

QUARTER ENDING MARCH 31, 2020
INVESTMENT PERFORMANCE ANALYSIS
EASTERN MICHIGAN BOARD OF REGENTS

May 13, 2020

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TABLE OF CONTENTS

	Page
NEPC Update	3
Quarterly Review	6
Key Market Themes	19
Q1 2020 Performance Summary	26
Total Fund Summary	33
Appendix	53
- Q1 2020 Asset Allocation Assumptions	
- Market Review	



NEPC UPDATE

NEPC, LLC

Q1 2020 HAPPENINGS AT NEPC

From everyone at NEPC, we hope your families and loved ones are safe and healthy during these difficult times. Please know that we remain vigilant in our oversight of your investments as the world focuses on the challenges ahead.

At NEPC, our goal is twofold: to help steer your investment programs through this market turmoil and identify opportunities that may arise from the tumult. Please see below the investment views published by NEPC related to the COVID-19 outbreak. To stay up-to-date on our COVID-19 content, please view <https://info.nepc.com/covid-19>.

COVID-19 CONTENT

- Taking Stock: China in the Time of Coronavirus (COVID-19)
- Taking Stock: The Implications of COVID-19 and the February 2020 Market Correction
- Taking Stock: Acting Amid Uncertainty
- Taking Stock: Corporate Pension Plans in the Time of COVID-19
- Taking Stock: The Ides of Fed Intervention
- Taking Stock: Pension Investor Flash Poll
- Negative Interest Rates: Here to Stay
- COVID-19: Business & Market Perspectives Webinar Replay
- COVID-19 and NEPC's Market Perspectives Webinar Replay



Q1 2020 HAPPENINGS AT NEPC

NEPC INSIGHTS

- Taking Stock: NEPC's Fourth Quarter Pension Monitor
- Taking Stock: Will the SECURE Act Finally Make Lifetime Income More Than Just a Buzzword?
- Taking Stock: Late Cycle Dynamics, an NEPC Key Market Theme
- Taking Stock: Permanent Interventions, an NEPC Key Market Theme
- Taking Stock: China Transitions, an NEPC Key Market Theme
- Taking Stock: Globalization Backlash, an NEPC Key Market Theme
- NEPC's Asset Allocation Letter: 2020: Taking a Leap of Faith Into a New Decade
- 2019 Fourth Quarter Market Thoughts
- The Three Pillars of a Successful Investment Plan for Endowments and Foundations
- NEPC's 2019 Defined Contribution Plan & Fee Survey
- NEPC's 2019 Defined Contribution Plan & Fee Survey - Recording
- Private Wealth: Getting the Most Out of Your Custodian
- Taking Stock: NEPC's February 2020 Pension Monitor

WEBINAR REPLAYS

- Webinar Replay: 8th Defined Benefit Plan Trends Survey
- NEPC 2020 Market Outlook Webinar
- Webinar Replay: SECURE Act Webinar with Morgan Lewis
- Fireside Chat with Mellody Hobson: "Is the Investment Industry Ready to be Color Brave™?"















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

QUARTERLY REVIEW

NEPC, LLC

PERFORMANCE OVERVIEW

Q1 Market Summary

Macro			Equity			Credit			Real Assets		
US Dollar	VIX	US 10-Yr	S&P 500	MSCI EAFE	MSCI EM	US Agg.	High Yield	Dollar EMD	Oil	Gold	REITS
											
2.8%	39.8	-124 bps	-19.6%	-22.8%	-23.6%	3.1%	-12.7%	-13.4%	-67.1%	4.0%	-25.5%

Global risk assets declined during the quarter as markets digested the potential economic impact of COVID-19

Equities experienced the sharpest declines, with most major indices entering bear market territory in March

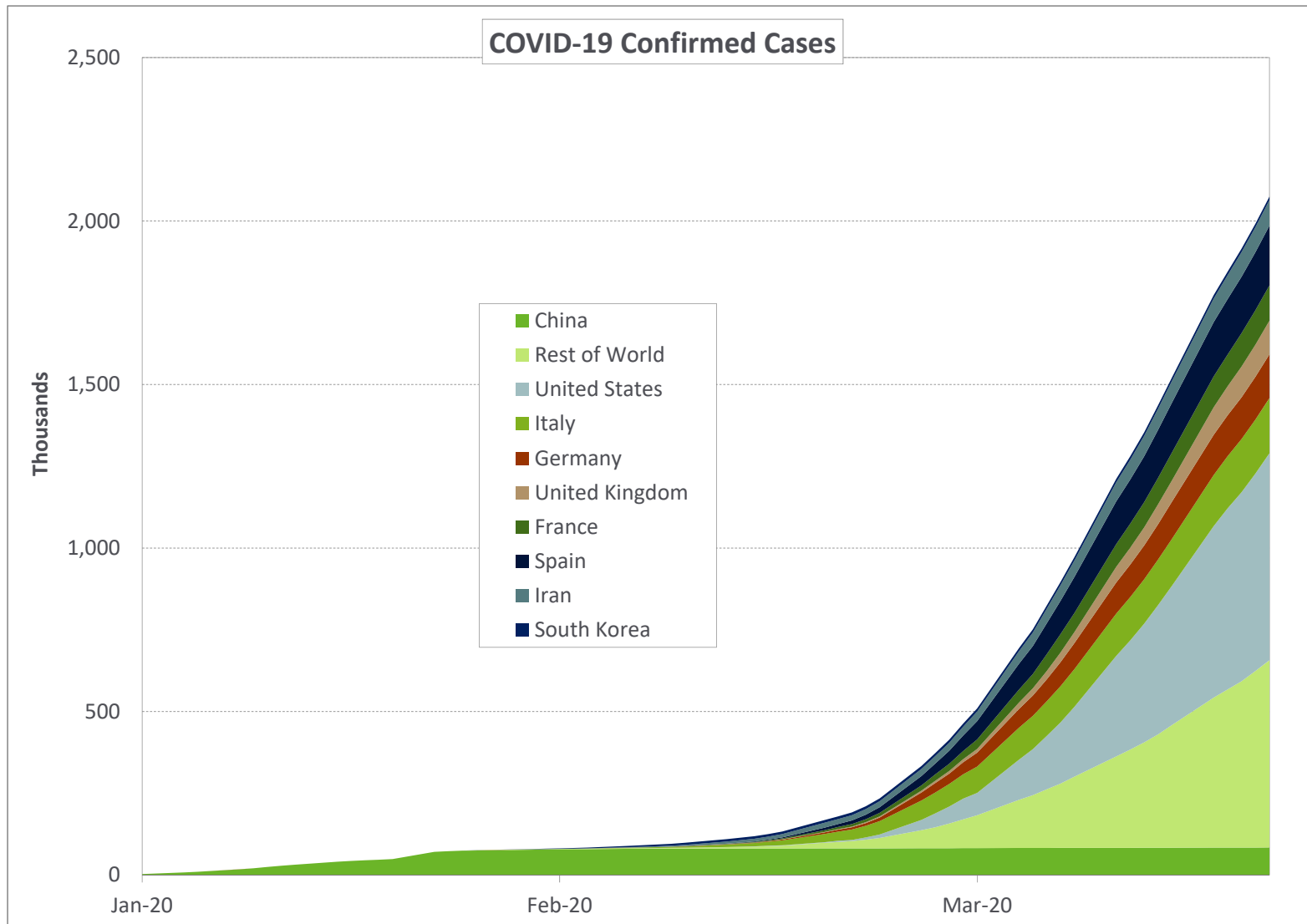
Widespread stimulative fiscal and monetary policies have been implemented to help support economic growth

Energy prices collapsed as tensions intensified between Saudi Arabia and Russia, leading to supply gluts and a sharp decline in prices

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



COVID-19 CONFIRMED CASES CONTINUE RISING



Source: World Health Organization, FactSet
Data as of 4/17/2020



ASSESSING THE ECONOMIC IMPACT

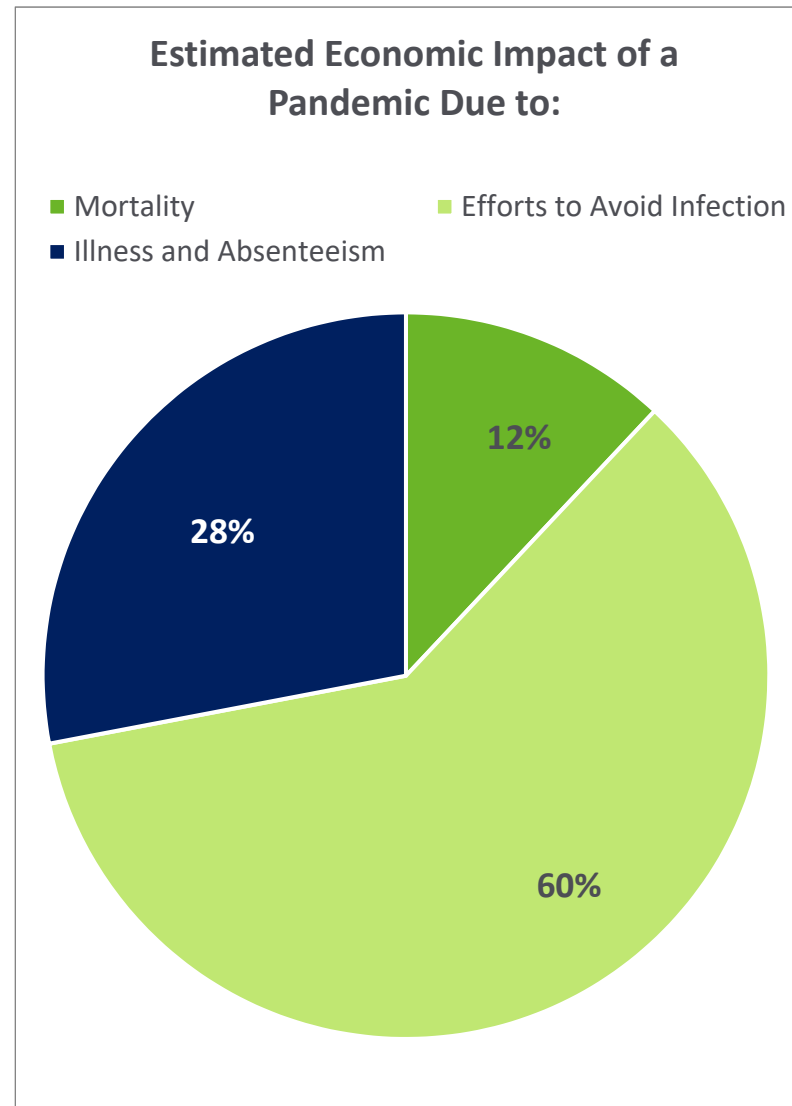
Based on a World Bank study the impact and severity of containment and quarantine is likely the largest economic cost from a pandemic

Restrictive containment strategies can lead to both a demand and a supply shock to economic activity

The weak economic data from China shows how swift the decline can be

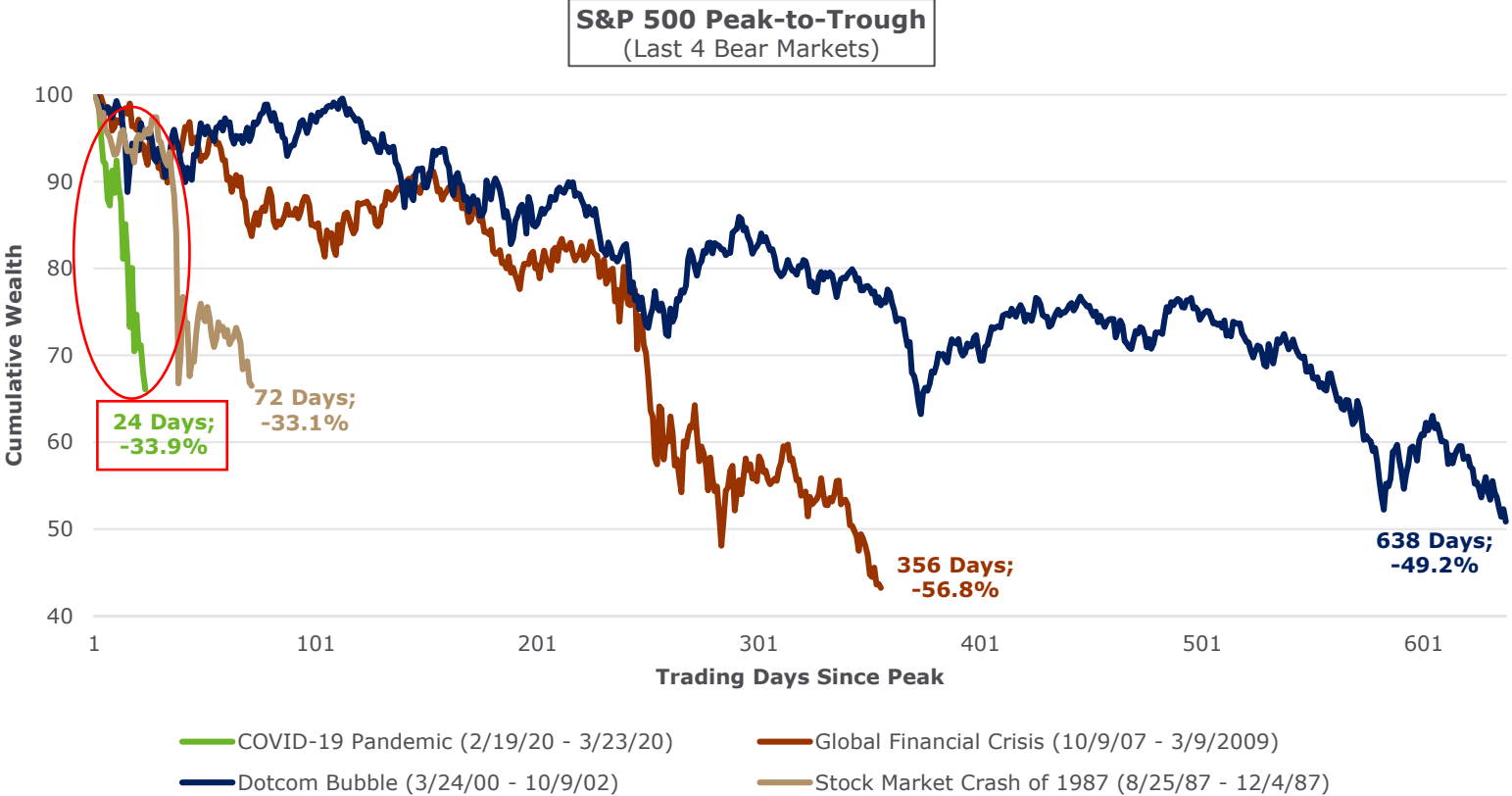
The unknown is the duration of the containment strategy and whether the economic impact is short-term or has a longer-term economic impact on consumer consumption

