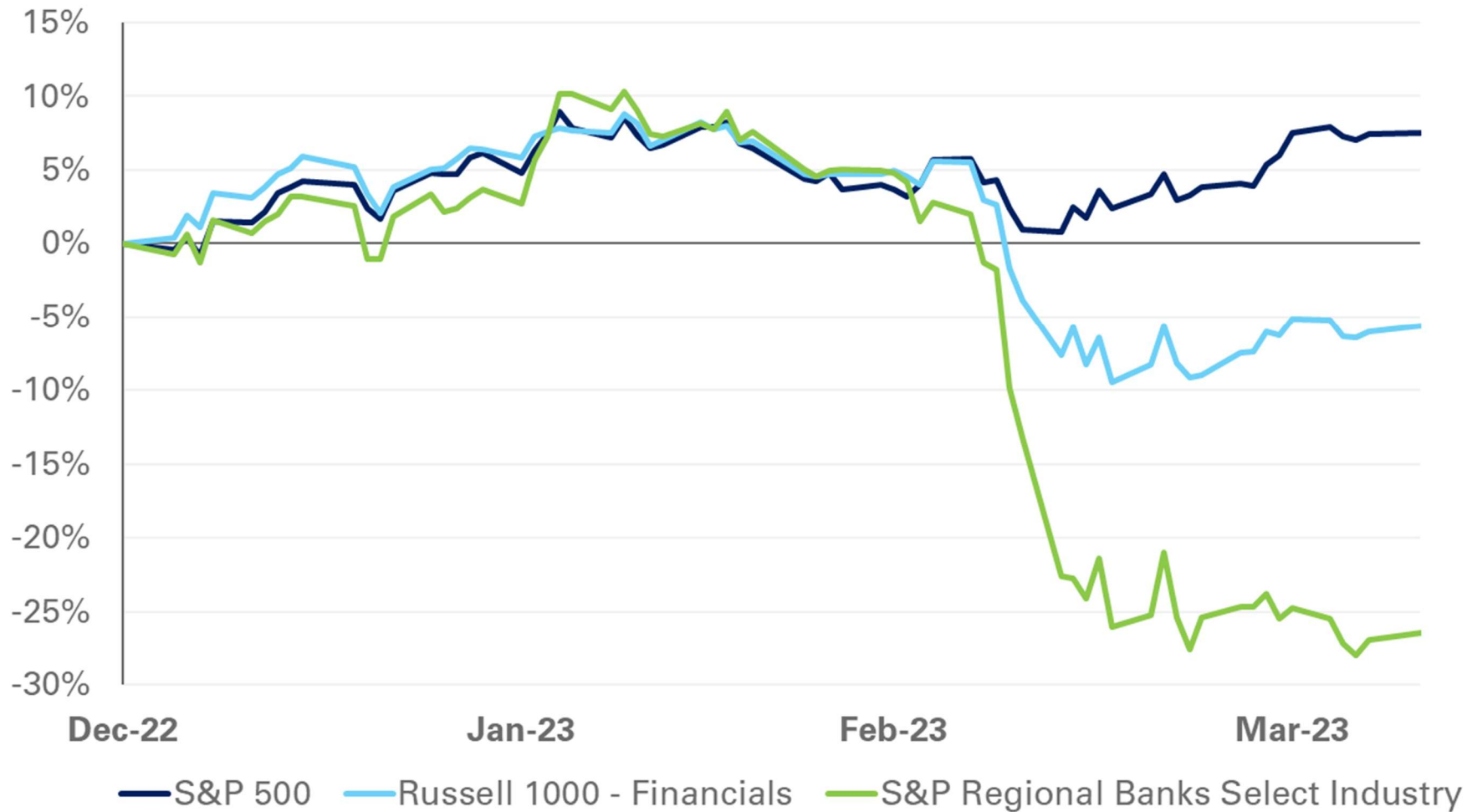
6-MONTH BANK CD RATE VERSUS MONEY MARKET FUND YIELD



Source: Bankrate, VMFXX, FactSet

THE FINANCIAL SECTOR UNDERPERFORMED

2023 CUMULATIVE TOTAL RETURNS



Sources: S&P, Russell, FactSet

U.S. ECONOMIC OUTLOOK



The market is struggling to discount the forward path for the U.S. economy given diverging economic data points



Interest rate-sensitive sectors of the economy are realizing the impact of tighter monetary policy – stoking broad recession fears



Resilient data from the services sector and the labor market continue to underpin “no landing” and “soft landing” outcomes

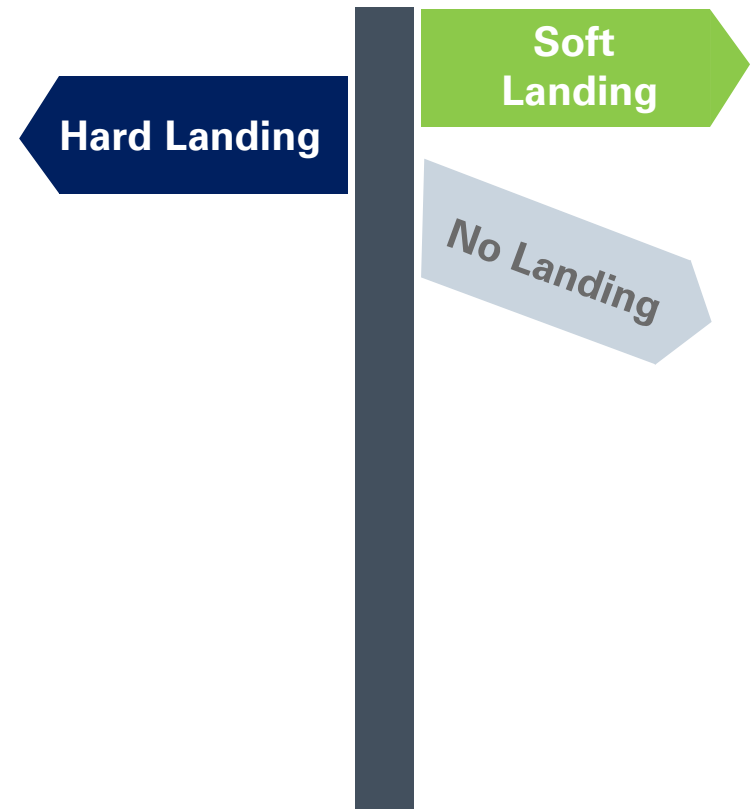


The credit lending impact from banking sector stress is still being realized – this will be a key determinant of the landing path

