# QUARTER ENDING JUNE 30, 2020 INVESTMENT PERFORMANCE ANALYSIS

#### **EASTERN MICHIGAN BOARD OF REGENTS**

August 12, 2020
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# NEPC UPDATE

NEPC, LLC —

#### 2020 SECOND QUARTER HAPPENINGS AT NEPC

#### **NEPC INSIGHTS**

- · Taking Stock: NEPC's 2020 First Quarter Pension Monitor
- Taking Stock: Operational Impact Survey in the Time of COVID-19
- Taking Stock: Oil and Gas Struggle as COVID-19 Crushes Demand
- Taking Stock: Endowments and Foundations Flash Poll
- Charting a Course Forward: NEPC's Updated 2020 Asset Allocation Letter
- Taking Stock: Does TALF Present an Investment Opportunity?
- 2020 First Quarter Market Thoughts
- Taking Stock: NEPC's April 2020 Pension Monitor
- Taking Stock: Are Bonds Still an Effective Portfolio Diversifier?
- NEPC Healthcare Flash Poll Battling COVID-19: Impact and Actions
- Taking Stock: The Faceoff Between Value and Growth (Part 1): Sector Dynamics
- Taking Stock: What About the Denominator Effect from Private Markets?
- Taking Stock: NEPC's May 2020 Pension Monitor
- NEPC Statement on Diversity and Inclusion
- Healthcare Strategic Investing After COVID-19
- NEPC's CIO Conversations Recap: George Walker
- NEPC's CIO Conversations Recap: Recovering From The COVID-19 Crisis With J.P. Morgan's Michael Cembalest
- Taking Stock: NEPC's June 2020 Pension Monitor

To download NEPC's recent insights and webinar replays, visit: www.NEPC.com/insights



#### 2020 SECOND QUARTER HAPPENINGS AT NEPC

#### WEBINAR REPLAYS

- 10th Annual Investment Manager Webinar Replay
- NEPC's Updated Outlook and Assumptions Webinar Replay
- · NEPC's CIO Conversations: Market Impacts of COVID-19 with Jeffrey Gundlach
- NEPC's CIO Conversations: Market Impacts of COVID-19 with Bob Prince
- NEPC's CIO Conversations: Market Impacts of COVID-19 with Rajiv Jain
- NEPC's CIO Conversations: Market Impacts of COVID-19 with Rick Rieder
- NEPC's CIO Conversations: Market Impacts of COVID-19 with George Walker
- NEPC's CIO Conversations: Market Impacts of COVID-19 with Michael Cembalest
- NEPC's CIO Conversations: Market Impacts of COVID-19 with Cliff Asness
- NEPC's Taft Hartley Real Estate Webinar Replay
- NEPC Perspectives on the Current Defined Benefit Environment
- NEPC's Infrastructure Webinar Replay
- Healthcare Strategic Investing Post COVID-19: Webinar Replay

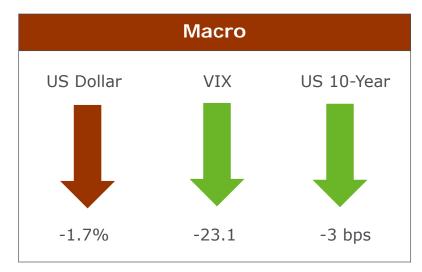
To stay up-to-date on our COVID-19 content, visit: <a href="https://info.nepc.com/covid-19">https://info.nepc.com/covid-19</a>



# QUARTERLY REVIEW

NEPC, LLC —

#### MARKET OVERVIEW





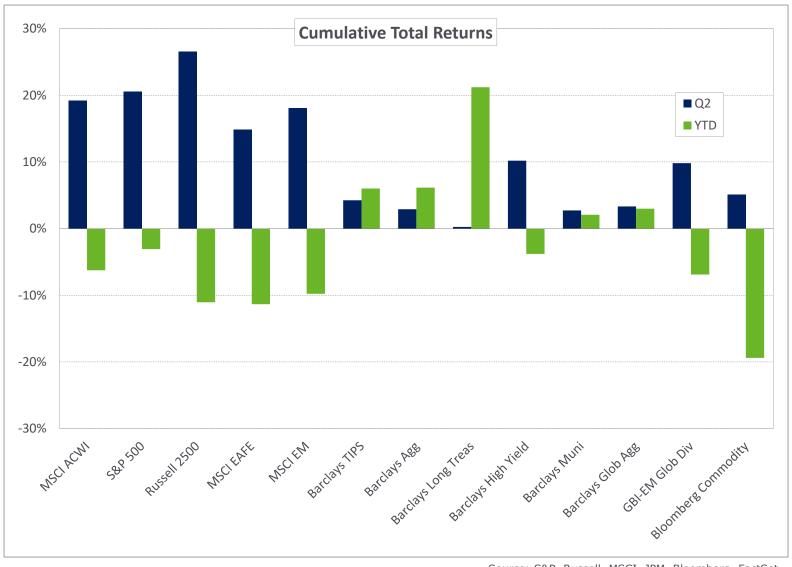




Market segment (index representation) as follows: US Dollar (DXY Index), VIX (CBOE Volatility Index), US 10-Year (US 10-Year Treasury Yield), S&P 500 (US Equity), MSCI EAFE Index (International Developed Equity), MSCI Emerging Markets (Emerging Markets Equity), US Agg (Barclays US Aggregate Bond Index), High Yield (Barclays US High Yield Index), Dollar EMD (JPM EMBI Global Diversified Index), Crude Oil (WTI Crude Oil Spot), Gold (Gold Price Spot), and REITs (NAREIT Composite Index). Source: FactSet