The COVID-19 case fatality rate is estimated at 1-3% and largely depends on the ability to “bend the curve”



Source: The World Bank

BEAR MARKETS VARY IN BOTH LENGTH AND DRAWDOWN

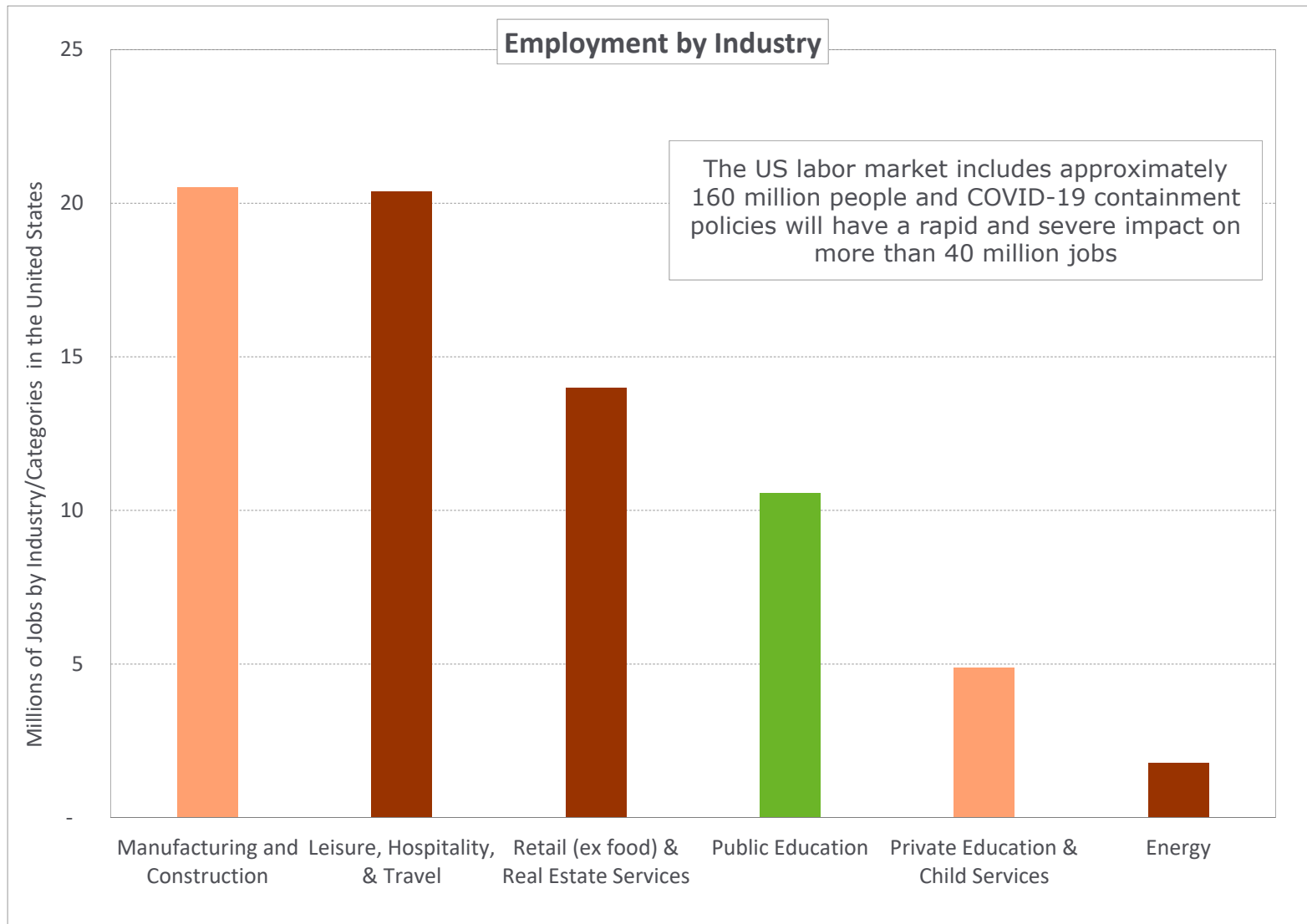


- **At just 24 trading days, the COVID-19 Pandemic bear market had the quickest peak-to-trough out of the past four bear markets**
 - S&P 500 peaked on 2/19/2020 at 3,386; the low-point was 3/23/2020 at 2,237
 - Peak-to-Trough Return: -33.9%



Source: Factset

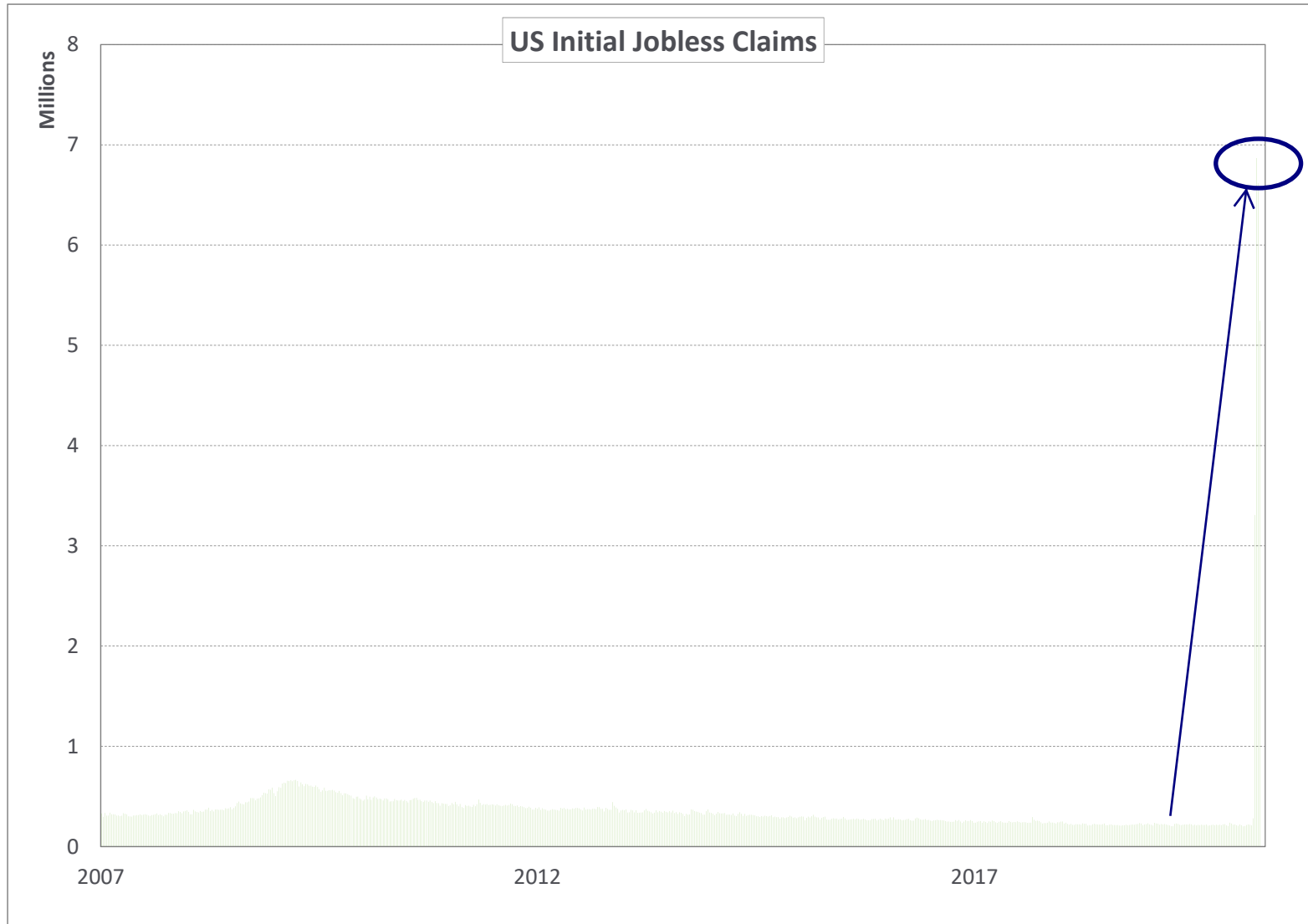
CONTAINMENT STRATEGIES IMPACT EMPLOYMENT