A DATA CONUNDRUM

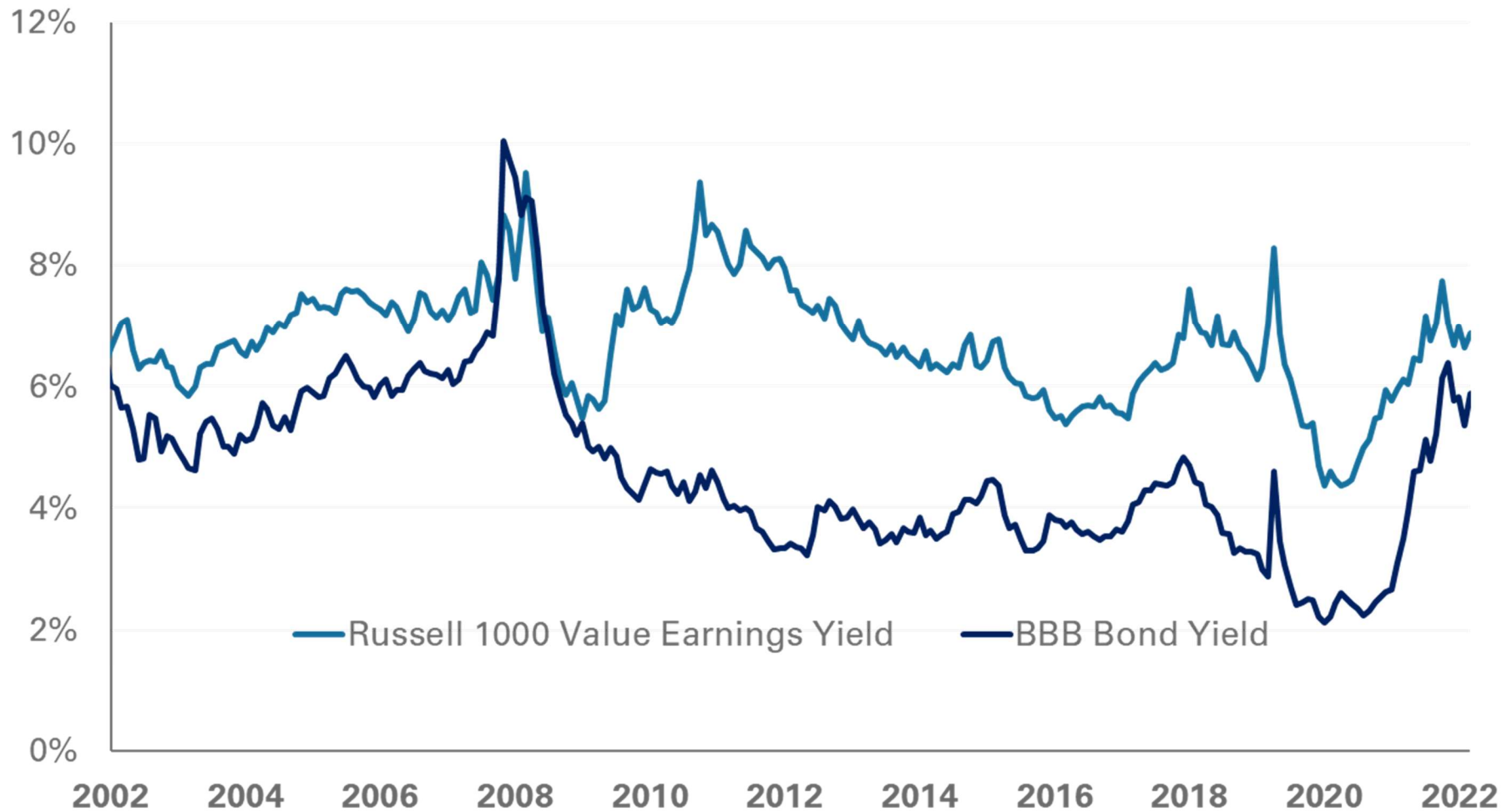
THE MARKET IS DIGESTING THREE ECONOMIC OUTCOMES

Investor Sentiment	No Landing
Labor Market	No Landing
Economic Growth	Soft Landing
Inflation	No Landing
Consumer Spending	Soft Landing
Fed Funds Expectations	Hard Landing
FOMC Expectations	Soft Landing
Interest Rates	Soft Landing
Manufacturing Sector	Hard Landing
Services Sector	No Landing
Commercial Real Estate	Hard Landing



LARGE-CAP VALUE IS PREFERRED EQUITY PROFILE

RUSSELL 1000 VALUE EARNINGS YIELD AND BBB BOND YIELD



Sources: S&P, FactSet, NEPC

PORTFOLIO POSITIONING VIEWS

We recommend **holding equity exposure near strategic targets** and continue to advocate for value exposure in U.S. large-cap equities

We are **less constructive on short-term investment grade bonds** as the carry benefit versus cash has diminished

Be prepared for equity rebalance opportunities and explore the portfolio benefit of diversifying asset classes

Look to hold greater levels of portfolio liquidity and **maintain safe-haven fixed income duration** in-line with policy targets