#### RISK ASSETS RALLIED SIGNIFICANTLY IN Q2







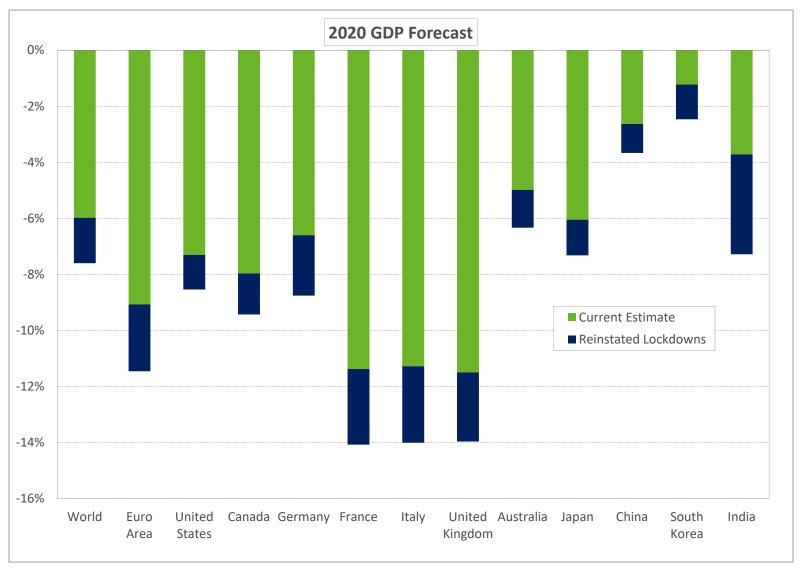
## THE ECONOMIC BACKDROP IS CHALLENGED

Metric	12/31/19	03/31/20	06/30/20	Trend
S&P 500 CY 2020 Earnings Estimate	\$177.81	\$160.40	\$126.89	
US Real GDP (QoQ%)	2.1%	-5.0%	-33.4%*	monthmen
US CY 2020 Real GDP Growth Consensus	1.8%	-0.7%	-5.2%	
US Unemployment Rate	3.5%	4.4%	11.1%	~~
Continued Claims for Unemployment	1.7M	3.5M	19.1M	
Federal Reserve Balance Sheet as % of Nominal GDP	19.2%	24.4%	32.9%	

Source: US Bureau of Labor Statistics, Federal Reserve, FactSet, NEPC \*The 06/30/20 real GDP figure represents the consensus estimate from FactSet



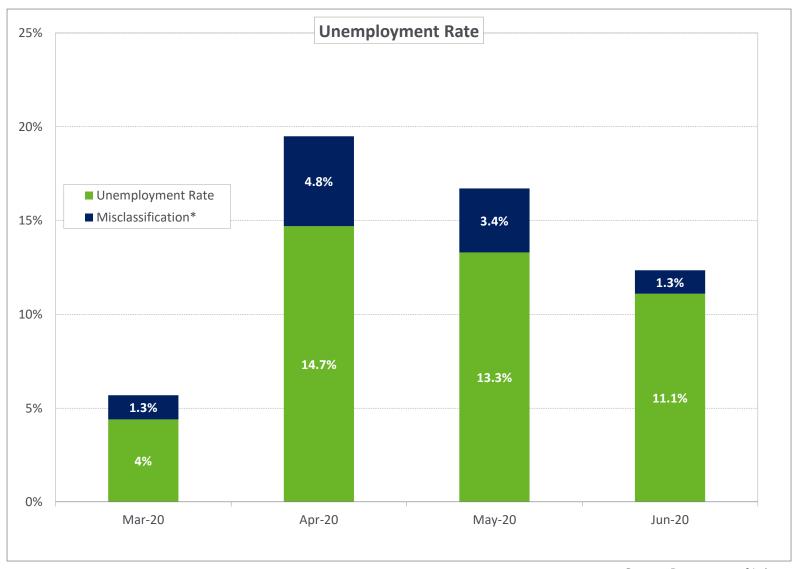
#### **COVID WEIGHS ON GROWTH FORECASTS**





Source: OECD The additional decline in economic growth from reinstated lockdowns represents a renewed outbreak of infections that forces economies to re-implement restrictions.

## **UNEMPLOYMENT MAY BE WORSE THAN REPORTED**

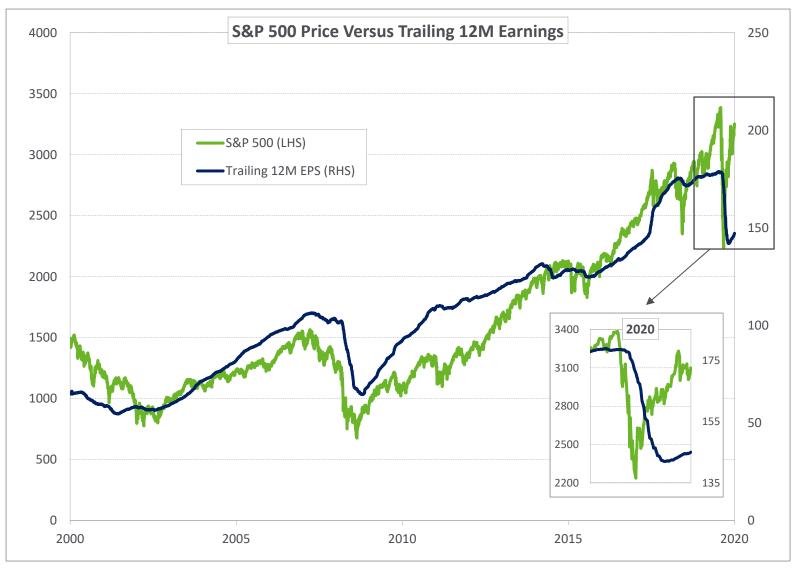




Misclassification\* represents an estimate of "unemployed on temporary leave" mislabeled as "employed but absent from work"