Source: US Bureau of Labor Statistics, FactSet, NEPC
Data as of 2/28/2020



UNEMPLOYMENT SPIKES

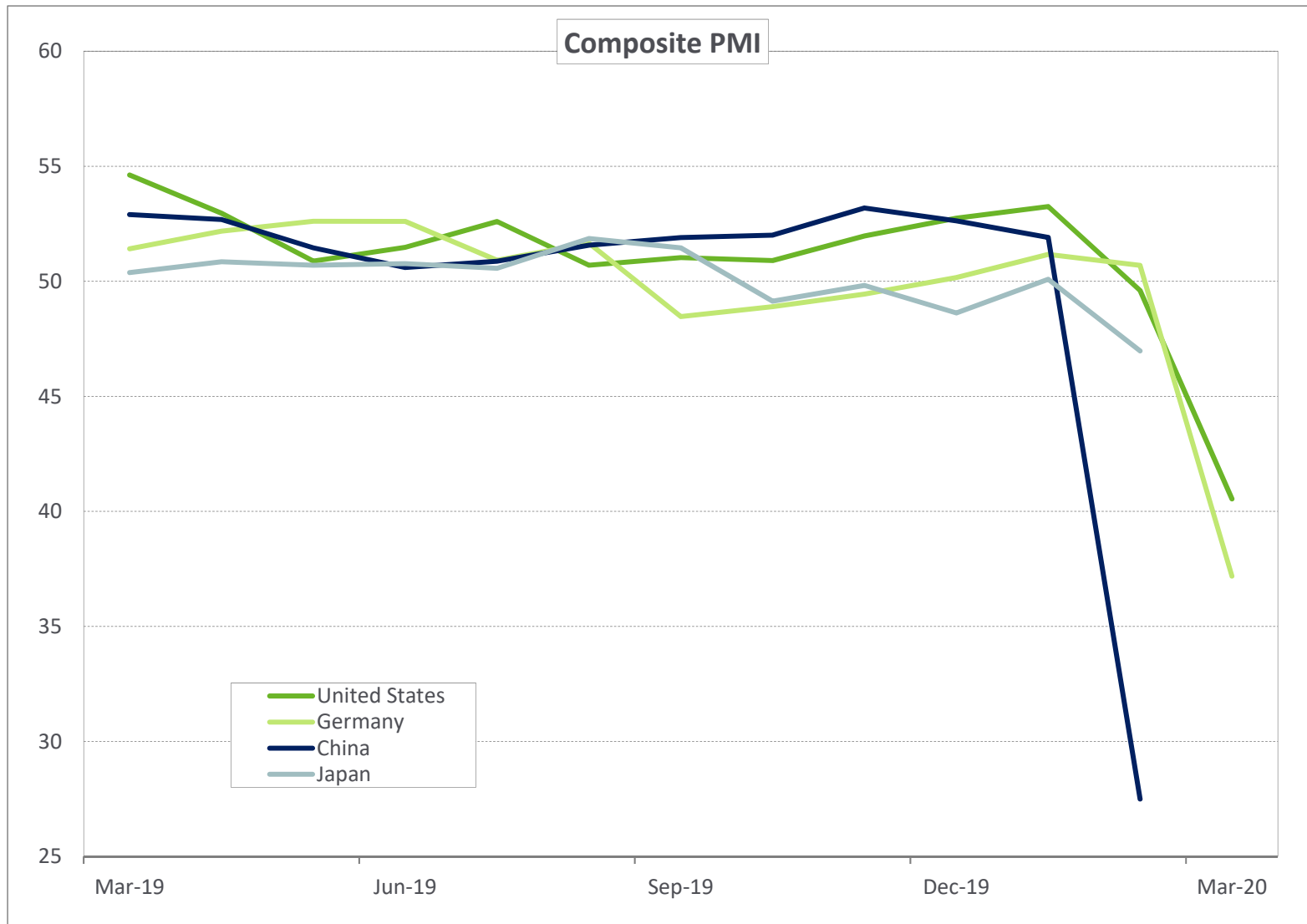


We continue to see a dramatic increase in jobless claims

Source: Department of Labor, FactSet
Data as of 4/17/2020



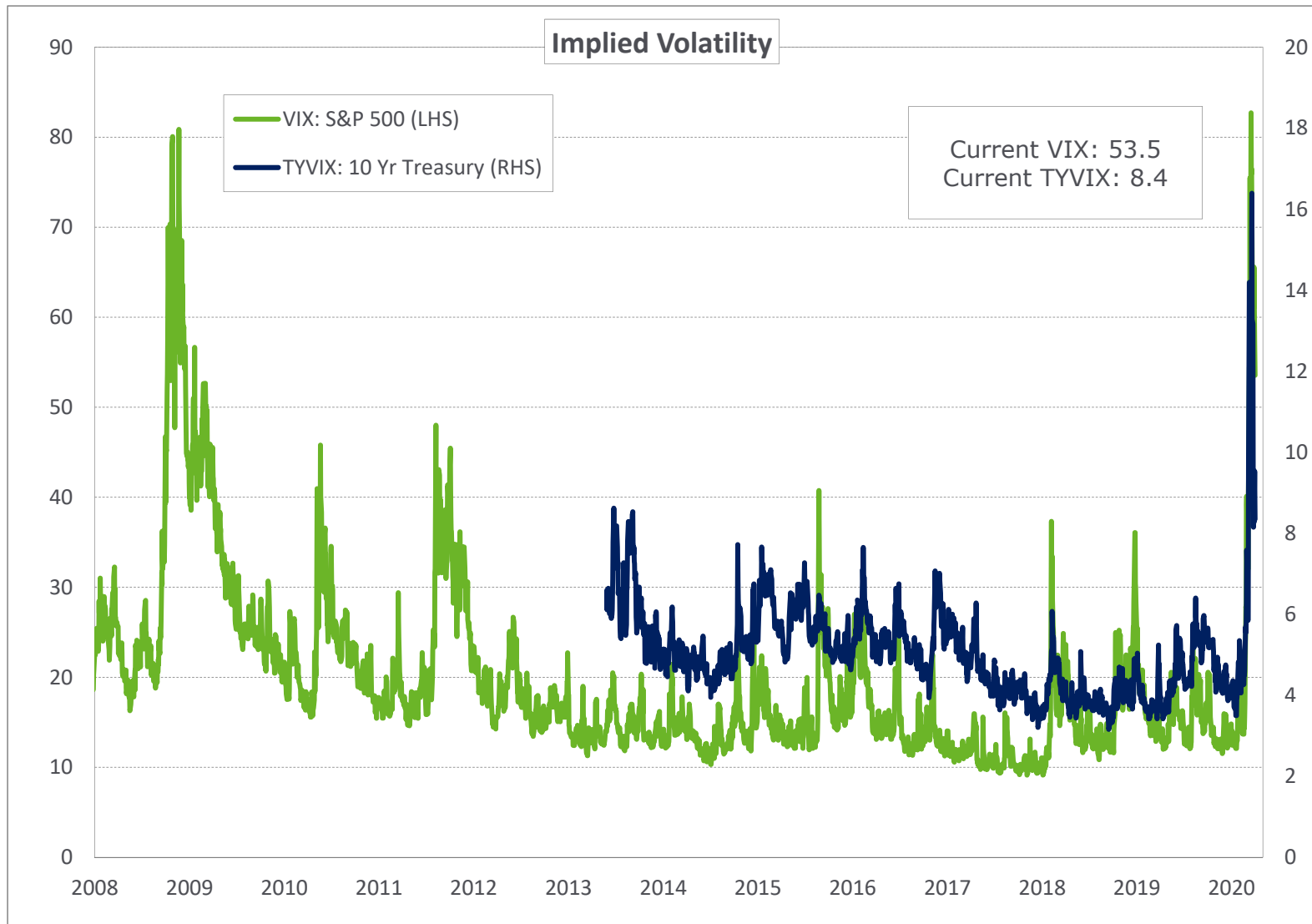
GLOBAL ECONOMY EXPECTED TO CONTRACT



Source: Markit, FactSet



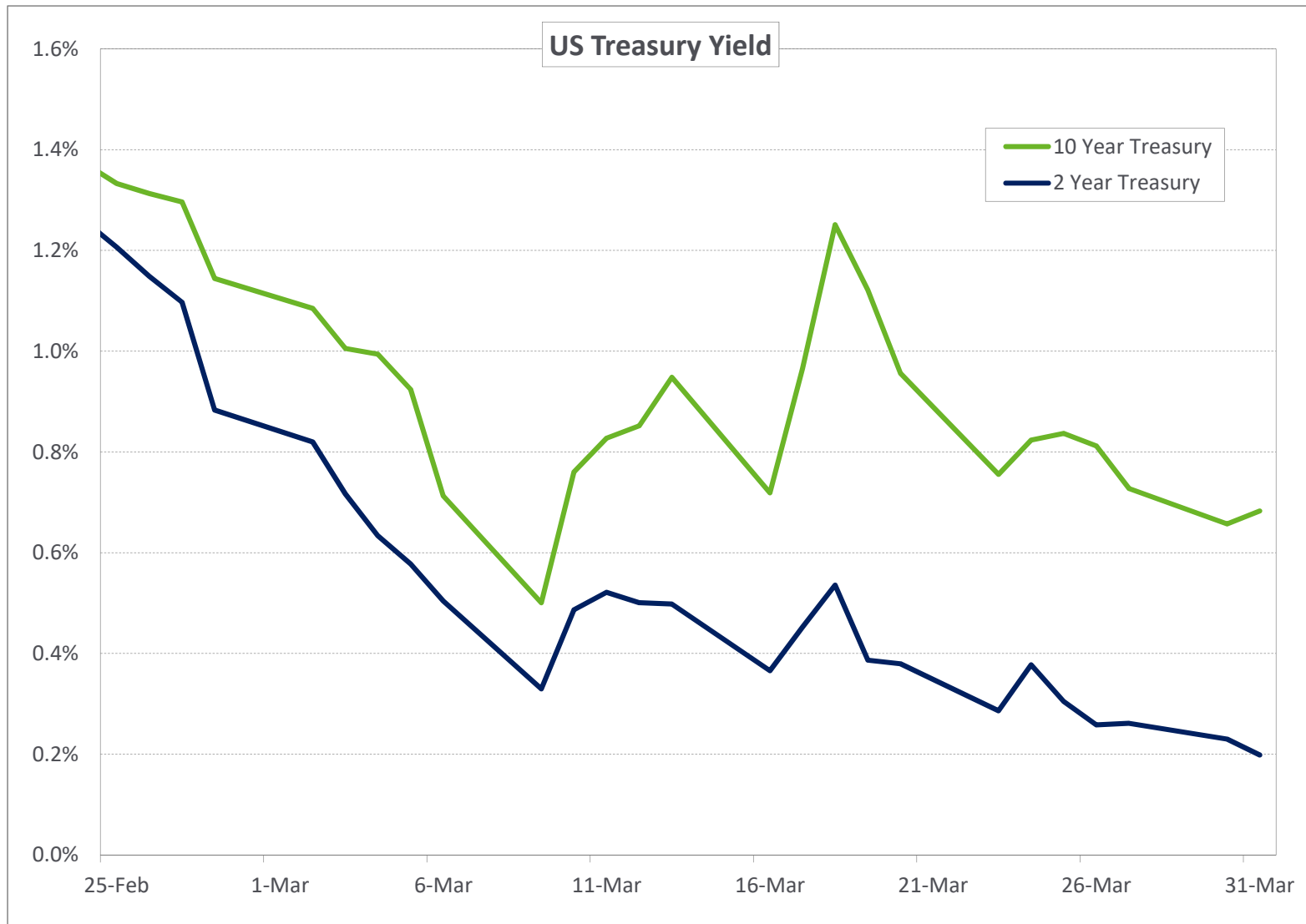
CORRELATIONS AND VOLATILITY ARE ELEVATED



Source: CBOE, FactSet
Data as of 3/31/2020



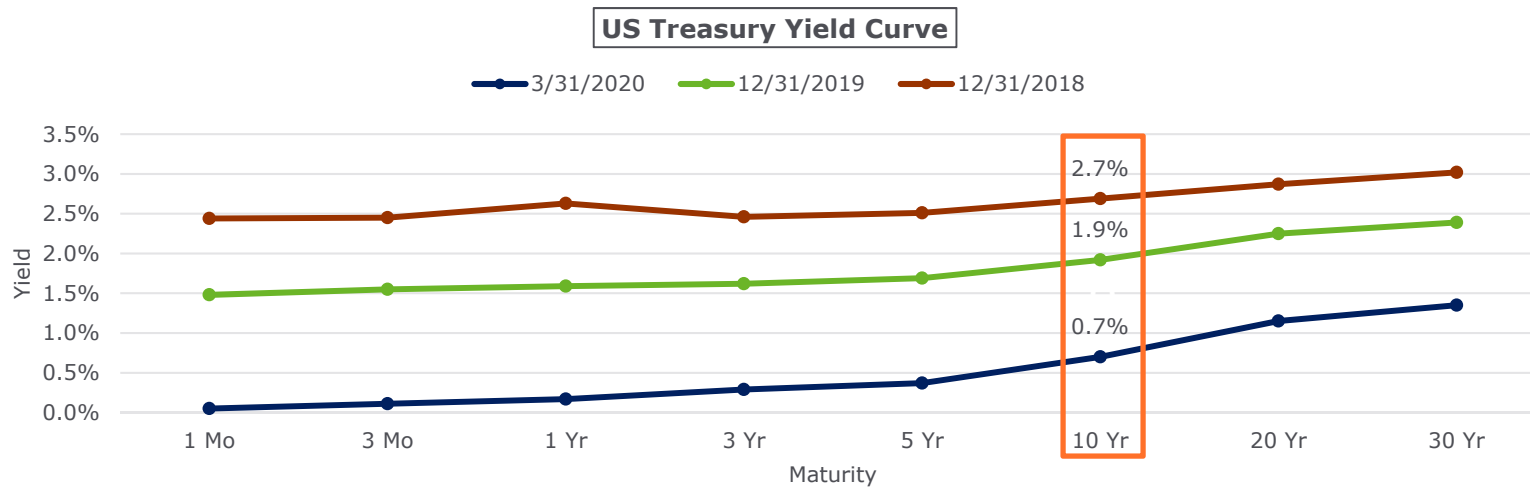
U.S. TREASURY YIELDS ARE STRESSED



Source: FactSet
Data as of 3/31/2020



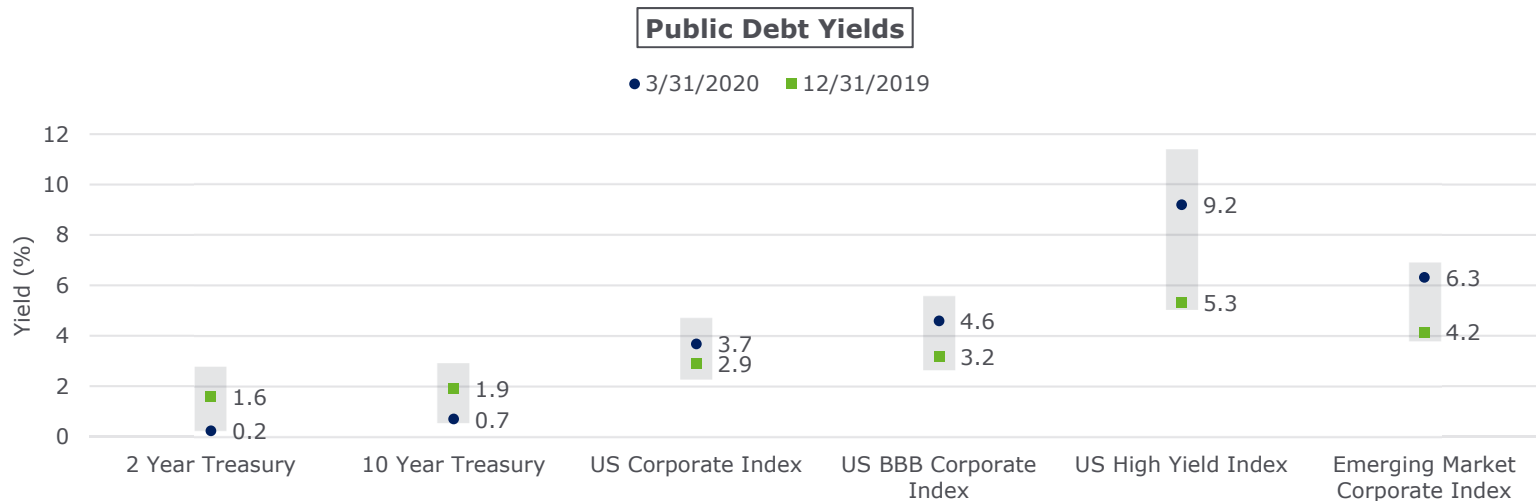
TREASURY YIELDS DECLINED



- **Treasury yields declined across the maturity spectrum**
 - *Flight to Quality*: Investors sold equities and credit, and invested in Treasuries as equity markets sold-off
 - *Federal Reserve Action*: Fed cut their interest rate target to the 0-25 basis points range and announced a \$700 billion Treasury and MBS purchasing program
- **Treasuries were the best performing asset class in Q1 2020**
 - Declining interest rates resulted in price appreciation and positive returns for Treasuries