Q1 2023 PERFORMANCE REVIEW

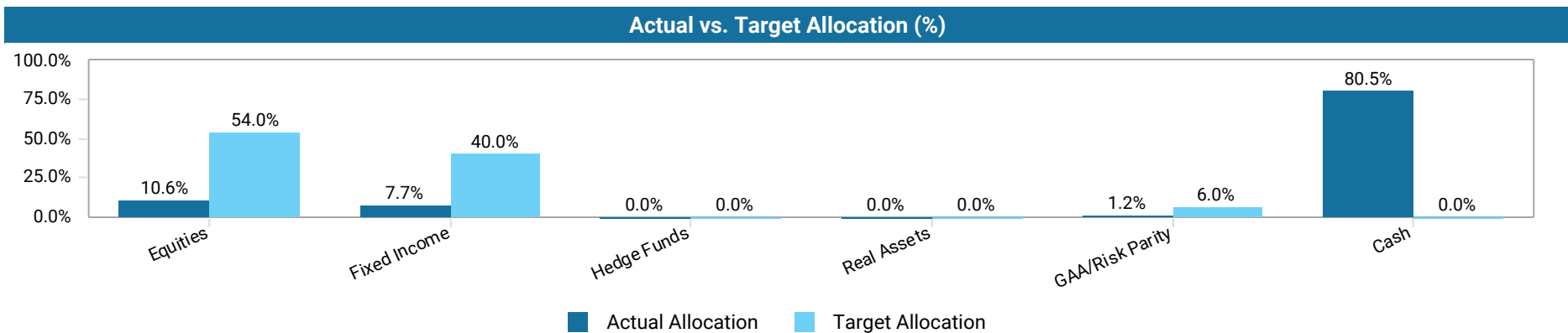


PROPRIETARY & CONFIDENTIAL

TOTAL FUND PERFORMANCE SUMMARY

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Board of Regents Total Composite	45,061,399	1.7	-0.1	4.2	1.8
<i>Allocation Index</i>		1.9	0.0	4.6	3.7

Year to Date			
	Return	Standard Deviation	Sharpe Ratio
Board of Regents Total Composite	1.7	0.6	0.4
<i>Allocation Index</i>	1.9	0.6	0.4

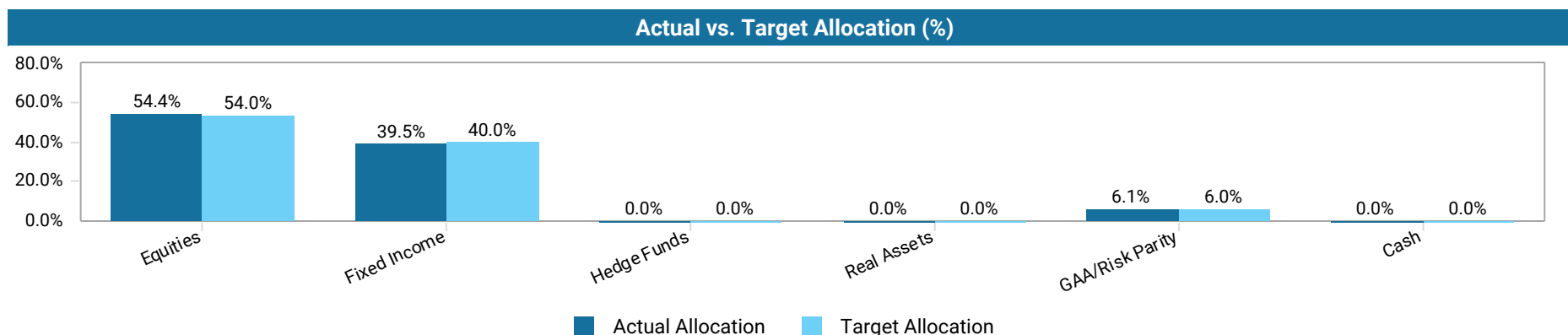


Allocation Index: Used to measure the value add from active management. Calculated as the asset weight from the prior month end multiplied by the specified market index.

LONG TERM INVESTMENT PERFORMANCE SUMMARY

	Market Value (\$)	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Long Term Investment Pool	8,800,109	4.8	-5.7	8.1	2.8
<i>Long Term Allocation Index</i>		4.4	-5.9	8.4	4.9
<i>Long Term Balanced Index</i>		5.3	-5.9	7.1	4.0

Year to Date			
	Return	Standard Deviation	Sharpe Ratio
Long Term Investment Pool	4.8	4.1	0.3
<i>Long Term Allocation Index</i>	4.4	3.9	0.3
<i>Long Term Balanced Index</i>	5.3	4.0	0.4

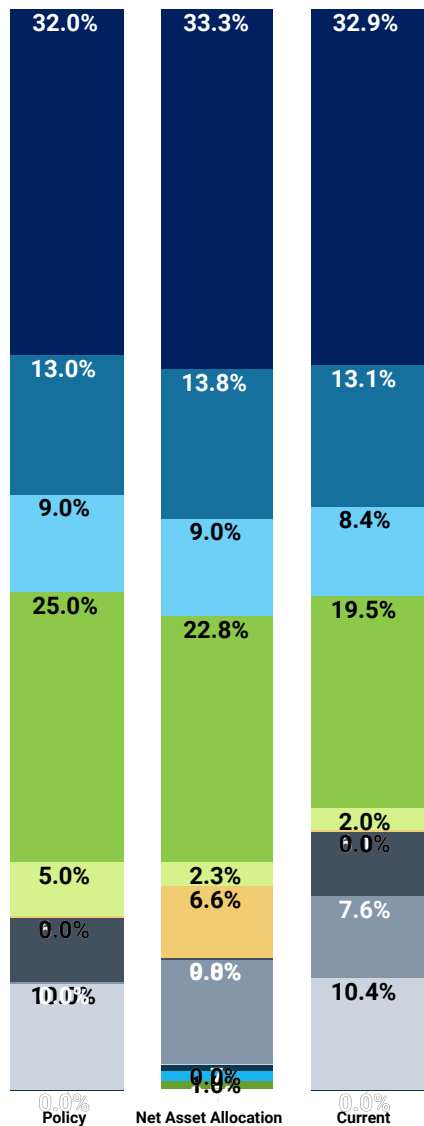


Long Term Allocation Index: Used to measure the value add from active management. Calculated as the asset weight from the prior month end multiplied by the specified market index.