## **EQUITY PRICES DETACHED FROM FUNDAMENTALS**





Source: S&P, FactSet Data as of 7/20/2020

# 2020 YTD PERFORMANCE: RISK OFF, RISK ON

Risk assets rallied significantly in Q2 - The opposite of the Q1 experience



US equity performance has largely been driven by

technology and

the consumer





Source: S&P, Russell, MSCI, JPM, Bloomberg, FactSet. Data as of June 30, 2020.

#### BY THE NUMBERS: HISTORICAL PERFORMANCE

#### **Annualized Performance**

(as of 6/30/2020)

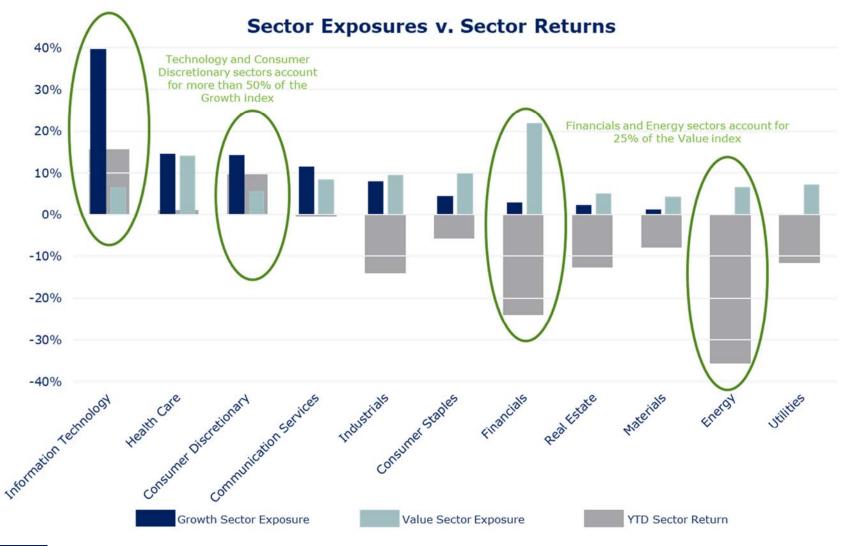
	YTD	3-Years	5-Years	10-Years	20-Years	40-Years
Russell 1000 Growth Index	9.8	19.0	15.9	17.2	5.5	11.4
Russell 1000 Value Index	-16.3	1.8	4.6	10.4	6.3	11.1
Difference	26.1	17.2	11.3	6.8	-0.9	0.3





Notes: Data sourced from eVestment alliance and is as of June 30, 2020. Growth represented by the Russell 1000 Growth Index and Value represented by the Russell 1000 Value Index.

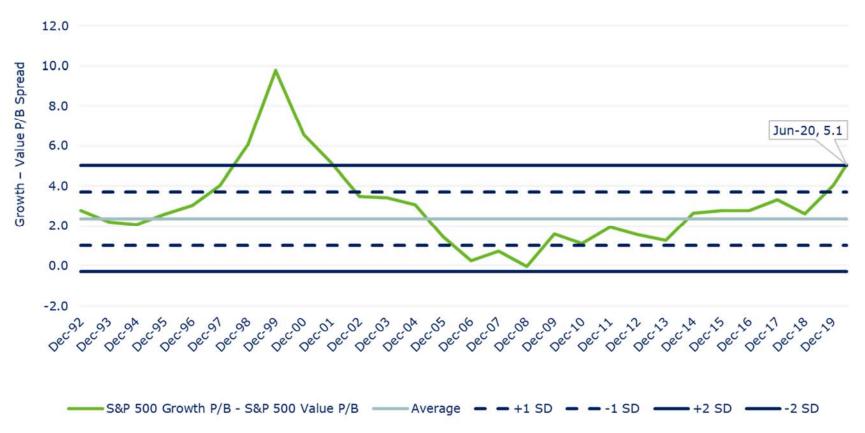
# GROWTH VERSUS VALUE <u>OR</u> TECHNOLOGY VERSUS EVERYTHING ELSE?





Notes: Data sourced from eVestment alliance and is as of June 30, 2020. Growth represented by the Russell 1000 Growth Index , Value represented by the Russell 1000 Value Index and Sector Return represented by the Russell 1000 Index.

#### VALUATION SPREAD CONTINUES TO WIDEN



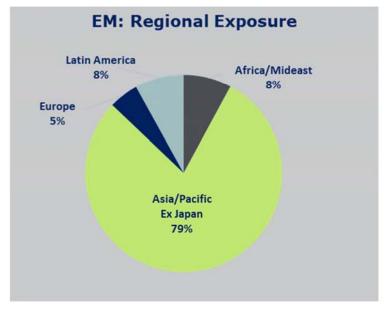


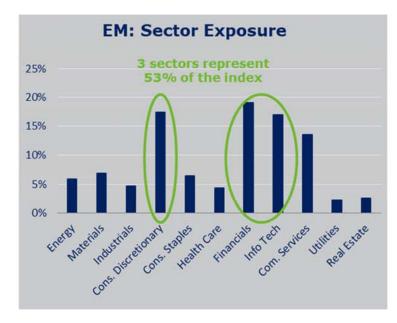


# BY THE NUMBERS: PERFORMANCE & COMPOSITION

#### **Rolling 10-Year Returns**









Source: MSCI, FactSet, NEPC. Regional and Sector exposure represented by MSCI Emerging Markets Index. Data as of 6/30/2020