CREDIT SPREADS WIDENED



- **Credit spreads widened significantly as credit markets sold-off**
 - Spreads widened across the credit quality spectrum; lower quality credit spreads widened more than investment grade spreads
 - March 2020 was the worst-ever month on record for investment-grade credit, and the second-worst month ever for high-yield credit
- **Market action has created an attractive buying opportunity in credit**
 - Relative to Treasuries, investors should expect to generate higher returns by investing in the credit markets



2020 ORIGINAL “CURRENT OPPORTUNITIES”

Reassessing all Current Opportunities due to Market Dislocation

Original Opportunity	Messaging
Reduce Lower Quality Credit Exposure	Thesis has been realized
Add Long Volatility Exposure	Thesis has been realized
Overweight Emerging Market Equities	Paused, focus on US equity when rebalancing
Fund Emerging Local Debt	Paused, focus on maintaining liquidity but EMD can play a diversifying role in long-term strategic allocations
Fund Public Midstream Energy Exposure	Thesis has been disrupted



KEY MARKET THEMES

NEPC, LLC

NEPC'S KEY MARKET THEMES

3/31/20 Assessment

New Theme

	Virus Trajectory	Permanent Interventions	Globalization Backlash	China Transitions
Dominant	<p><u>Change in Status:</u> -</p> <p>Virus Trajectory is the dominant force driving market and economic outcomes. The theme looks to reflect the unknown path of a pandemic but also the timing of how economies recover. The duration of social distancing policies is a key unknown as increased COVID-19 testing is needed to define an exposure baseline.</p>	<p><u>Change in Status:</u> ↑</p> <p>Globally, significant monetary and fiscal stimulus has been aimed at lessening the economic impact of COVID-19.</p> <p>In the US, the Fed cut rates by 150 bps and broadly expanded the balance sheet with unlimited QE purchases and vast lending facilities to aid market liquidity. Congress also passed a \$2T relief package.</p>	<p><u>Change in Status:</u> -</p> <p>Trade tensions have waned as COVID-19 concerns take on a greater focus.</p> <p>The influence and temperature of the theme will likely increase in coming quarters as countries reassess supply chains and consider locally sourced medical supplies .</p>	<p><u>Change in Status:</u> -</p> <p>China's economy was at a standstill for much of the quarter as the country attempted to contain the virus.</p> <p>Manufacturing PMI fell into deep contractionary territory to 35.7 in February.</p> <p>China's total exports contracted 17.2% for the first two months of the year.</p>
Emerging				
Neutral				
Fading				
Dormant				



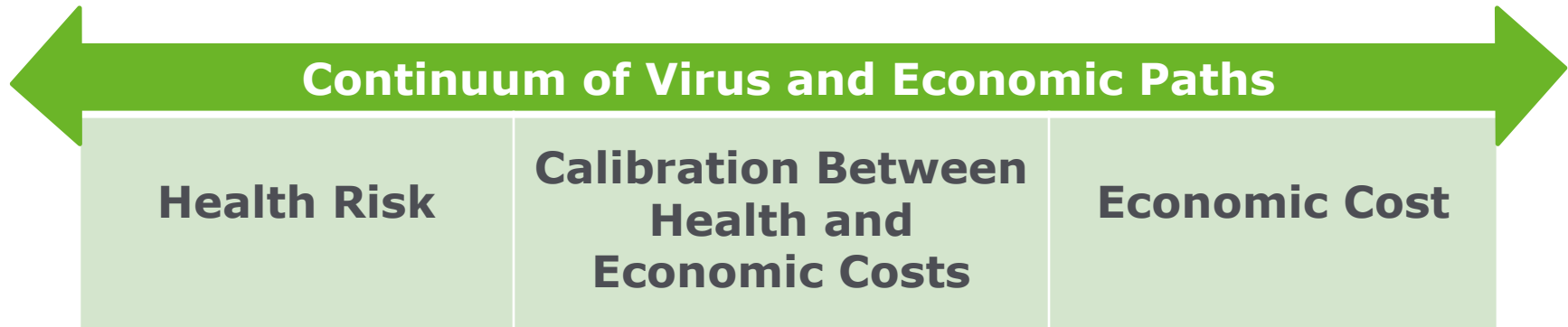
VIRUS AND ECONOMIC PATHS ARE ALIGNED

The COVID-19 pandemic has halted global economic activity

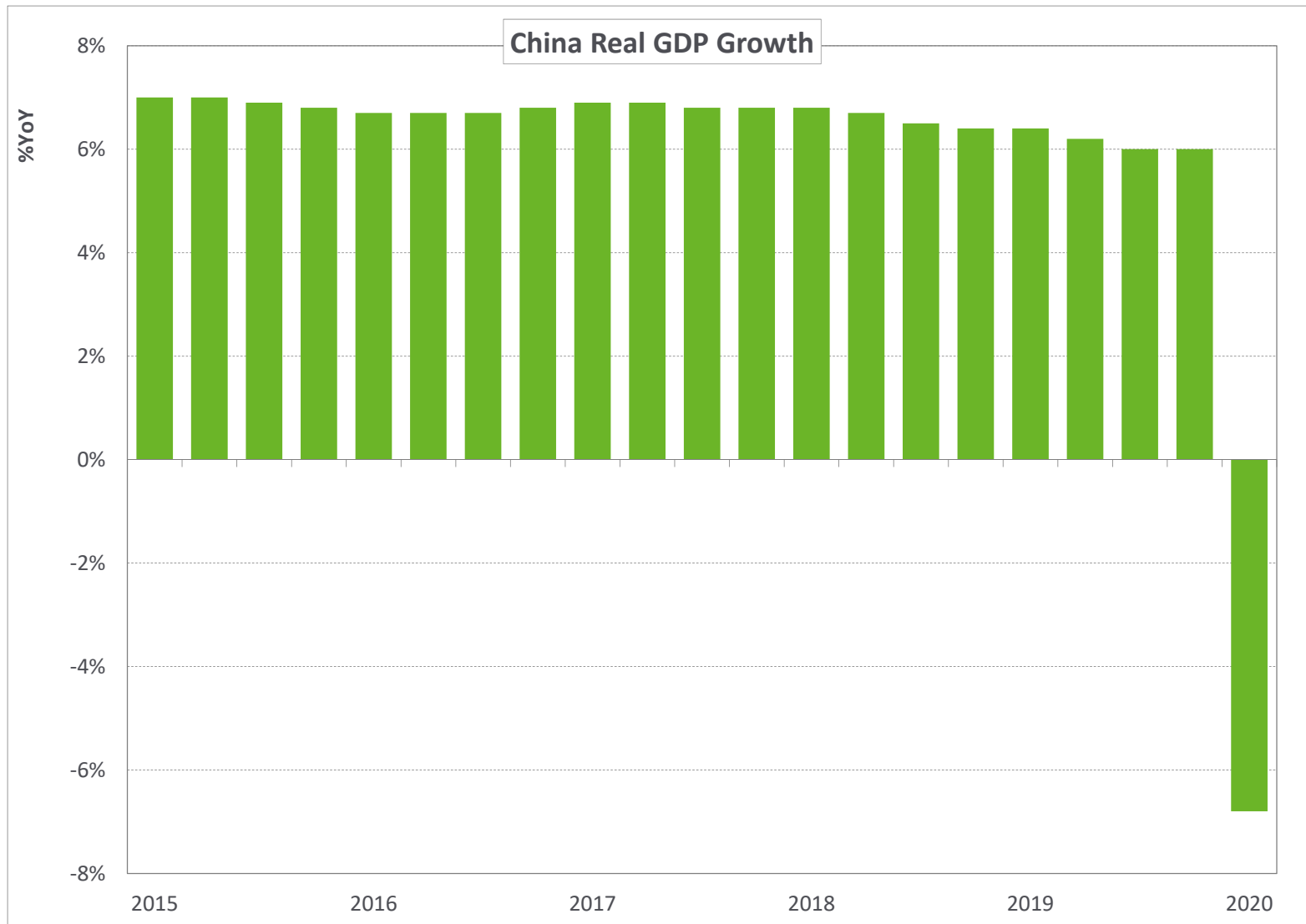
Virus Trajectory reflects uncertainty of pandemic and economy