Long Term Balanced Index: (54% - MSCI ACWI)(30% - Bloomberg Aggregate)(5% - Bloomberg US TIPS TR) (5% - Bloomberg US Treasury TR)(6% - PIMCO All Asset Index) as of 3/1/2021.

LONG TERM INVESTMENT ASSET ALLOCATION VS. POLICY

Asset Allocation vs. Target

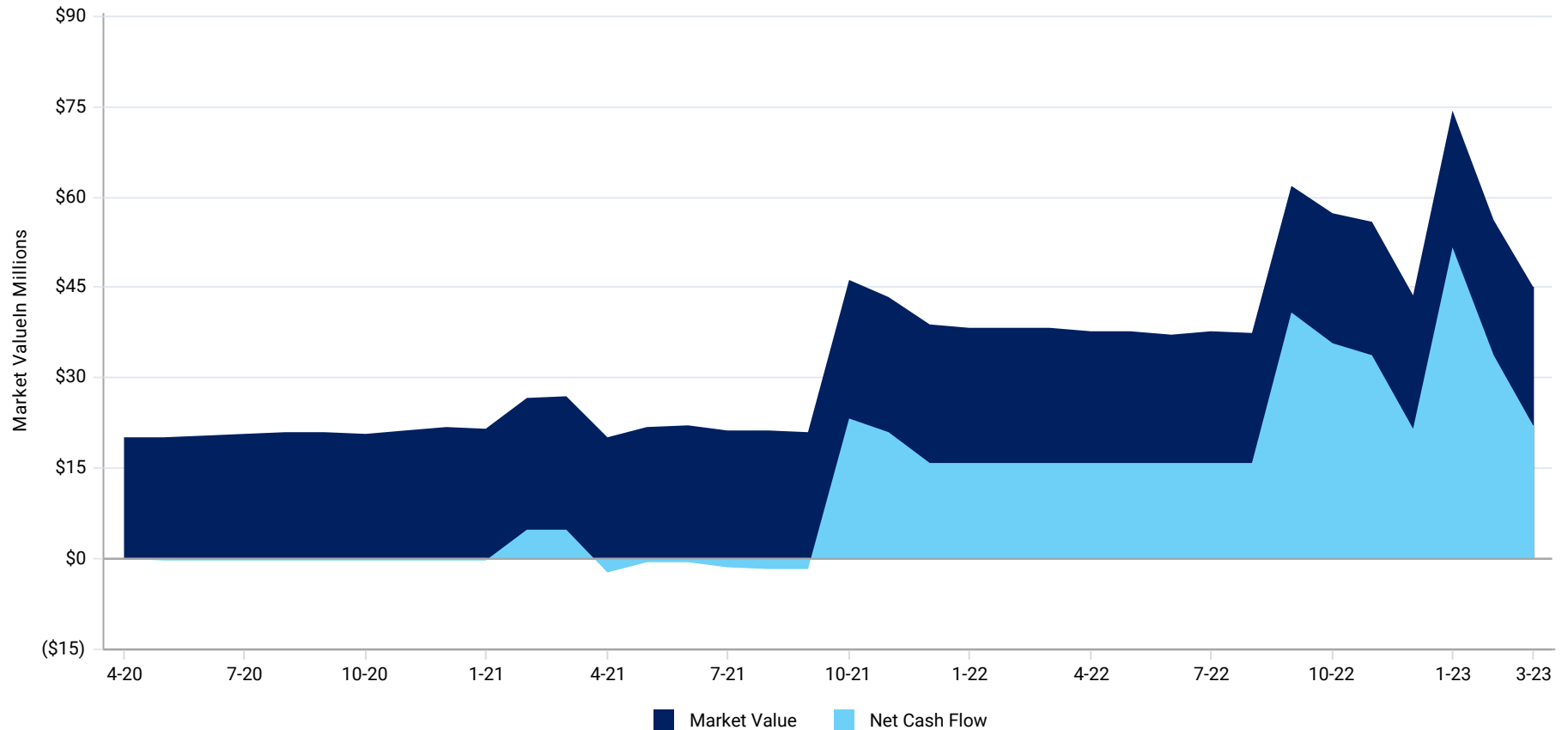


	Current (\$)	Policy (%)	Current (%)	Net Asset Allocation
Domestic Equity	2,896,669	32.0	32.9	33.3
International Equity	1,150,807	13.0	13.1	13.8
Emerging Markets Equity	740,374	9.0	8.4	9.0
Core Fixed Income	1,715,753	25.0	19.5	22.8
TIPS	175,988	5.0	2.0	2.3
Non-U.S. Fixed Income	-	0.0	0.0	6.6
GAA/Risk Parity	537,873	6.0	6.1	0.0
Treasury	670,713	0.0	7.6	9.8
Absolute Return	911,931	10.0	10.4	0.0
Hedge Funds	-	0.0	0.0	0.7
Real Assets	-	0.0	0.0	1.0
Cash	-	0.0	0.0	0.7
Total	8,800,109	100.0	100.0	100.0

The "Net Asset Allocation" analysis disaggregates the global asset allocation and the absolute return managers in order to get a better sense of the true exposures across the portfolio.

ASSET GROWTH SUMMARY

3 Years Ending March 31, 2023



	Last Three Months	1 Year	3 Years
Beginning Market Value	43,636,098	38,226,314	19,880,526
Net Cash Flow	502,433	6,303,757	22,175,155
Net Investment Change	922,867	531,328	3,005,718
Ending Market Value	45,061,399	45,061,399	45,061,399
Net Change	1,425,301	6,835,085	25,180,873