# EMERGING MARKET EQUITY: WHERE DO WE GO FROM HERE?

China will be a key driver of emerging market equity performance going forward



Conviction in EME is centered around Asia and the growth of the local consumer

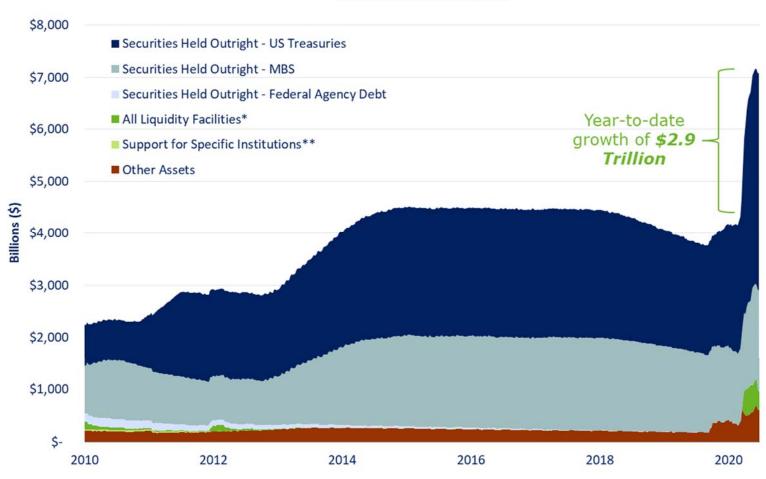
Company	Country	Sector	Weight
Alibaba Group (ADR)	China	Consumer Discretionary	7.0%
Tencent Holdings Ltd.	China	Communication Services	6.4%
Taiwan Semiconductor Manufacturing	Taiwan	Information Technology	4.5%
Samsung Electronics	South Korea	Information Technology	3.6%
Naspers Limited	South Africa	Consumer Discretionary	1.4%
·		Top 5 Holding	js: 22.9%



Source: MSCI, FactSet, NEPC. Regional and Holdings exposure represented by MSCI Emerging Markets Index. Data as of 6/30/2020

# FED BALANCE SHEET: RECENT GROWTH MEASURED BY TRILLIONS, NOT BILLIONS

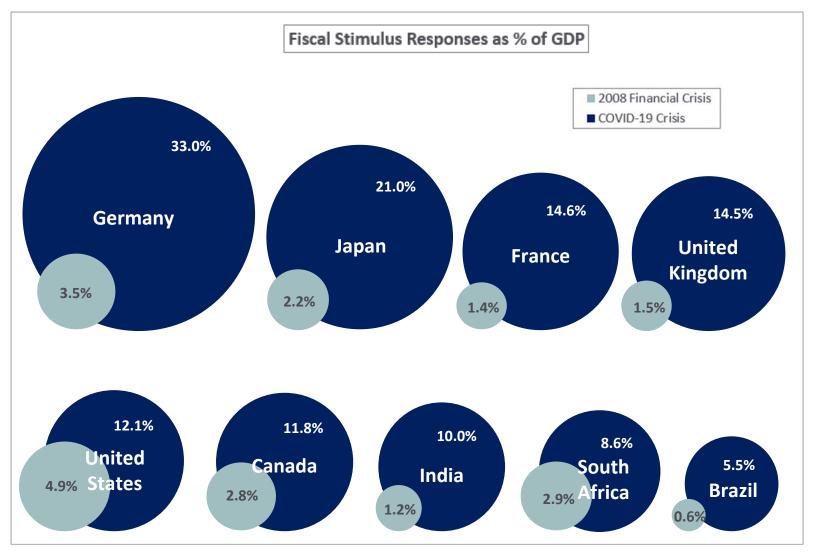
#### **Federal Reserve Assets**





Sources: Federal Reserve, FactSet, NEPC; \*All Liquidity Facilities includes term auction credit, primary credit, secondary credit, seasonal credit, Primary Dealer Credit Facility, Asset-Backed Commercial Paper, Money Market Mutual Fund Liquidity Facility, and central bank liquidity swaps; \*\*Support for Specific Institutions includes credit extended to AIG and Maiden Lane LLCs

#### THE GLOBAL FISCAL STIMULUS PICTURE





Source: IMF, McKinsey – <u>The 10 Trillion Dollar Rescue: How Governments Can Deliver Impact</u>
COVID-19 Crisis includes 2019 GDP for calculations; 2008 Financial Crisis incorporates data published by the IMF in March 2009 and includes discretionary measures announced for 2008-2010

China announced 4.5% Fiscal Stimulus in May, less than countries in chart

#### **ACTIONS FOR INVESTORS**

#### Favor US and Emerging Markets over EAFE among public equity

Encourage strategic target of 60% US, 25% EAFE, and 15% Emerging equity

#### We recommend a dedicated strategic target to US Treasuries

An allocation with size, approximately a 10% allocation, is needed to impact portfolio-level events related to market drawdowns and be a liquidity source

# For investors that set aside one quarter of spending needs in cash, we recommend moving the cash to a Treasury allocation

Maintaining adequate liquidity levels is critical as potential market dislocations can introduce bouts of illiquidity across publicly traded markets