Plausible paths include rapid economic recovery or depression

Investor focus likely to shift along a continuum



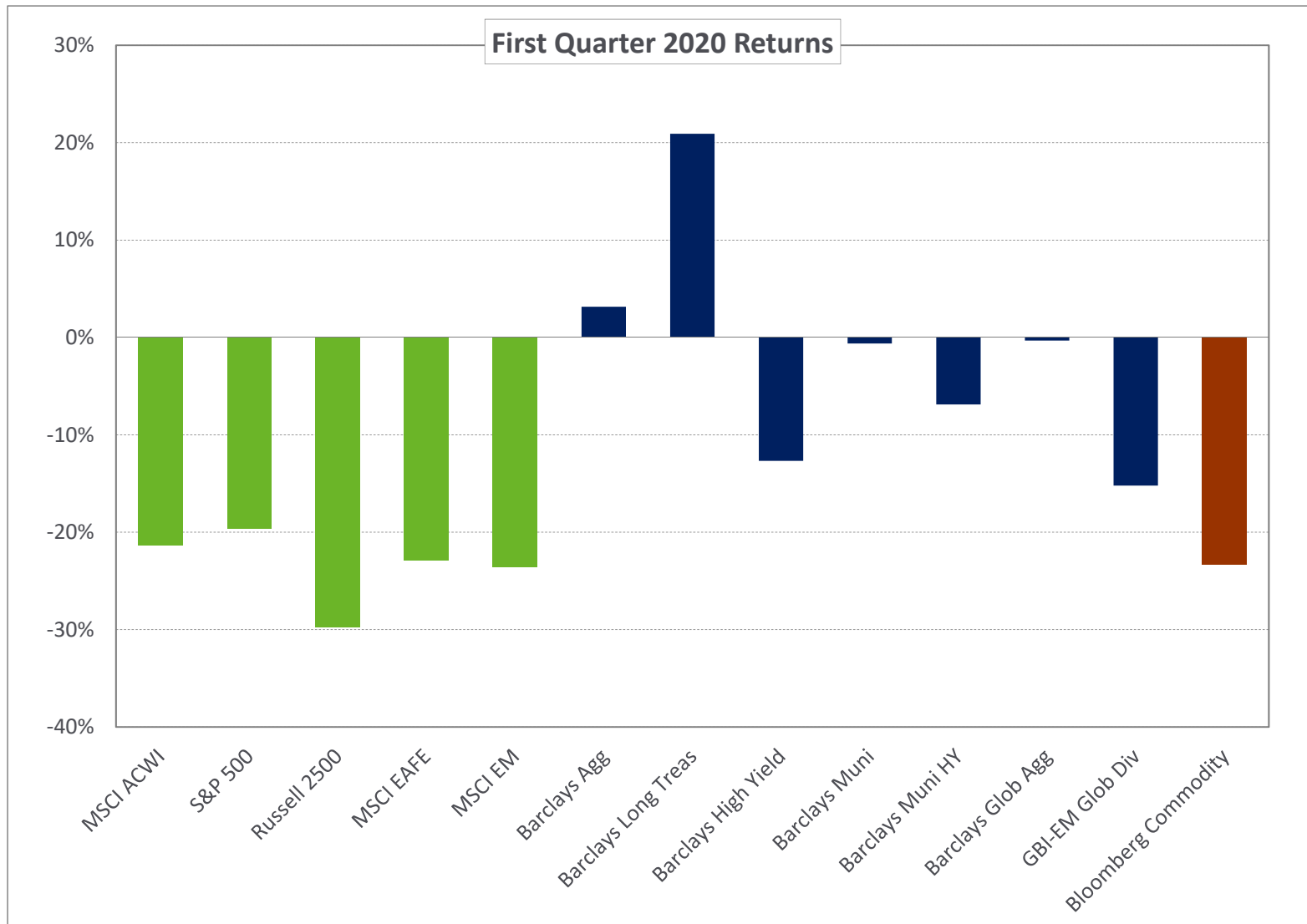
ECONOMIC GROWTH EXPECTED TO FALL



Source: FactSet
Data as of 4/17/2020



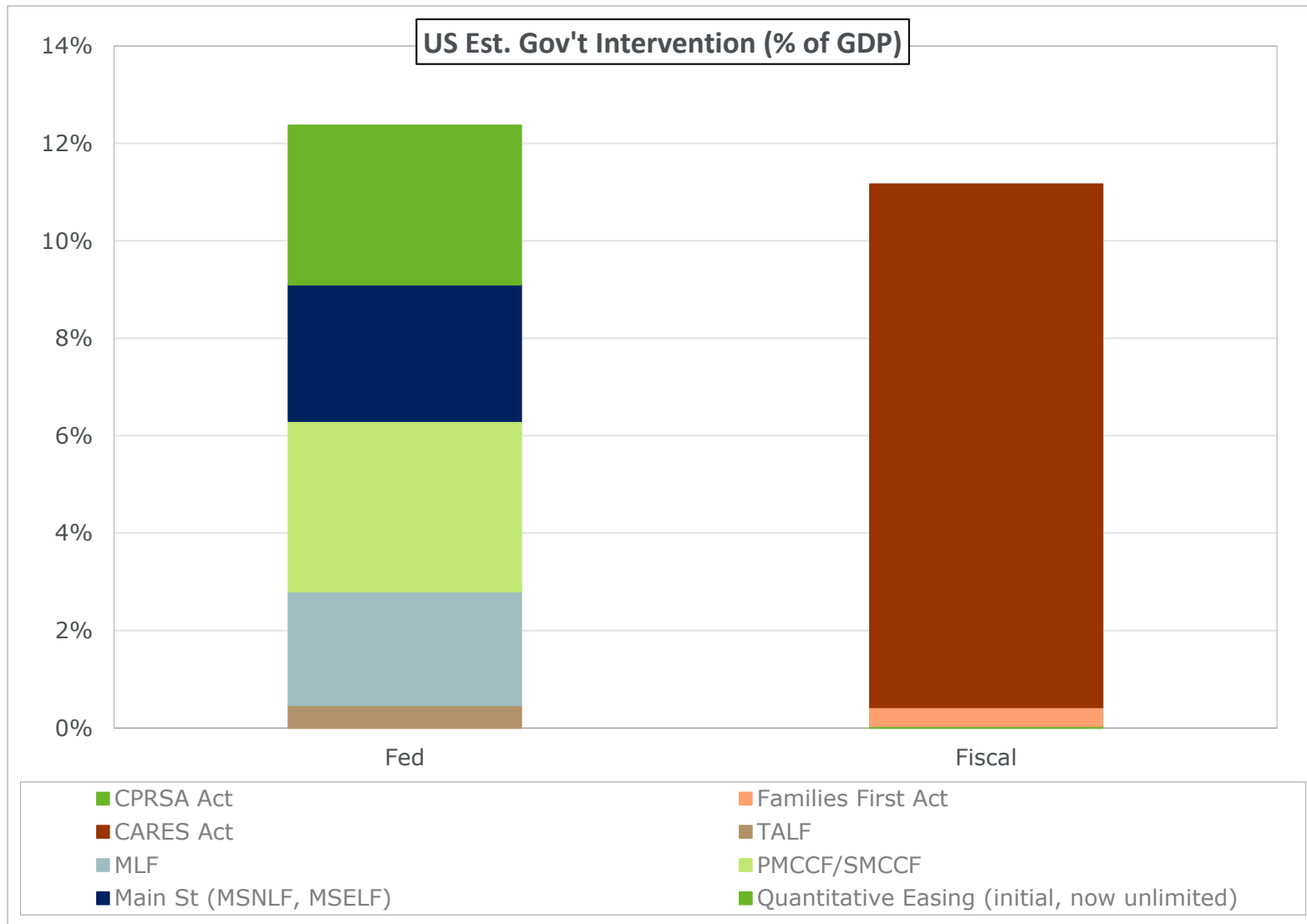
COVID-19 FEARS IMPACTING MOST ASSETS



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



ELEVATED PERMANENT INTERVENTIONS



Source: NEPC, Federal Reserve



MONETARY AND FISCAL RESPONSES

Fed Action	Description
Fed Rate Cuts	The Fed cut rates in two emergency sessions by a total of 1.50% to a range of 0.00% - 0.25%.
Balance Sheet Expansion	The Fed announced an unlimited expansion of the balance sheet to support the US economy. This move expanded on previous announcements for smaller QE denominations
Liquidity Support Facilities	The Fed announced additional measures to ensure market liquidity, including facilities to support money market funds, commercial paper, and broad credit support systems
Credit Support Facilities	The Fed established programs aimed at supporting consumers and businesses, such as the Term Asset-Backed Securities Loan Facility (TALF) and a Main Street Business Lending Program. These programs provide preferential borrower agreements, such as deferred interest and principal payments, for consumers and small businesses.

US Government Action	Description
Families First Coronavirus Response Act	The bill was passed to provide sick leave, expand food assistance and unemployment benefits, and provide additional protection for health care employees
Fiscal Stimulus Package	Congress approved a \$2 trillion economic stimulus package aimed at providing direct financial assistance, expanded benefits programs, and loans to individuals, small businesses, and industries impacted by COVID-19



Q1 2020 PERFORMANCE SUMMARY

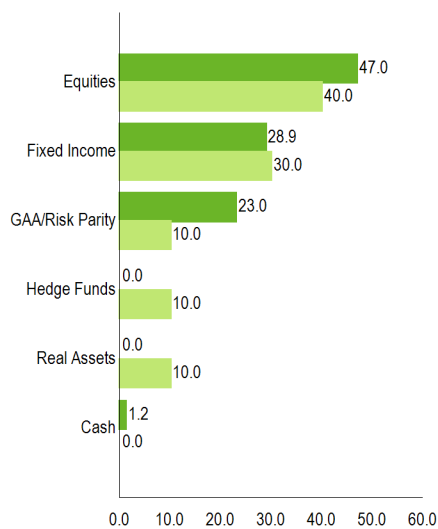
NEPC, LLC

TOTAL FUND PERFORMANCE SUMMARY

	Market Value	3 Mo	Rank Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	
Board of Regents Total Composite	\$19,889,206	-10.9%	99	-6.8%	99	-4.6%	99	1.7%	93	1.8%	87
<i>Allocation Index</i>		-7.4%	85	-2.2%	71	0.3%	72	4.2%	22	3.3%	31

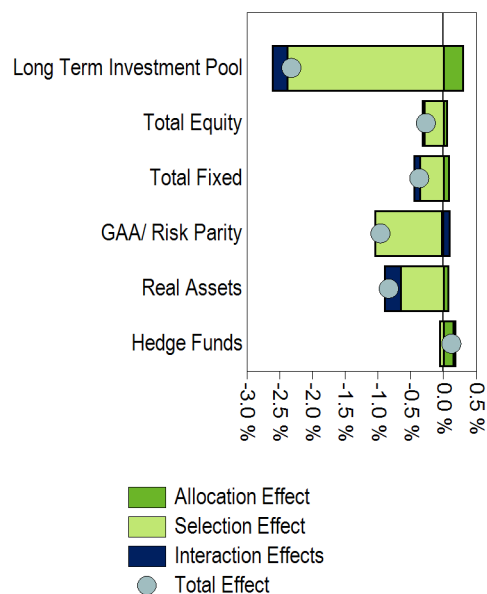
	Market Value	3 Mo	Rank Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	
Long Term Investment Pool	\$8,568,369	-15.5%	55	-11.5%	78	-8.8%	77	0.3%	87	1.4%	86
<i>Long Term Allocation Index</i>		-10.6%	15	-5.5%	16	-2.4%	15	3.2%	13	3.3%	17
<i>Long Term Balanced Index</i>		-10.7%	16	-5.8%	17	-2.8%	17	2.9%	16	3.2%	18

Long Term Investment Pool Actual vs. Target Allocation



Actual Policy

Long Term Investment Pool Attribution Effects 3 Years Ending March 31, 2020



Allocation Effect
Selection Effect
Interaction Effects
Total Effect

Year to Date

	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank
Board of Regents Total Composite	-10.90%	99	15.01%	97	-0.75	74
Allocation Index	-7.35%	85	10.68%	81	-0.72	72

Composite Performance

- H'Y portfolio was down -10.9% for the quarter
- Global sell off, fueled by the Covid-19 pandemic, had a significant impact on the portfolio:
- 12/31/2019 3 year annualized return: **+6.5%**
- 3/31/2020 3 year annualized return: **+1.7%**

Allocation Index

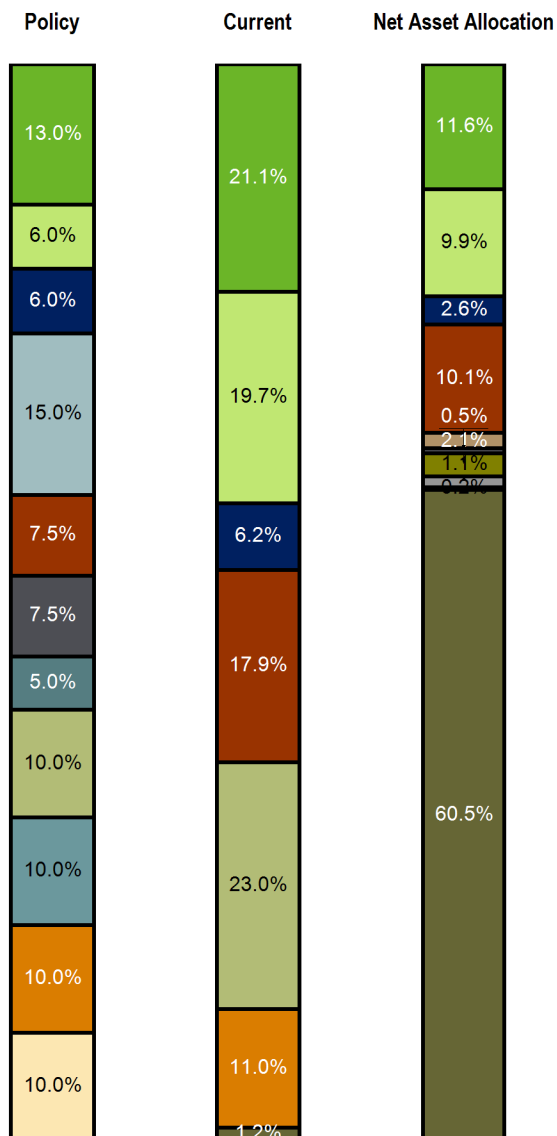
- Heightened volatility, coupled with a rapid drawdown, unraveled correlations - which led to declines across almost all asset classes
- The Global Asset Allocation sleeve did outperform on a relative basis, finishing 100bps ahead of the 60% MSCI World (Net) / 40% FTSE WGBI Index

Active Management

- Magnitude and timing of trades proved to be a headwind this past quarter
- William Blair Macro Allocation's exposure to U.S. Treasuries and short exposure to Hong Kong equity proved beneficial over the quarter
- Blackrock Strategic Income Opportunities, an absolute return fixed income mandate, detracted due to its positions in global credit, emerging market debt, and municipal assets



ASSET ALLOCATION VS. POLICY TARGETS



Asset Allocation vs. Target				
	Current	Policy	Current	Net Asset Allocation
Domestic Equity	\$1,808,927	13.0%	21.1%	11.6%
International Equity	\$1,685,433	6.0%	19.7%	9.9%
Emerging Markets Equity	\$530,591	6.0%	6.2%	2.6%
Global Equity	--	15.0%	--	--
Core Fixed Income	\$1,530,623	7.5%	17.9%	10.1%
High Yield	--	--	--	1.4%
TIPS	--	7.5%	--	0.5%
Multi-Sector Fixed Income	--	5.0%	--	--
Non-US Developed Bonds	--	--	--	2.1%
Emerging Market Debt	--	--	--	1.1%
GAA/Risk Parity	\$1,968,491	10.0%	23.0%	--
Hedge Funds	--	10.0%	--	--
Absolute Return	\$945,297	10.0%	11.0%	--
Real Assets	--	10.0%	--	0.2%
Cash	\$99,007	--	1.2%	60.5%
Total	\$8,568,369	100.0%	100.0%	100.0%

-Asset Allocation vs. Policy Targets analytics are based on the Long Term Investment Pool.