TOTAL FUND SUMMARY



PROPRIETARY & CONFIDENTIAL

TOTAL FUND PERFORMANCE DETAIL

	Allocation		Performance (%)							Inception Date
	Market Value (\$)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)		
Board of Regents Total Composite	45,061,399	100.0	1.7	-0.1	4.2	1.8	2.7	4.1	Apr-09	
<i>Allocation Index</i>			<u>1.9</u>	<u>0.0</u>	<u>4.6</u>	<u>3.7</u>	-	-		
Short Term Investment Pool	36,261,290	80.5	1.0	2.4	0.8	1.1	0.6	0.5	Apr-09	
<i>90 Day U.S. Treasury Bill</i>			<u>1.1</u>	<u>2.5</u>	<u>0.9</u>	<u>1.4</u>	<u>0.9</u>	<u>0.6</u>		
Northern Inst Govt Select MMKT	10,927,544	24.3	1.1	2.3	0.8	0.8	0.4	0.3	Nov-09	
<i>90 Day U.S. Treasury Bill</i>			<u>1.1</u>	<u>2.5</u>	<u>0.9</u>	<u>1.4</u>	<u>0.9</u>	<u>0.7</u>		
Bank of Ann Arbor T-Bills	25,333,746	56.2	1.0	1.4	0.5	0.9	0.5	0.4	Nov-09	
<i>90 Day U.S. Treasury Bill</i>			<u>1.1</u>	<u>2.5</u>	<u>0.9</u>	<u>1.4</u>	<u>0.9</u>	<u>0.7</u>		
Long Term Investment Pool	8,800,109	19.5	4.8 (38)	-5.7 (64)	8.1 (74)	2.8 (89)	4.0 (82)	4.8 (93)	Apr-09	
<i>Long Term Allocation Index</i>			<u>4.4 (53)</u>	<u>-5.9 (69)</u>	<u>8.4 (71)</u>	<u>4.9 (51)</u>	-	-		
<i>Long Term Balanced Index</i>			<u>5.3 (21)</u>	<u>-5.9 (67)</u>	<u>7.1 (80)</u>	<u>4.0 (76)</u>	-	-		
<i>InvMetrics All E&F < \$50M Median</i>			4.5	-5.3	10.0	4.9	5.8	8.1		
Total Equity	4,787,851	10.6	6.7 (51)	-7.3 (61)	14.7 (55)	5.6 (66)	-	7.0 (49)	Jan-14	
<i>MSCI AC World Index (Net)</i>			<u>7.3 (43)</u>	<u>-7.4 (61)</u>	<u>15.4 (48)</u>	<u>6.9 (49)</u>	<u>8.1 (52)</u>	<u>7.1 (48)</u>		
<i>eV All Global Equity Median</i>			6.7	-6.4	15.1	6.9	8.1	7.0		
Fidelity Large Cap Value - FLCOX	866,282	1.9	1.0 (34)	-	-	-	-	-0.3 (67)	May-22	
<i>Russell 1000 Value Index</i>			<u>1.0 (34)</u>	<u>-5.9 (73)</u>	<u>17.9 (71)</u>	<u>7.5 (64)</u>	<u>9.1 (60)</u>	<u>-0.3 (67)</u>		
<i>Large Value Median</i>			0.2	-4.8	19.1	8.0	9.4	0.4		
SEG Baxter	188,952	0.4	8.9 (32)	-4.4 (49)	8.7 (89)	3.5 (37)	-	4.5 (49)	Jul-17	
<i>MSCI AC World ex USA (Net)</i>			<u>6.9 (67)</u>	<u>-5.1 (55)</u>	<u>11.8 (67)</u>	<u>2.5 (62)</u>	<u>4.2 (85)</u>	<u>3.9 (68)</u>		
<i>eV All ACWI ex-US Equity Median</i>			7.8	-4.6	12.9	3.0	5.3	4.5		
MFS Instl International Equity	961,856	2.1	10.0 (14)	-	-	-	-	6.9 (17)	May-22	
<i>MSCI EAFE Index</i>			<u>8.6 (30)</u>	<u>-0.9 (35)</u>	<u>13.5 (40)</u>	<u>4.0 (19)</u>	<u>5.5 (18)</u>	<u>5.9 (30)</u>		
<i>Foreign Large Blend Median</i>			7.9	-2.3	13.0	2.9	4.8	4.3		
Acadian Emerging Markets Equity	740,374	1.6	7.7 (9)	-12.5 (85)	11.8 (37)	0.4 (39)	-	3.2 (39)	Oct-14	
<i>MSCI Emerging Markets (Net)</i>			<u>4.0 (70)</u>	<u>-10.7 (70)</u>	<u>7.8 (69)</u>	<u>-0.9 (68)</u>	<u>2.0 (69)</u>	<u>2.2 (67)</u>		
<i>eV Emg Mkts Equity Median</i>			4.8	-9.1	9.8	0.0	2.6	2.8		
Vanguard Total Stock Market VIPERs - VTI	2,030,387	4.5	7.2 (30)	-8.8 (61)	18.3 (51)	10.3 (27)	-	-	Nov-16	
<i>Russell 3000 Index</i>			<u>7.2 (30)</u>	<u>-8.6 (59)</u>	<u>18.5 (50)</u>	<u>10.5 (25)</u>	<u>11.7 (25)</u>	<u>12.3 (30)</u>		
<i>eV All US Equity Median</i>			4.6	-7.7	18.4	8.5	10.1	10.7		