Restructure EMD exposure to a blended hard and local currency

Remain disciplined with a portfolio rebalance approach aimed at preserving long-term strategic targets to risk assets



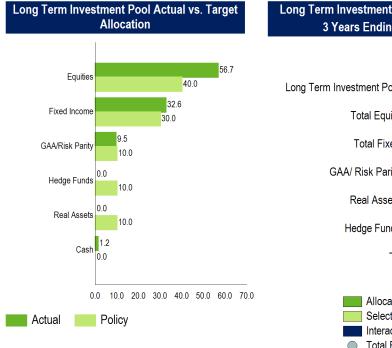
# Q2 2020 PERFORMANCE SUMMARY

NEPC, LLC —

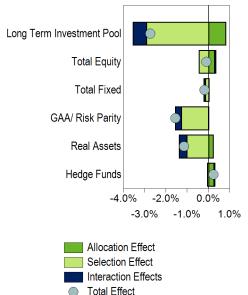
#### **TOTAL FUND PERFORMANCE SUMMARY**

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs
Board of Regents Total Composite	\$20,464,933	4.6%	-8.0%	-3.8%	2.3%	2.6%
Allocation Index		5.1%	-2.6%	2.8%	5.3%	4.5%

	Market Value	3 Mo	YTD	1 Yr	3 Yrs	5 Yrs
Long Term Investment Pool	\$8,029,210	11.5%	-7.5%	-3.2%	2.6%	3.2%
Long Term Allocation Index		9.1%	-2.4%	3.1%	5.1%	5.2%
Long Term Balanced Index		11.1%	-0.9%	4.4%	5.5%	5.4%



# Long Term Investment Pool Attribution Effects 3 Years Ending June 30, 2020



	Year to Date		
	Anlzd Ret	Anlzd Std Dev	Sharpe Ratio
Board of Regents Total Composite	-7.98%	15.36%	-0.55
Allocation Index	-2.64%	10.68%	-0.29

#### **Composite Performance**

- H\Y Total Composite accrued +4.6% in Q2, fueled by active management positions in Equity
- The Long Term Investment Pool gained +11.5% over the same period

#### **Allocation Index**

- Over the quarter, the Equity portfolio outperformed relative to global stock markets by 90bps
- Since inception, the Equity sleeve has returned +6.3%, ahead of global markets over the same period

#### **Active Management**

- The remaining positions represent post Q1 trades per guidance from the team to provide liquidty for operating needs
- Blackrock Strategic Income Opportunities, an absolute return fixed income mandate, experienced a strong quarter per its tactical positioning in emerging market debt and US Treasuries

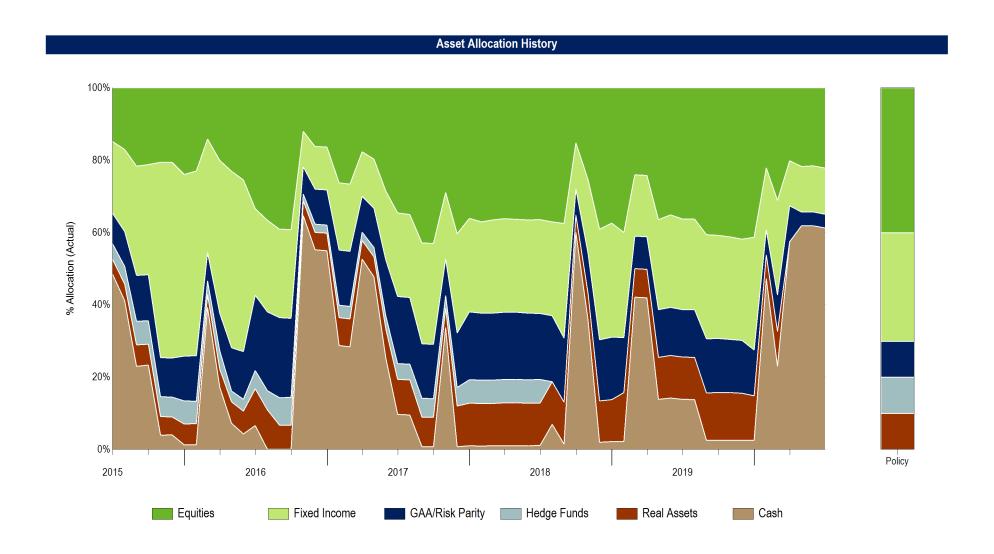


## **ASSET ALLOCATION VS. POLICY TARGETS**

Policy	Current	Net Asset Allocation					
				Asset Allocation vs. Target			
13.0%				Current	Policy	Current	Net Asset Allocation
			Domestic Equity	\$2,195,873	13.0%	27.3%	28.9%
6.0%	27.3%	28.9%	International Equity	\$1,736,051	6.0%	21.6%	22.4%
0.070			Emerging Markets Equity	\$618,238	6.0%	7.7%	7.7%
6.0%			Global Equity		15.0%		
			Core Fixed Income	\$1,603,904	7.5%	20.0%	26.5%
			High Yield				2.9%
15.0%			TIPS		7.5%		0.1%
13.078			Multi-Sector Fixed Income		5.0%		
	21.6%		Non-US Developed Bonds				1.8%
		22.4%	Emerging Market Debt				2.8%
7.5%			GAA/Risk Parity	\$765,781	10.0%	9.5%	
			Hedge Funds		10.0%		
7.5%			Absolute Return	\$1,009,874	10.0%	12.6%	
	7.7%	7.7%	Real Assets		10.0%		0.0%
5.0%		7.770	Cash	\$99,490		1.2%	7.1%
			Total	\$8,029,210	100.0%	100.0%	100.0%
10.0%	20.0%						
		26.5%					
10.0%							
	9.5%	0.0%					
10.0%		2.9% 0.1% 1.8%	-Asset Allocation vs. Policy Targets ar	nalytics are based on the Long Terr	n Investment P	Pool.	
	12.6%	2.8% 0.0%					
10.0%	1.2%	7.1%					