REBALANCING PROPOSED BY NEPC

- The Board requested that NEPC provide guidance on creating additional liquidity for the portfolio
- The following transactions were submitted:

Asset	Transaction
Artisan Global Opportunities	Full Redemption
Hexavest Global Equity	Full Redemption
Franklin Templeton Global Multi-Sector Plus	Full Redemption
Vanguard TIPS	Full Redemption
PIMCO All Asset	Full Redemption
AQR GMAP	Full Redemption; Liquidation in process
SEG Baxter Street	Trimmed \$250k
Acadian Emerging Markets Equity	Trimmed \$300k
Vanguard VIPERS	Trimmed \$850k
William Blair Macro Allocation	Trimmed \$700k
Baird Core Bonds	Trimmed \$900k
Blackrock SIO	Trimmed \$1.2M



INVESTMENT MANAGER - DUE DILIGENCE STATUS

Investment Options	Manager Changes/ Announcements (Recent Quarter)	NEPC Due Diligence Committee Recommendations
AQR Global Market and Alternative Premia Offshore Strategy	Loss of Personnel: AQR Staff Reduction 02/20	1. No Action
Eaton Vance Hexavest Global Equity Fund	Loss of Personnel: Hexavest Strategic Reorganization 04/20	4. Client Review
Templeton Global Total Return	Change of Firm Ownership: Franklin Resources Purchases Legg Mason 03/20	2. Watch (Searches Ok)



INVESTMENT MANAGER - DUE DILIGENCE STATUS

Investment Options	Commentary	NEPC Rating
AQR Global Market and Alternative Premia Offshore Strategy	<p>AQR has announced a staff reduction of approximately 10% of their global workforce. AQR has seen assets fall from \$224 billion at year end 2017 to \$186 billion as of December 2019. AQR added head count in 2016 and 2017 in anticipation of future growth that has not materialized. These moves follow an ongoing trend in the asset management business of headcount reductions, however not all investment firms have publicly announced their reductions. NEPC is not aware of any senior level investment staff departing as part of this reduction. NEPC is aware of one Managing Director departing, Rudolpho Martel, who is a strategist on the Global Stock Selection team. NEPC will monitor AQR's staffing levels going forward and will report on any changes to our view.</p>	1
Eaton Vance Hexavest Global Equity Fund	<p>Hexavest informed NEPC Research of their strategic reorganization of the investment team to address disappointing investment results. They are eliminating the co-chief investment officer Vincent Delisle, three portfolio managers for both Asia and North America, and an analyst covering Europe. This directly aims to address the continued underperformance whereby the strategy trailed the MSCI World benchmark by over 700bps in both 2017 and 2019, and disappointed again most recently in March/1Q 2020 by failing to protect on the downside which is their main pitch. They have been adding talents and diversity to the team to try to address upside capture, but unfortunately that tempered with their capital preservation DNA. They are hoping to come back to their roots, downsizing the team to improve accountability and getting back to being purely top down (founder-Chairman-CIO Vital Proulx indicated that the departing individuals have deviated from the firm's DNA, being more return seeking and too stock-selection oriented over the years).</p> <p>Both Mr. Delisle and Mr. Durocher-Dumais are shareholders of the firm; their shares will be bought back using the company's retained dividends. Taking a step back, the team's leadership has changed materially since 2017, and is changing significantly now. Out of the original six founders only two are left including Chairman-CIO Vital Proulx: one founder retired in 2017, one left in 2018 and one is currently progressively moving towards retirement. There is no clear succession planning for Mr. Proulx. We are concerned with inconsistent performance track record, ongoing outflows due to poor performance, material changes with the team and the strategy, and the lack of succession planning which heightens key man risk. Therefore we are putting CLIENT REVIEW status on Hexavest as a firm, and downgrading World Equity strategy to a 4-rating.</p>	4
Templeton Global Total Return	<p>Franklin Resources ("FT") announced on February 18, 2020 that it has entered into an agreement to acquire Legg Mason ("LT") for \$4.5 billion in an all cash deal. As part of the transaction FT will assume \$2 billion in debt and gain ownership of Legg Mason's eight remaining affiliates. Entrust Global will be executing a management buyout of the subsidiary from Legg Mason/ Franklin Resources. The remaining eight affiliates include: Brandywine Global, Clarion Partners, ClearBridge Investments, Martin Currie, QS Investors, Royce Investment Partners, and Western Asset. All affiliate agreements with Legg Mason will transfer over to FT.</p> <p>The combined entity will be one of the world's largest independent global investment manager with a combined AUM of over 1.5 trillion, larger even than the recent transaction between Invesco and Oppenheimer</p>	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 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.



TOTAL FUND SUMMARY

NEPC, LLC

Eastern Michigan University - Board of Regents

TOTAL FUND PERFORMANCE SUMMARY

	Market Value (\$)	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank
Board of Regents Total Composite	19,889,206	-10.9	99	-6.8	99	-4.6	99	1.7	93	1.8	87
<i>Allocation Index</i>		-7.4	85	-2.2	71	0.3	72	4.2	22	3.3	31
<i>InvMetrics Trust Funds >60% Fixed Income Net Median</i>		-3.3		-0.4		2.0		3.1		2.9	
Short Term Investment Pool	11,320,837	0.3		1.0		1.5		1.0		0.6	
<i>91 Day T-Bills</i>		0.4	--	1.3	--	1.9	--	1.7	--	1.1	--
Long Term Investment Pool	8,568,369	-15.5	55	-11.5	78	-8.8	77	0.3	87	1.4	86
<i>Long Term Allocation Index</i>		-10.6	15	-5.5	16	-2.4	15	3.2	13	3.3	17
<i>Long Term Balanced Index</i>		-10.8	16	-6.0	17	-2.9	17	2.9	17	3.2	19
Total Equity	4,024,951	-24.3	68	-17.9	67	-14.5	62	0.6	54	2.7	47
<i>MSCI ACWI</i>		-21.4	51	-14.3	46	-11.3	47	1.5	45	2.8	45
<i>eV All Global Equity Net Median</i>		-21.3		-15.1		-11.9		0.9		2.3	
Total Fixed	2,574,927	-2.9	26	-1.1	27	1.4	34	2.3	40	2.7	27
<i>BBgBarc US Aggregate TR</i>		3.1	2	5.7	1	8.9	1	4.8	3	3.4	11
<i>eV All Global Fixed Inc Net Median</i>		-7.0		-4.5		-2.0		1.6		2.0	
GAA/ Risk Parity	1,968,491	-11.1	30	-10.4	62	-8.7	67	-1.8	75	-1.5	92
<i>60% MSCI World (Net) / 40% FTSE WGBI</i>		-12.2	41	-7.3	26	-3.6	21	3.2	12	3.4	7
<i>eV Global TAA Net Median</i>		-13.0		-9.9		-6.6		0.0		0.6	

Intermediate Term Balanced Index comprised of 50.0% Barclays Intermediate U.S. GV/CR Index and 50.0% BofA ML 1-3 Year Treasury Index.

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.



Eastern Michigan University - Board of Regents

TOTAL FUND PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Board of Regents Total Composite	19,889,206	100.0	-10.9	99	-6.8	99	-4.6	99	1.7	93	1.8	87	3.5	63	4.2	Apr-09
<i>Allocation Index</i>			-7.4	85	-2.2	71	0.3	72	4.2	22	3.3	31	--	--	--	Apr-09
<i>InvMetrics Trust Funds >60% Fixed Income Net Median</i>			-3.3		-0.4		2.0		3.1		2.9		4.0		5.0	Apr-09
Short Term Investment Pool	11,320,837	56.9	0.3		1.0		1.5		1.0		0.6		0.4		0.3	Apr-09
<i>91 Day T-Bills</i>			0.4	--	1.3	--	1.9	--	1.7	--	1.1	--	0.6	--	0.5	Apr-09
Northern Inst Govt Select MMKT	11,320,837	56.9	0.3	73	0.3	94	0.9	94	0.5	99	0.3	99	0.2	99	0.2	Nov-09
<i>91 Day T-Bills</i>			0.4	50	1.3	67	1.9	75	1.7	63	1.1	71	0.6	69	0.6	Nov-09
<i>eV US Cash Management Net Median</i>			0.4		1.4		2.0		1.8		1.3		0.7		0.7	Nov-09
Long Term Investment Pool	8,568,369	43.1	-15.5	55	-11.5	78	-8.8	77	0.3	87	1.4	86	4.4	84	4.1	Apr-09
<i>Long Term Allocation Index</i>			-10.6	15	-5.5	16	-2.4	15	3.2	13	3.3	17	--	--	--	Apr-09
<i>Long Term Balanced Index</i>			-10.8	16	-6.0	17	-2.9	17	2.9	17	3.2	19	5.0	61	4.6	Apr-09
Total Equity	4,024,951	20.2	-24.3	68	-17.9	67	-14.5	62	0.6	54	2.7	47	--	--	3.7	Jan-14
<i>MSCI ACWI</i>			-21.4	51	-14.3	46	-11.3	47	1.5	45	2.8	45	5.9	58	3.3	Jan-14
<i>eV All Global Equity Net Median</i>			-21.3		-15.1		-11.9		0.9		2.3		6.2		3.2	Jan-14
SEG Baxter	1,685,433	8.5	-21.2	35	-17.2	54	-12.2	41	--	--	--	--	--	--	0.2	Jul-17
<i>MSCI ACWI ex USA</i>			-23.4	53	-18.0	59	-15.6	60	-2.0	61	-0.6	65	2.1	81	-4.1	Jul-17
<i>eV All ACWI ex-US Equity Net Median</i>			-23.0		-16.7		-13.6		-0.9		0.3		3.7		-3.6	Jul-17
Acadian Emerging Markets Equity	530,591	2.7	-22.6	20	-17.0	27	-16.5	32	-3.4	56	-0.8	50	--	--	-1.2	Oct-14
<i>MSCI Emerging Markets</i>			-23.6	35	-18.2	37	-17.7	41	-1.6	32	-0.4	41	0.7	64	-0.8	Oct-14
<i>eV Emg Mkts Equity Net Median</i>			-25.0		-20.0		-19.0		-2.7		-0.9		1.3		-1.2	Oct-14
Vanguard Total Stock Market VIPERs	1,808,927	9.1	-20.9	34	-12.8	29	-9.3	31	4.0	32	--	--	--	--	5.9	Nov-16
<i>Russell 3000</i>			-20.9	35	-12.7	29	-9.1	30	4.0	32	5.8	25	10.1	28	6.0	Nov-16
<i>eV All US Equity Net Median</i>			-24.6		-18.7		-15.4		0.3		2.6		8.3		2.0	Nov-16

-Intermediate Term Balanced Index: 50.0% Barclays Intermediate U.S. GV/CR Index and 50.0% BofA ML 1-3 Year Treasury Index.

-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: (15% - Russell 3000)(5% - MSCI Emerging Markets)(15% - MSCI ACWI)(17.5% - Barclays Aggregate)(7.5 Barclays US TIPS)(5% - Barclays Multi-verse)(10% - 60% MSCI World (Net)/ 40% CITI WGBI)(10% - HFRI Fund of Funds Composite)(10% - PIMCO All Asset Index).



Eastern Michigan University - Board of Regents

TOTAL FUND PERFORMANCE DETAIL

	Market Value (\$)	% of Portfolio	3 Mo (%)	Rank	Fiscal YTD (%)	Rank	1 Yr (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank	Inception (%)	Inception Date
Total Fixed	2,574,927	12.9	-2.9	26	-1.1	27	1.4	34	2.3	40	2.7	27	--	--	2.8	Jan-14
BBgBarc US Aggregate TR			3.1	2	5.7	1	8.9	1	4.8	3	3.4	11	3.9	39	3.9	Jan-14
eV All Global Fixed Inc Net Median			-7.0		-4.5		-2.0		1.6		2.0		3.3		2.1	Jan-14
BlackRock- SIO	945,297	4.8	-5.8	99	-3.2	98	-0.7	98	1.5	98	1.5	99	--	--	1.8	Oct-14
BBgBarc US Aggregate TR			3.1	6	5.7	5	8.9	5	4.8	9	3.4	25	3.9	85	3.7	Oct-14
eV US Core Plus Fixed Inc Net Median			-0.6		2.3		5.5		3.9		3.1		4.3		3.4	Oct-14
Baird - Core Bond	1,530,623	7.7	1.5	58	4.2	45	7.5	45	4.5	38	3.4	26	--	--	3.5	Dec-14
BBgBarc US Aggregate TR			3.1	15	5.7	11	8.9	13	4.8	14	3.4	29	3.9	55	3.5	Dec-14
eV US Core Fixed Inc Net Median			1.7		4.1		7.3		4.4		3.2		3.9		3.3	Dec-14
US Treasury	99,007	0.5														
GAA/ Risk Parity	1,968,491	9.9	-11.1	30	-10.4	62	-8.7	67	-1.8	75	-1.5	92	--	--	-1.0	Dec-14
60% MSCI World (Net) / 40% FTSE WGBI			-12.2	41	-7.3	26	-3.6	21	3.2	12	3.4	7	5.0	25	3.0	Dec-14
eV Global TAA Net Median			-13.0		-9.9		-6.6		0.0		0.6		3.8		0.7	Dec-14
William Blair Macro Allocation	703,106	3.5	-7.1	17	-5.8	14	-4.2	28	--	--	--	--	--	--	-0.8	Aug-17
60% MSCI World (Net) / 40% FTSE WGBI			-12.2	41	-7.3	26	-3.6	21	3.2	12	3.4	7	5.0	25	1.4	Aug-17
eV Global TAA Net Median			-13.0		-9.9		-6.6		0.0		0.6		3.8		-1.7	Aug-17
AQR Global Market and Alternative Premia Offshore Fund	1,265,385	6.4	-14.6	62	-14.8	84	-12.8	83	--	--	--	--	--	--	-8.2	Mar-18
60% MSCI World (Net) / 40% FTSE WGBI			-12.2	41	-7.3	26	-3.6	21	3.2	12	3.4	7	5.0	25	-0.8	Mar-18