TOTAL FUND PERFORMANCE DETAIL

	Allocation		Performance (%)							Inception Date
	Market Value (\$)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)		
Total Fixed	3,474,385	7.7	2.6 (62)	-3.4 (31)	0.1 (62)	0.6 (58)	-	1.8 (52)	Jan-14	
<i>Blmbg. U.S. Aggregate Index</i>			<u>3.0</u> (49)	<u>-4.8</u> (45)	<u>-2.8</u> (87)	<u>0.9</u> (52)	<u>1.4</u> (56)	<u>1.7</u> (53)		
<i>eV All Global Fixed Inc Median</i>			2.9	-5.4	1.5	1.0	1.8	2.0		
BlackRock Strategic Income Opportunities Fund - BSIX	911,931	2.0	1.6 (99)	-1.3 (4)	3.4 (2)	2.2 (12)	-	2.4 (17)	Oct-14	
<i>Blmbg. U.S. Aggregate Index</i>			<u>3.0</u> (74)	<u>-4.8</u> (36)	<u>-2.8</u> (100)	<u>0.9</u> (86)	<u>1.4</u> (93)	<u>1.4</u> (91)		
<i>eV US Core Plus Fixed Inc Median</i>			3.2	-5.1	-0.7	1.3	1.9	1.8		
Baird Core Bond - BAGIX	1,715,753	3.8	3.1 (50)	-4.7 (42)	-2.0 (54)	1.2 (46)	-	1.5 (34)	Dec-14	
<i>Blmbg. U.S. Aggregate Index</i>			<u>3.0</u> (64)	<u>-4.8</u> (50)	<u>-2.8</u> (90)	<u>0.9</u> (75)	<u>1.4</u> (74)	<u>1.2</u> (76)		
<i>eV US Core Fixed Inc Median</i>			3.1	-4.8	-1.9	1.1	1.6	1.4		
Vanguard Intermediate-Term Treasury ETF - VGIT	670,713	1.5	2.9 (7)	-2.9 (86)	-	-	-	-	Apr-21	
<i>Blmbg. U.S. Treasury: Intermediate</i>			<u>2.3</u> (67)	<u>-1.5</u> (18)	<u>-2.3</u> (95)	<u>1.1</u> (83)	<u>0.9</u> (93)	<u>-2.9</u> (30)		
<i>eV US Interm Duration Fixed Inc Median</i>			2.3	-2.0	-0.9	1.4	1.4	-3.0		
Fidelity Inflation-Protected Bond Index Fund - FIPDX	175,988	0.4	3.4 (29)	-6.2 (69)	-	-	-	-2.5 (63)	Jun-21	
<i>Blmbg. U.S. TIPS</i>			<u>3.3</u> (42)	<u>-6.1</u> (60)	<u>1.8</u> (66)	<u>2.9</u> (47)	<u>1.5</u> (39)	<u>-2.5</u> (59)		
<i>eV US TIPS / Inflation Fixed Inc Median</i>			3.3	-6.0	2.1	2.9	1.4	-2.5		
GAA/ Risk Parity	537,873	1.2	3.2 (68)	-6.7 (62)	-0.4 (96)	-2.4 (94)	-	-0.8 (94)	Dec-14	
<i>eV Global TAA Median</i>			3.9	-6.0	7.3	3.1	4.2	3.6		
PIMCO All Asset - PAAIX	537,873	1.2	3.2 (68)	-6.7 (62)	-	-	-	-	Apr-21	
<i>PIMCO All Asset Index</i>			<u>3.4</u> (62)	<u>-4.6</u> (28)	<u>1.7</u> (89)	<u>2.6</u> (60)	<u>2.7</u> (78)	<u>-2.6</u> (60)		
<i>eV Global TAA Median</i>			3.9	-6.0	7.3	3.1	4.2	-2.1		

-Allocation Index: Used to measure the value add from active management. Calculated as the asset weight from the prior month end multiplied by the specified market index.

-Long-Term Balanced Index: (54% - MSCI ACWI)(30% - Bloomberg Aggregate)(5% - Bloomberg US TIPS TR)(5% - Bloomberg US Treasury TR)(6% - PIMCO All Asset Index) as of 3/1/2021.

-PIMCO All Asset Index: (40% - Bloomberg Aggregate)(30% - Bloomberg US TIPS 1-10 Yr)(10% - S&P 500)(10% - Bloomberg High Yield)(10% - JP Morgan EMBI+).

CASH FLOW SUMMARY BY MANAGER

	1 Quarter Ending March 31, 2023					
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flows	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$687,503	-	-\$1,209	-\$1,209	\$54,080	\$740,374
Baird Core Bond - BAGIX	\$1,664,843	-	-	-	\$50,909	\$1,715,753
Bank of Ann Arbor T-Bills	\$25,076,536	-	-	-	\$257,209	\$25,333,746
BlackRock Strategic Income Opportunities Fund - BSIX	\$897,321	-	-	-	\$14,611	\$911,931
Fidelity Inflation-Protected Bond Index Fund - FIPDX	\$170,135	-	-	-	\$5,853	\$175,988
Fidelity Large Cap Value - FLCOX	\$857,591	-	-	-	\$8,692	\$866,282
MFS Intl International Equity	\$874,810	-	-	-	\$87,046	\$961,856
Northern Inst Govt Select MMKT	\$10,057,012	\$30,116,321	-\$29,502,208	\$614,113	\$256,419	\$10,927,544
PIMCO All Asset - PAAIX	\$521,228	-	-	-	\$16,645	\$537,873
SEG Baxter	\$173,491	-	-	-	\$15,461	\$188,952
US Treasury	\$99,512	-	-\$100,000	-\$100,000	\$488	-
Vanguard Intermediate-Term Treasury ETF - VGIT	\$654,157	-	-\$2,650	-\$2,650	\$19,205	\$670,713
Vanguard Total Stock Market VIPERs - VTI	\$1,901,958	-	-\$7,821	-\$7,821	\$136,250	\$2,030,387
Total	\$43,636,098	\$30,116,321	-\$29,613,888	\$502,433	\$922,867	\$45,061,399

INVESTMENT MANAGER - DUE DILIGENCE STATUS

Investment Options	Manager Changes/ Announcement	NEPC Due Diligence Committee Recommendations
PIMCO All Asset - PAAIX	Litigation Update	Watch

INVESTMENT MANAGER - DUE DILIGENCE STATUS

Investment Options	Manager Changes/ Announcement	NEPC Due Diligence Committee Recommendations
PIMCO All Asset - PAAIX	<p>On 2/13/2023, PIMCO provided NEPC with an update on the various workplace discrimination lawsuits that have been filed against the firm in recent years. PIMCO noted that the complaints from 2019 and 2020 have officially been “resolved and dismissed with prejudice”. However, they were not able to provide any real specifics, so there is no transparency around fault. While these original claims have been resolved, there was another filing by two former employees in May 2022 that remains outstanding and appears to still only be in the preliminary stages of the litigation process. PIMCO noted that the May 2022 matter is an employment related claim also but could not offer any other specific information. NEPC will continue to engage with the firm as it progresses through these issues.</p>	Watch