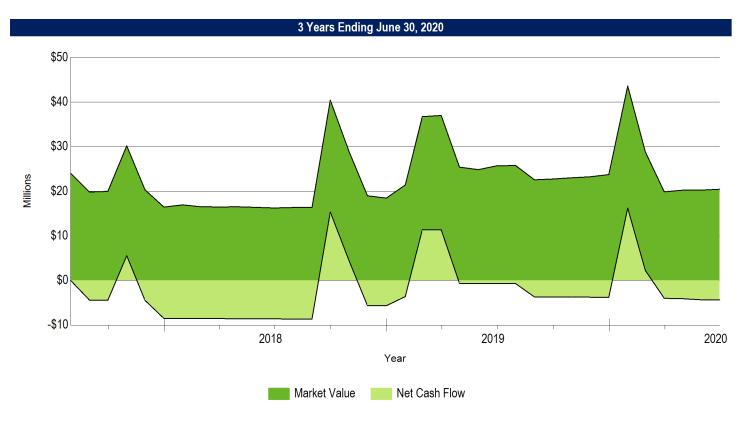


## TOTAL FUND ASSET ALLOCATION HISTORY





## **TOTAL FUND ASSET GROWTH SUMMARY**



	Last Three Months	Year-To-Date	One Year	Three Years
Beginning Market Value	\$19,880,526	\$23,750,387	\$25,713,932	\$23,691,074
Contributions	\$1,100,077	\$43,160,939	\$44,639,252	\$112,890,927
Withdrawals	-\$1,437,707	-\$43,752,385	-\$48,305,467	-\$117,240,505
Net Cash Flow	-\$337,630	-\$591,446	-\$3,666,216	-\$4,349,578
Net Investment Change	\$922,036	-\$2,694,009	-\$1,582,784	\$1,123,436
Ending Market Value	\$20,464,933	\$20,464,933	\$20,464,933	\$20,464,933



#### **INVESTMENT MANAGER - DUE DILIGENCE STATUS**

Investment Options	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
BlackRock Strategic Income Opportunities	Change of Firm Ownership: BlackRock Ownership Change 05/18/20	1. No Action

Investment Options	Commentary	NEPC Rating
BlackRock Strategic Income Opportunities	PNC Financial Services Group announced earlier this week that they will be selling their investment in BlackRock, of which they are a 22.4% owner. They will be donating 500,000 shares to the PNC Foundation and selling the rest of their 34.8 million shares. The shares will be sold in a public secondary offer in which any Series B convertible shares will convert to common stock shares after sale. Underwriters will have a 30-day option to buy additional shares. Upon completion of the secondary offering, BlackRock plans to repurchase \$1.1 billion of its stock. BlackRock has a targeted level of share repurchases for 2020; once they complete these repurchases of approximately \$1.5 billion of its shares, they will have met their targeted level for the year.	1



# **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
4	outweigh the strengths.
5	



# TOTAL FUND SUMMARY

NEPC, LLC —

#### **TOTAL FUND PERFORMANCE DETAIL**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Board of Regents Total Composite	20,464,933	100.0	4.6		-8.0		-3.8		2.3		2.6		3.9		4.4	Apr-09
Allocation Index			5.1		-2.6		2.8		5.3		4.5					Apr-09
Short Term Investment Pool	12,435,723	60.8	0.1		0.4		1.1		1.1		0.7		0.4		0.4	Apr-09
91 Day T-Bills			0.0		0.4		1.3		1.7		1.1		0.6		0.5	Apr-09
Northern Inst Govt Select MMKT	12,435,723	60.8	0.1		0.4		0.5		0.6		0.4		0.2		0.2	Nov-09
91 Day T-Bills			0.0		0.4		1.3		1.7		1.1		0.6		0.6	Nov-09
Bank of Ann Arbor Trust Cash	0	0.0	0.0		0.2		1.1		1.1		0.7		0.3		0.3	Nov-09
91 Day T-Bills			0.0		0.4		1.3		1.7		1.1		0.6		0.6	Nov-09
Long Term Investment Pool	8,029,210	39.2	11.5		-7.5		-3.2		2.6		3.2		5.5		4.8	Apr-09
Long Term Allocation Index			9.1		-2.4		3.1		5.1		5.2					Apr-09
Long Term Balanced Index			11.1		-0.9		4.4		5.5		5.4		6.3		5.5	Apr-09
Total Equity	4,550,161	22.2	20.1	44	-10.2	64	-2.6	62	4.7	53	5.8	48			6.3	Jan-14
MSCI ACWI			19.2	50	-6.3	49	2.1	45	6.1	43	6.5	43	9.2	53	6.0	Jan-14
eV All Global Equity Net Median			19.2		-6.8		0.7		5.1		5.5		9.3		5.8	Jan-14
SEG Baxter	1,736,051	8.5	19.5	43	-5.8	40	-1.1	52	6.3	26					6.3	Jul-17
MSCI ACWI ex USA			16.1	74	-11.0	62	-4.8	64	1.1	60	2.3	65	5.0	81	1.1	Jul-17
eV All ACWI ex-US Equity Net Median			18.6		-8.4		-0.7		2.8		3.8		6.9		2.8	Jul-17
Acadian Emerging Markets Equity	618,238	3.0	16.8	80	-9.7	47	-3.1	47	-0.3	65	2.1	60			1.6	Oct-14
MSCI Emerging Markets			18.1	68	-9.8	48	-3.4	48	1.9	41	2.9	49	3.3	62	2.2	Oct-14
eV Emg Mkts Equity Net Median			20.4		-10.1		-4.0		1.2		2.8		3.9		2.1	Oct-14
Vanguard Total Stock Market VIPERs	2,195,873	10.7	22.0	50	-3.9	37	5.8	35	9.8	34					11.4	Nov-16
Russell 3000			22.0	49	-3.5	36	6.5	33	10.0	33	10.0	28	13.7	29	11.6	Nov-16
eV All US Equity Net Median			21.9		-8.7		-1.0		5.9		6.7		11.7		7.5	Nov-16