Eastern Michigan University - Board of Regents

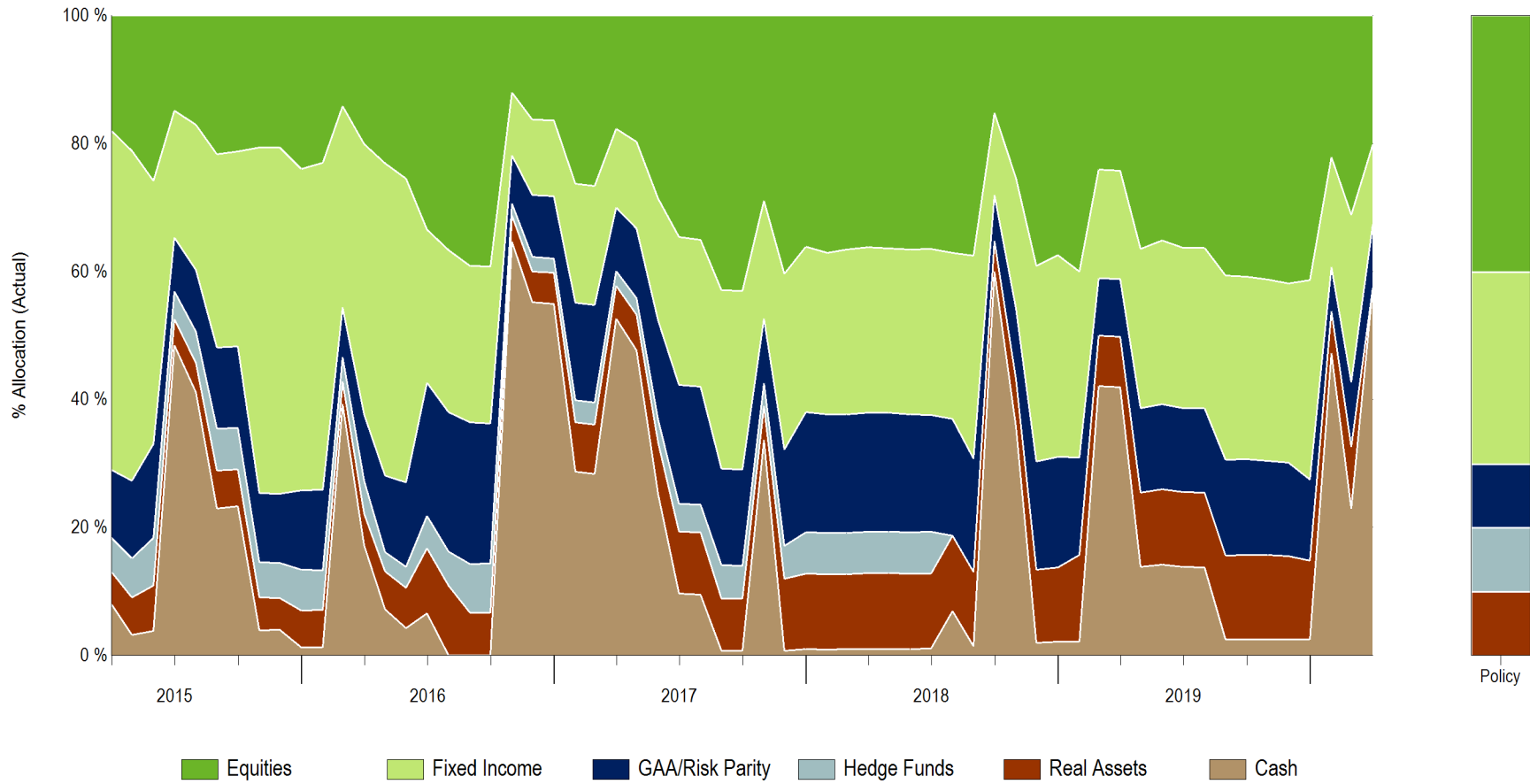
TOTAL FUND ASSET GROWTH SUMMARY

	Quarter Ending March 31, 2020					Ending Market Value
	Beginning Market Value	Contributions	Withdrawals	Net Cash Flow	Net Investment Change	
Acadian Emerging Markets Equity	\$1,116,081	\$0	-\$300,000	-\$300,000	-\$285,490	\$530,591
AQR Global Market and Alternative Premia Offshore Fund	\$1,482,338	\$0	\$0	\$0	-\$216,953	\$1,265,385
Baird - Core Bond	\$2,429,243	\$0	-\$900,000	-\$900,000	\$1,380	\$1,530,623
Bank of Ann Arbor Trust Cash	\$500,295	\$23,019	-\$524,336	-\$501,317	\$1,021	\$0
BlackRock- SIO	\$2,304,441	\$0	-\$1,200,000	-\$1,200,000	-\$159,144	\$945,297
Northern Inst Govt Select MMKT	\$0	\$42,037,842	-\$30,741,513	\$11,296,329	\$24,508	\$11,320,837
SEG Baxter	\$2,138,487	\$0	\$0	\$0	-\$453,054	\$1,685,433
US Treasury	\$95,040	\$0	\$0	\$0	\$3,967	\$99,007
Vanguard Total Stock Market VIPERs	\$3,444,365	\$0	-\$850,013	-\$850,013	-\$785,425	\$1,808,927
William Blair Macro Allocation	\$1,526,259	\$0	-\$700,000	-\$700,000	-\$123,153	\$703,106
Z Terminated - Franklin Templeton- Global Multi-Sector Plus	\$1,334,031	\$0	-\$1,255,228	-\$1,255,228	-\$78,803	--
Z Terminated Artisan Global Opportunities	\$1,565,387	\$0	-\$1,210,812	-\$1,210,812	-\$354,575	--
Z-Terminated Hexavest GE	\$1,551,578	\$0	-\$1,040,136	-\$1,040,136	-\$511,441	--
Z-Terminated PIMCO All Asset	\$2,918,795	\$0	-\$2,275,374	-\$2,275,374	-\$643,421	--
Z-Terminated Vanguard Inflation Protected Fund	\$1,344,048	\$0	-\$1,288,998	-\$1,288,998	-\$55,050	--
Total	\$23,750,387	\$42,060,862	-\$42,286,411	-\$225,549	-\$3,635,633	\$19,889,206

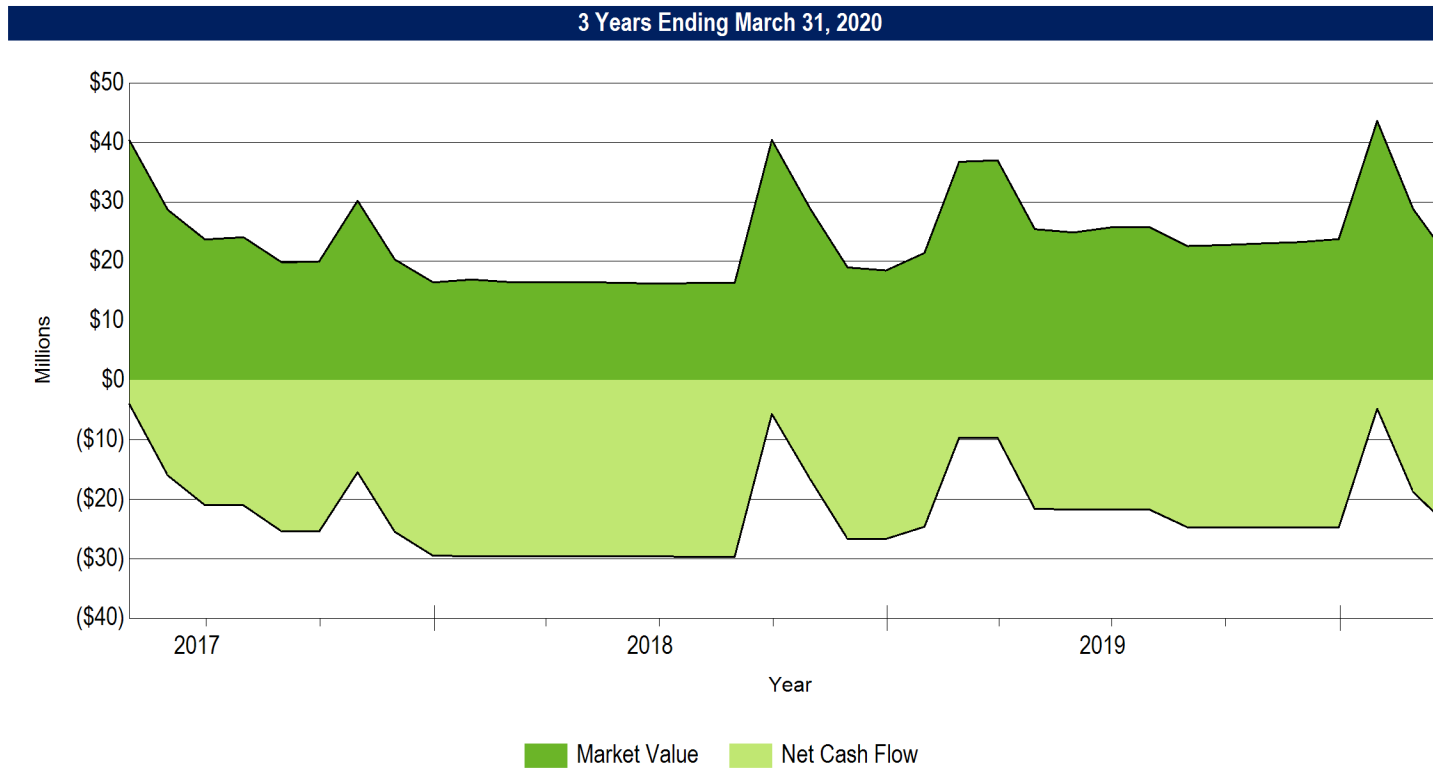


TOTAL FUND ASSET ALLOCATION HISTORY

Asset Allocation History



TOTAL FUND ASSET GROWTH SUMMARY

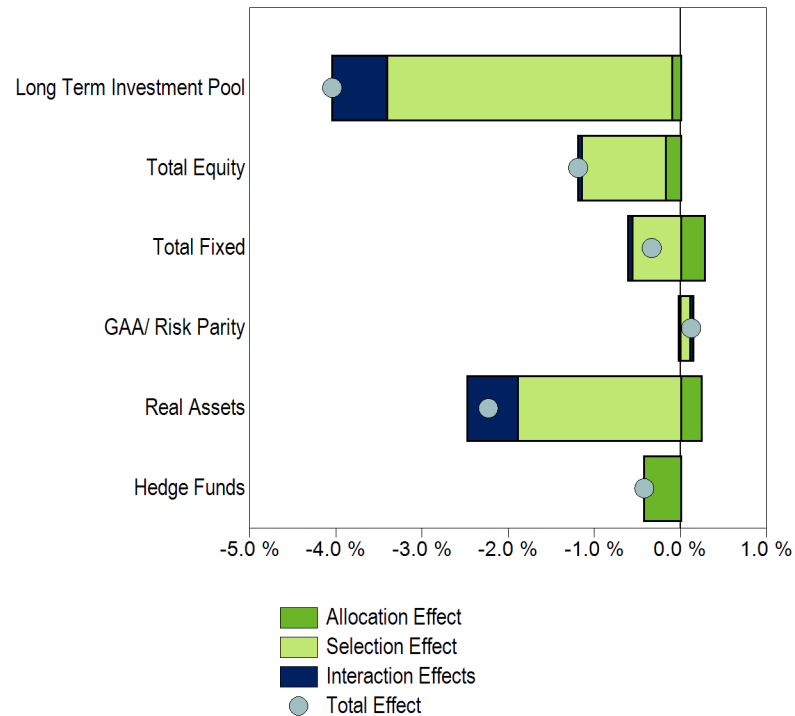


	Last Three Months	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$23,750,387	\$25,713,932	\$37,000,286	\$44,156,593
Contributions	\$42,060,862	\$43,539,175	\$43,680,768	\$113,847,834
Withdrawals	-\$42,314,678	-\$46,867,761	-\$59,047,410	-\$138,876,018
Net Cash Flow	-\$253,817	-\$3,328,586	-\$15,366,642	-\$25,028,184
Net Investment Change	-\$3,607,365	-\$2,496,140	-\$1,744,439	\$760,797
Ending Market Value	\$19,889,206	\$19,889,206	\$19,889,206	\$19,889,206



LONG TERM INVESTMENT POOL

Attribution Effects
3 Months Ending March 31, 2020

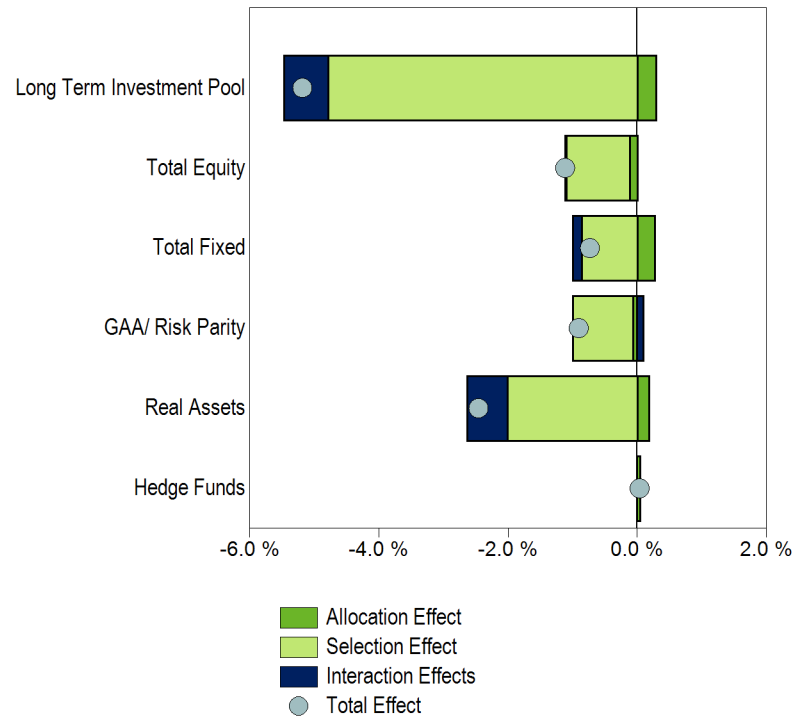


Attribution Summary							
3 Months Ending March 31, 2020							
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Equity	-24.3%	-21.9%	-2.3%	-1.0%	-0.2%	0.0%	-1.2%
Total Fixed	-2.9%	-0.9%	-2.0%	-0.6%	0.3%	0.0%	-0.3%
GAA/ Risk Parity	-11.1%	-12.2%	1.2%	0.1%	0.0%	0.0%	0.1%
Real Assets	-22.0%	-2.9%	-19.1%	-1.9%	0.2%	-0.6%	-2.2%
Hedge Funds	--	--	--	--	-0.4%	--	--
Total	-15.6%	-11.6%	-4.0%	-3.3%	-0.1%	-0.6%	-4.0%