ASSET ALLOCATION REVIEW



PROPRIETARY & CONFIDENTIAL

CORE ASSET CLASS RETURN ASSUMPTIONS

	Asset Class	03/31/23 10-Year Return	03/31/22 10-Year Return	Delta
	Cash	3.8%	2.4%	+1.4%
	U.S. Inflation	2.5%	2.5%	-
Equity	U.S. Large-Cap Equity	4.9%	4.7%	+0.2%
	Non-U.S. Developed Equity	5.0%	5.6%	-0.6%
	Emerging Market Equity	9.3%	8.5%	+0.8%
	Global Equity*	5.9%	5.8%	+0.1%
	Private Equity*	9.2%	9.0%	+0.2%
Fixed Income	US Treasury Bond	3.9%	2.6%	+1.3%
	US Municipal Bond	4.1%	3.1%	+1.0%
	US Aggregate Bond*	4.5%	3.1%	+1.4%
	US TIPS	4.1%	2.1%	+2.0%
	US High Yield Corporate Bond	6.9%	4.5%	+2.4%
	Private Debt*	8.6%	7.3%	+1.3%
Real Assets	Commodity Futures	3.9%	1.7%	+2.2%
	REIT	6.3%	5.1%	+1.2%
	Gold	4.8%	3.9%	+0.9%
	Real Estate - Core	4.5%	4.8%	-0.3%
	Private Real Assets - Infrastructure	6.6%	5.4%	+1.2%
Multi-Asset	60% S&P 500 & 40% U.S. Aggregate	5.0%	4.3%	+0.7%
	60% MSCI ACWI & 40% U.S. Agg.	5.7%	5.1%	+0.6%
	Hedge Fund*	6.3%	5.0%	+1.3%

*Calculated as a blend of other asset classes



ASSET ALLOCATION – MARCH 31, 2023

Asset Class	Current Targets
Domestic Equity	32%
International Equity	13%
Emerging Markets Equity	9%
Total Equity	54%
GAA/ Risk Parity	6%
Core Fixed Income	19%
TIPS	5%
Treasury	6%
Absolute Return	10%
Total Fixed Income	40%
Cash	0%
Expected 10 Year Return	5.7%
Asset Standard Deviation	10.7%
10 Year Sharpe Ratio	0.17

- **NEPC recommends no change to asset allocation**



Note: Above analysis is based on NEPC's 3/31/2023 forward-looking capital market assumptions.



APPENDIX



TOTAL FUND PERFORMANCE DETAIL

	Allocation		Performance (%)							
	Market Value (\$)	% of Portfolio	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Inception (%)	Inception Date
Board of Regents Total Composite	34,916,010	100.0	0.5	2.3	3.0	1.7	3.6	1.9	4.1	Apr-09
<i>Allocation Index*</i>			<i>0.4</i>	<i>2.3</i>	<i>3.0</i>	<i>1.9</i>	<i>3.7</i>	<i>3.8</i>	<i>-</i>	
Short Term Investment Pool	26,019,167	74.5	0.4	1.4	2.6	2.7	1.0	1.1	0.5	Apr-09
<i>90 Day U.S. Treasury Bill</i>			<i>0.3</i>	<i>1.4</i>	<i>2.7</i>	<i>2.8</i>	<i>1.0</i>	<i>1.4</i>	<i>0.7</i>	
Northern Inst Govt Select MMKT	598,913	1.7	0.4	1.5	2.6	2.7	1.0	0.9	0.3	Nov-09
<i>90 Day U.S. Treasury Bill</i>			<i>0.3</i>	<i>1.4</i>	<i>2.7</i>	<i>2.8</i>	<i>1.0</i>	<i>1.4</i>	<i>0.7</i>	
Bank of Ann Arbor T-Bills	25,420,254	72.8	0.3	1.4	1.8	1.8	0.6	1.0	0.4	Nov-09
<i>90 Day U.S. Treasury Bill</i>			<i>0.3</i>	<i>1.4</i>	<i>2.7</i>	<i>2.8</i>	<i>1.0</i>	<i>1.4</i>	<i>0.7</i>	

*Allocation Index: Used to measure the value add from active management. Calculated as the asset weight from the prior month end multiplied by the specified market index returns.

Returns are net of fees.