<sup>-</sup>Real Assets Custom Benchmark: (40% - Barclays Aggregate)(30% - Barclays TIPS)(10% - S&P 500)(10% - Barclays High Yield)(10% - JP Morgan EMBI+) as of April 1, 2020. Formerly PIMCO All Asset Index.



<sup>-</sup>Allocation Index: Used to measure the value add from active management. Calculated as the asset weight from the prior month end mulitiplied by the specified market index. -Long-Term Balanced Index: (40% - MSCI ACWI)(30% - Barclays Aggregate)(10% - 60% MSCI World (Net)/ 40% FTSE WGBI)(10% - HFRI Fund of Funds Composite)(10% - Real Assets Custom Benchmark) as of April 1, 2020

## **TOTAL FUND PERFORMANCE DETAIL**

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fixed	2,713,268	13.3	5.4	77	1.3	42	3.2	46	3.4	48	3.6	54			3.3	Jan-14
BBgBarc US Aggregate TR			2.9	92	6.1	5	8.7	5	5.3	11	4.3	31	3.8	55	4.2	Jan-14
eV All Global Fixed Inc Net Median			8.3		0.1		2.5		3.3		3.8		4.2		3.0	Jan-14
BlackRock- SIO	1,009,874	4.9	6.8	26	0.7	98	3.5	98	3.4	98	3.0	98			2.9	Oct-14
BBgBarc US Aggregate TR			2.9	97	6.1	19	8.7	25	5.3	40	4.3	70	3.8	99	4.0	Oct-14
eV US Core Plus Fixed Inc Net Median			5.8		5.0		7.9		5.2		4.6		4.6		4.2	Oct-14
Baird - Core Bond	1,603,904	7.8	4.8	35	6.3	40	9.2	24	5.6	25	4.7	25			4.2	Dec-14
BBgBarc US Aggregate TR			2.9	92	6.1	48	8.7	44	5.3	50	4.3	59	3.8	71	3.8	Dec-14
eV US Core Fixed Inc Net Median			4.4		6.1		8.6		5.3		4.4		4.1		3.9	Dec-14
US Treasury	99,490	0.5														
GAA/ Risk Parity	765,781	3.7	-1.7	99	-12.6	94	-12.0	99	-2.5	97	-1.5	99			-1.2	Dec-14
60% MSCI World (Net) / 40% FTSE WGBI			12.2	27	-1.5	31	4.1	15	6.0	14	5.9	9	7.1	27	5.0	Dec-14
eV Global TAA Net Median			9.3		-5.1		-0.7		2.4		2.9		5.8		2.7	Dec-14
William Blair Macro Allocation	704,440	3.4	0.2	97	-7.0	67	-5.6	84							-0.7	Aug-17
60% MSCI World (Net) / 40% FTSE WGBI			12.2	27	-1.5	31	4.1	15	6.0	14	5.9	9	7.1	27	5.4	Aug-17
eV Global TAA Net Median			9.3		-5.1		-0.7		2.4		2.9		5.8		2.0	Aug-17
AQR Global Market and Alternative Premia Offshore Fund	61,341	0.3														

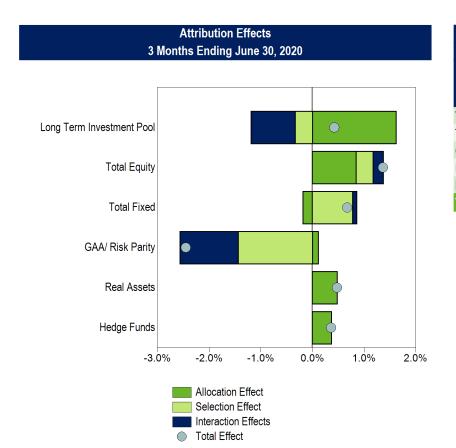


## **TOTAL FUND ASSET GROWTH SUMMARY**

	Quarter Ending June 30, 2020							
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	Ending Market Value		
Acadian Emerging Markets Equity	\$530,591	\$0	-\$1,858	-\$1,858	\$89,505	\$618,238		
AQR Global Market and Alternative Premia Offshore Fund	\$1,265,275	\$0	-\$1,172,819	-\$1,172,819	-\$31,115	\$61,341		
Baird - Core Bond	\$1,530,623	\$0	\$0	\$0	\$73,281	\$1,603,904		
Bank of Ann Arbor Trust Cash	\$0	\$0	\$0	\$0	\$0	\$0		
BlackRock- SIO	\$945,297	\$0	\$0	\$0	\$64,577	\$1,009,874		
Northern Inst Govt Select MMKT	\$11,320,837	\$1,100,077	-\$781	\$1,099,296	\$15,590	\$12,435,723		
SEG Baxter	\$1,685,433	\$0	-\$250,000	-\$250,000	\$300,618	\$1,736,051		
US Treasury	\$99,007	\$0	\$0	\$0	\$483	\$99,490		
Vanguard Total Stock Market VIPERs	\$1,800,357	\$0	\$0	\$0	\$395,516	\$2,195,873		
William Blair Macro Allocation	\$703,106	\$0	\$0	\$0	\$1,334	\$704,440		
Total	\$19,880,526	\$1,100,077	-\$1,425,458	-\$325,381	\$909,788	\$20,464,933		



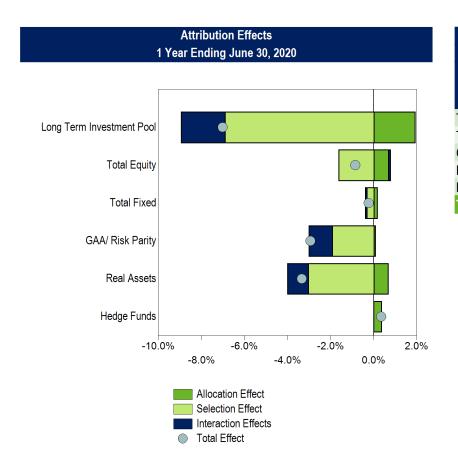
## **LONG TERM INVESTMENT POOL**



Attribution Summary 3 Months Ending June 30, 2020									
	Wtd. <sub>V</sub> Actual Return	Vtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects		
Total Equity	20.1%	19.2%	0.9%	0.3%	0.8%	0.2%	1.4%		
Total Fixed	5.4%	2.9%	2.5%	0.8%	-0.2%	0.1%	0.7%		
GAA/ Risk Parity	-1.7%	12.2%	-13.9%	-1.4%	0.1%	-1.1%	-2.5%		
Real Assets					0.5%				
Hedge Funds					0.4%				
Total	11.5%	11.0%	0.4%	-0.3%	1.6%	-0.9%	0.4%		



## **LONG TERM INVESTMENT POOL**



Attribution Summary 1 Year Ending June 30, 2020									
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects		
Total Equity	-2.6%	1.7%	-4.3%	-1.6%	0.7%	0.1%	-0.9%		
Total Fixed	3.2%	4.4%	-1.1%	-0.3%	0.1%	-0.1%	-0.2%		
GAA/ Risk Parity	-12.0%	4.1%	-16.1%	-1.9%	0.1%	-1.1%	-2.9%		
Real Assets		0.1%		-3.0%	0.7%	-1.0%	-3.3%		
Hedge Funds					0.3%				
Total	-3.6%	3.4%	-7.0%	-6.9%	1.9%	-2.0%	-7.0%		



# **APPENDIX**

NEPC, LLC —

## **UPDATED ASSET CLASS RETURN ASSUMPTIONS**

	Asset Class 10-Year Return Expectations	06/30/2020	03/31/2020	Change
	Cash	0.6%	0.7%	0.1%
	US Inflation	1.7%	1.7%	-
	Large Cap Equities	6.3%	6.6%	-0.3%
<u>ج</u>	International Equities (Unhedged)	6.7%	7.5%	-0.8%
Equity	Emerging International Equities	9.1%	10.2%	-1.1%
й	Global Equity*	7.2%	7.7%	-0.5%
	Private Equity*	10.4%	10.9%	-0.5%
e e	Treasuries	0.6%	0.6%	-
Income	Core Bonds*	1.3%	1.6%	-0.3%
	TIPS	0.9%	1.2%	-0.3%
Fixed	High Yield Bonds	4.3%	5.6%	-1.3%
Œ	Private Debt*	6.8%	8.0%	-1.2%
	Commodities	1.7%	1.4%	0.3%
Real Assets	REITs	6.6%	7.0%	-0.4%
Re Ass	Core Real Estate	4.4%	4.5%	-0.1%
	Private Real Assets: Infrastructure/Land	5.9%	6.2%	-0.3%
<u>.</u>	US 60/40*	4.6%	4.9%	-0.3%
Multi- Asset	Global 60/40*	4.9%	5.3%	-0.4%
≥⋖	Hedge Funds*	4.6%	5.0%	-0.4%



<sup>\*</sup>Calculated as a blend of other asset classes

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- The opinions presented herein represent the good faith views of NEPC as of the date of this presentation and are subject to change at any time.
- The comments provided herein should be considered a general overview and do not constitute investment advice, are not predictive of any future market performance, are not provided as a sales or advertising communication, and do not represent an offer to sell or a solicitation of an offer to buy any security.
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It is important that investors understand the following characteristics of non-traditional investment strategies including hedge funds and private equity:

- 1. Performance can be volatile and investors could lose all or a substantial portion of their investment
- 2. Leverage and other speculative practices may increase the risk of loss
- 3. Past performance may be revised due to the revaluation of investments
- 4. These investments can be illiquid, and investors may be subject to lock-ups or lengthy redemption terms
- 5. A secondary market may not be available for all funds, and any sales that occur may take place at a discount to value
- 6. These funds are not subject to the same regulatory requirements as registered investment vehicles
- 7. Managers may not be required to provide periodic pricing or valuation information to investors
- 8. These funds may have complex tax structures and delays in distributing important tax information
- 9. These funds often charge high fees
- 10. Investment agreements often give the manager authority to trade in securities, markets or currencies that are not within the manager's realm of expertise or contemplated investment strategy



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