TOTAL FUND PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	Policy (%)	1 Mo (%)	YTD (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	Inception (%)	Inception Date
Long Term Investment Pool	8,896,843	100.0	100.0	1.1	6.0	6.6	0.8	6.6	3.0	4.8	Apr-09
<i>Long Term Allocation Index*</i>				0.9	5.4	5.8	0.8	6.3	5.1	-	
<i>Long Term Balanced Index*</i>				1.0	6.4	6.6	1.0	5.4	4.2	5.2	
Total Equity	4,861,826	54.6	54.0	1.6	8.3	11.4	1.9	11.7	5.7	7.1	Jan-14
<i>MSCI AC World Index (Net)</i>				1.4	8.8	11.3	2.1	12.0	7.0	7.2	
Fidelity Large Cap Value - FLCOX	879,030	9.9		1.5	2.5	8.8	1.2	-	-	1.2	May-22
<i>Russell 1000 Value Index</i>				1.5	2.5	8.8	1.2	14.4	7.7	1.2	
SEG Baxter	190,266	2.1		0.7	9.7	10.8	2.7	6.4	3.3	4.6	Jul-17
<i>MSCI AC World ex USA (Net)</i>				1.7	8.7	11.9	3.0	9.7	2.5	4.1	
MFS Instl International Equity	994,498	11.2		3.4	13.7	20.7	10.5	-	-	10.5	May-22
<i>MSCI EAFE Index</i>				2.9	11.8	19.1	9.0	12.2	4.1	9.0	
Acadian Emerging Markets Equity	745,759	8.4		0.8	8.6	5.1	-6.1	9.1	0.7	3.3	Oct-14
<i>MSCI Emerging Markets (Net)</i>				-1.1	2.8	-0.3	-6.5	4.3	-1.0	2.0	
Vanguard Total Stock Market VIPERs - VTI	2,052,272	23.1		1.1	8.3	10.8	1.4	14.0	10.5	11.7	Dec-16
<i>Russell 3000 Index</i>				1.1	8.3	10.9	1.5	14.1	10.6	11.7	
Total Fixed	3,493,152	39.3	40.0	0.6	3.2	1.1	-0.3	-0.6	0.8	1.8	Jan-14
<i>Blmbg. U.S. Aggregate Index</i>				0.6	3.6	0.5	-0.4	-3.1	1.2	1.7	
BlackRock Strategic Income Opportunities Fund - BSIX	915,368	10.3		0.4	2.0	1.8	-0.4	2.6	2.4	2.4	Oct-14
<i>Blmbg. U.S. Aggregate Index</i>				0.6	3.6	0.5	-0.4	-3.1	1.2	1.4	
Baird Core Bond - BAGIX	1,727,416	19.4		0.7	3.8	1.0	-0.2	-2.6	1.4	1.6	Dec-14
<i>Blmbg. U.S. Aggregate Index</i>				0.6	3.6	0.5	-0.4	-3.1	1.2	1.2	
Vanguard Intermediate-Term Treasury ETF - VGIT	674,180	7.6		0.7	3.7	0.3	0.3	-	-	-4.1	Jun-21
<i>Blmbg. U.S. Treasury: Intermediate</i>				0.5	2.8	0.7	0.6	-2.2	1.3	-3.1	
Fidelity Inflation-Protected Bond Index Fund - FIPDX	176,188	2.0		0.1	3.6	0.1	-4.0	-	-	-2.4	Jun-21
<i>Blmbg. U.S. TIPS</i>				0.1	3.5	0.1	-4.0	0.9	3.0	-2.3	
GAA/ Risk Parity	541,865	6.1	6.0	0.7	4.0	4.7	-2.4	0.3	-2.3	-0.7	Dec-14
PIMCO All Asset - PAAIX	541,865	6.1		0.7	4.0	4.7	-2.4	-	-	-2.6	Jun-21
<i>PIMCO All Asset Index*</i>				0.6	4.0	3.0	-0.3	0.9	2.8	-3.5	

*Fiscal year begins July 1.

*Long Term Allocation Index: Used to measure the value add from active management. Calculated as the asset weight from the prior month end multiplied by the specified market index.

*Long-Term Balanced Index: (54% - MSCI ACWI)(30% - Bloomberg US Aggregate)(5% - Bloomberg US TIPS)(5% - Bloomberg US Treasury Int)(6% - PIMCO All Asset Index) as of June 2021.

*PIMCO All Asset Index: 40% Bloomberg US Aggregate, 30% Bloomberg US Tips, 10% Bloomberg High Yield, 10% JPM EMBI+, 10% S&P 500.

CASH FLOW SUMMARY BY MANAGER

1 Month Ending April 30, 2023							
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flows	Fees	Net Investment Change	Ending Market Value
Acadian Emerging Markets Equity	\$740,374	-	-\$1,349	-\$1,349	-\$463	\$6,734	\$745,759
Baird Core Bond - BAGIX	\$1,715,753	-	-	-	-\$429	\$11,663	\$1,727,416
Bank of Ann Arbor T-Bills	\$25,333,746	-	-	-	-	\$86,508	\$25,420,254
BlackRock Strategic Income Opportunities Fund - BSIIX	\$911,931	-	-	-	-\$494	\$3,437	\$915,368
Fidelity Inflation-Protected Bond Index Fund - FIPDX	\$175,988	-	-	-	-	\$200	\$176,188
Fidelity Large Cap Value - FLCOX	\$866,282	-	-	-	-	\$12,748	\$879,030
MFS Intl International Equity	\$961,856	-	-	-	-	\$32,642	\$994,498
Northern Inst Govt Select MMKT	\$10,927,544	\$1,394	-\$10,350,331	-\$10,348,937	-	\$20,306	\$598,913
PIMCO All Asset - PAAIX	\$537,873	-	-	-	-\$531	\$3,992	\$541,865
SEG Baxter	\$188,952	-	-	-	-\$236	\$1,315	\$190,266
Vanguard Intermediate-Term Treasury ETF - VGIT	\$670,713	-	-\$1,394	-\$1,394	-\$28	\$4,861	\$674,180
Vanguard Total Stock Market VIPERs - VTI	\$2,030,387	-	-	-	-\$85	\$21,886	\$2,052,272
Total	\$45,061,399	\$1,394	-\$10,353,074	-\$10,351,680	-\$2,266	\$206,291	\$34,916,010

DUE DILIGENCE MONITOR

NEPC Due Diligence Status Key

No Action	Informational items have surfaced; no action is recommended.
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.
Hold	Serious issues have surfaced to be concerned over; manager cannot be in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.
Client Review	Very serious issues have surfaced with a manager; manager cannot be in future searches unless a client specifically requests. Current clients must be advised to review the manager.
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot be in future searches unless a client specifically requests. Current clients must be advised to replace the manager.

NEPC Due Diligence Rating Key

1	A high conviction investment product. Product has a clear and economically-grounded investment thesis, and is managed by an investment team that is sufficiently resourced and incented to execute on the thesis.
2	NEPC has a positive view of the strategy. Strategy has a compelling and sound investment thesis. The manager is sufficiently resourced and incented to execute on the thesis. Strengths outweigh the weaknesses, but the strategy does not meet all requirements for a 1 rating.
3	A satisfactory investment product. The strategy lacks a compelling investment thesis, however there are no significant concerns around the manager's viability.
4	The strategy may have an unclear or ambiguous investment thesis or the manager may lack the ability to execute on the stated thesis. The strategy likely has strengths and weaknesses and the weaknesses may outweigh the strengths.
5	A strategy that lacks an investment thesis or NEPC has no confidence in the manager's ability to execute on the thesis, and/or the investment firm may not be viable. Serious issues have been identified with an investment manager or product. This rating aligns with a Terminate Due Diligence status for client-owned products.
NR	Due diligence has not been sufficiently completed on the product or manager.

DISCLAIMERS

Past performance is no guarantee of future results.

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