LONG TERM INVESTMENT POOL

Attribution Effects
1 Year Ending March 31, 2020

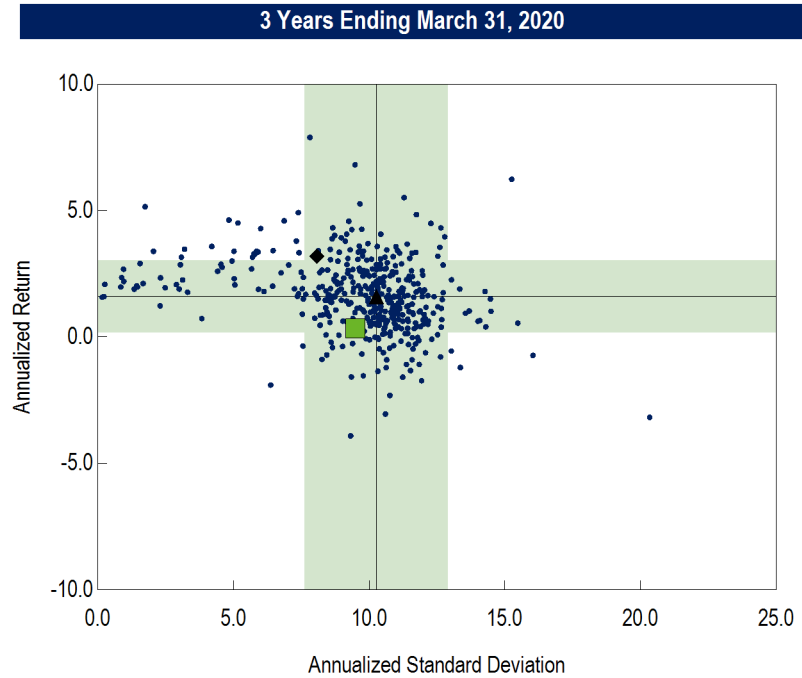


Attribution Summary
1 Year Ending March 31, 2020

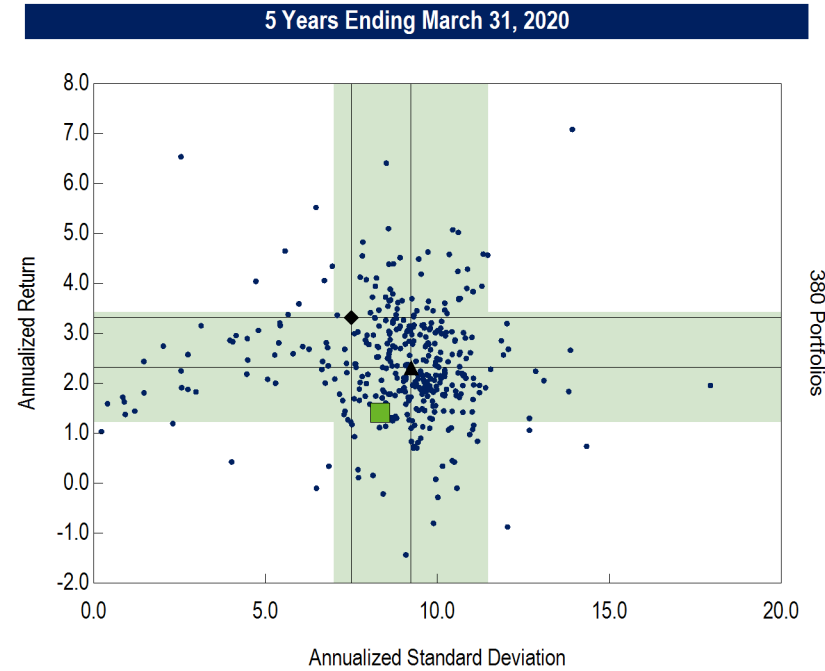
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Equity	-14.5%	-12.1%	-2.4%	-1.0%	-0.1%	0.0%	-1.1%
Total Fixed	1.4%	4.8%	-3.3%	-0.9%	0.3%	-0.1%	-0.7%
GAA/ Risk Parity	-8.7%	-3.6%	-5.1%	-0.9%	-0.1%	0.1%	-0.9%
Real Assets	-17.0%	3.3%	-20.3%	-2.0%	0.2%	-0.6%	-2.5%
Hedge Funds	--	--	--	--	0.0%	--	--
Total	-8.9%	-3.7%	-5.2%	-4.8%	0.3%	-0.7%	-5.2%



LONG TERM INVESTMENT POOL RISK VS. RETURN



- Long Term Investment Pool
- ◆ Long Term Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics All E&F < \$50mm Net



- Long Term Investment Pool
- ◆ Long Term Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics All E&F < \$50mm Net

3 Years Ending March 31, 2020						
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank
Long Term Investment Pool	0.33%	87	9.50%	35	-0.15	87
Long Term Allocation Index	3.18%	13	8.07%	15	0.18	13
Long Term Balanced Index	2.93%	16	8.09%	16	0.15	17

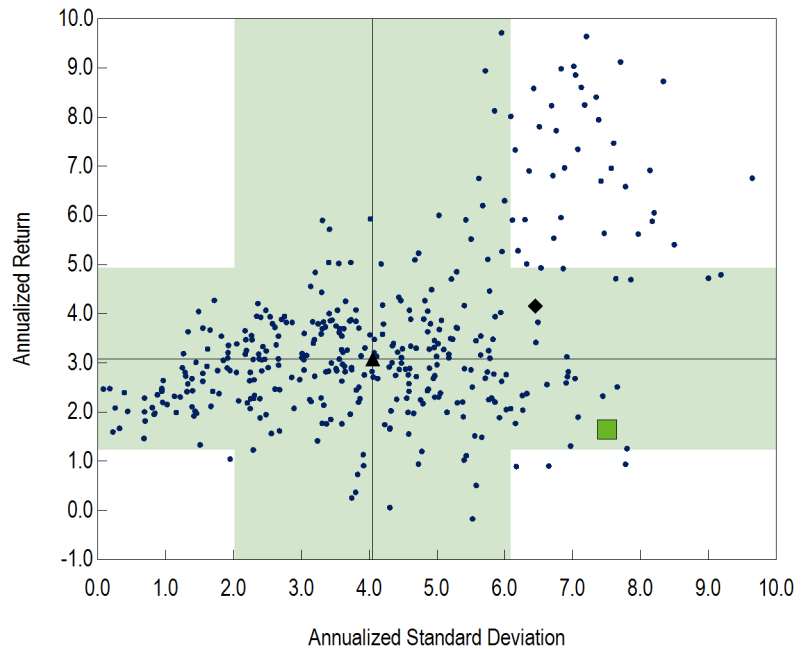
5 Years Ending March 31, 2020						
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank
Long Term Investment Pool	1.41%	86	8.33%	27	0.03	85
Long Term Allocation Index	3.32%	17	7.50%	16	0.29	15
Long Term Balanced Index	3.24%	18	7.50%	16	0.28	16

- Above Risk vs. Return analytics are based on the Long Term Investment Pool.



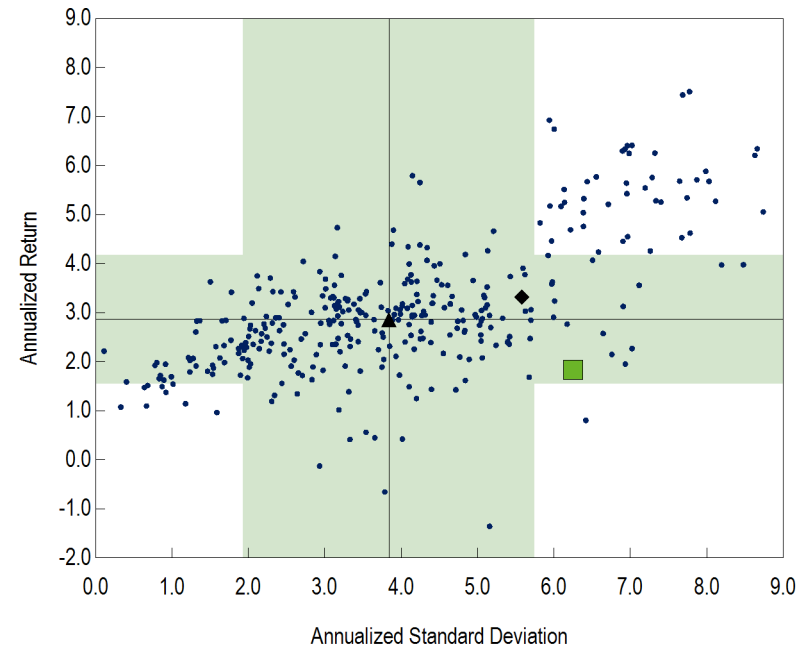
TOTAL FUND RISK VS. RETURN

3 Years Ending March 31, 2020



- Board of Regents Total Composite
- ◆ Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Trust Funds >60% Fixed Income Net

5 Years Ending March 31, 2020



- Board of Regents Total Composite
- ◆ Allocation Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Trust Funds >60% Fixed Income Net

	3 Years Ending March 31, 2020					
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank

Board of Regents Total Composite	1.65%	93	7.50%	93	-0.01	92
Allocation Index	4.16%	22	6.45%	22	0.38	54

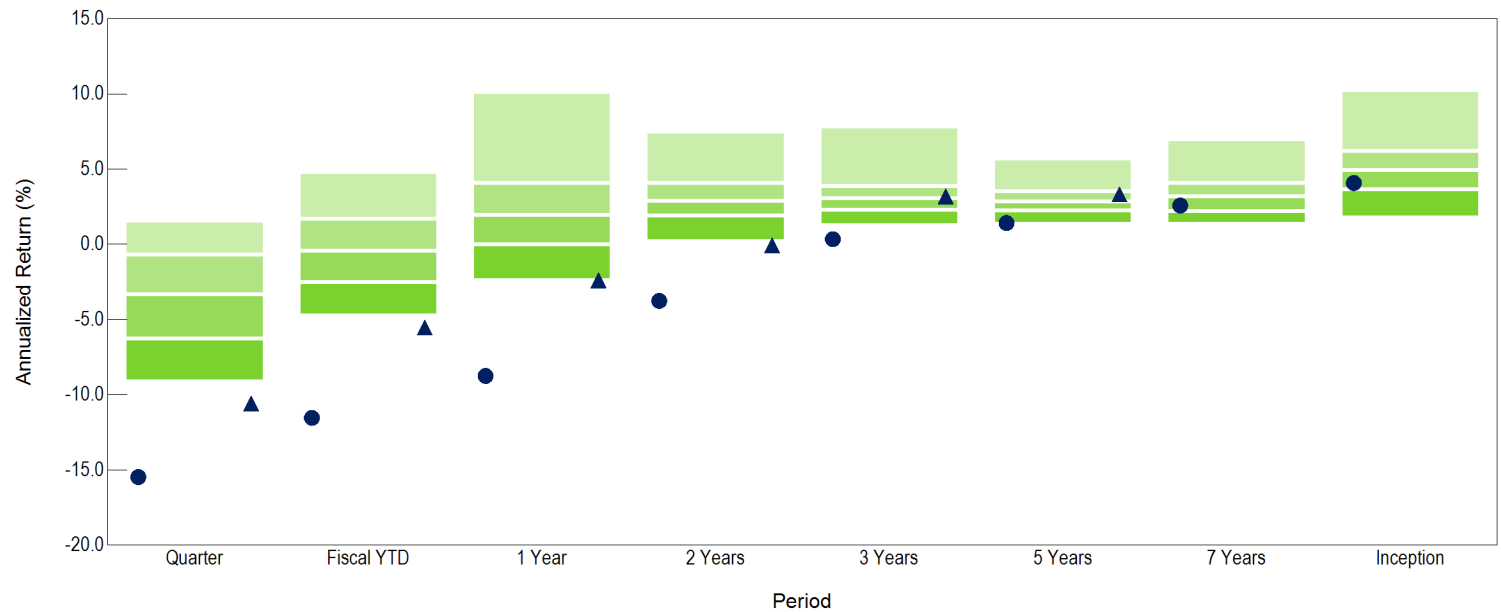
	5 Years Ending March 31, 2020					
	Anlzd Ret	Rank	Anlzd Std Dev	Rank	Sharpe Ratio	Rank

Board of Regents Total Composite	1.84%	87	6.25%	87	0.11	93
Allocation Index	3.32%	31	5.58%	31	0.39	70



RETURN SUMMARY VS. PEER UNIVERSE

Long Term Investment Pool vs. InvMetrics Trust Funds >60% Fixed Income Net



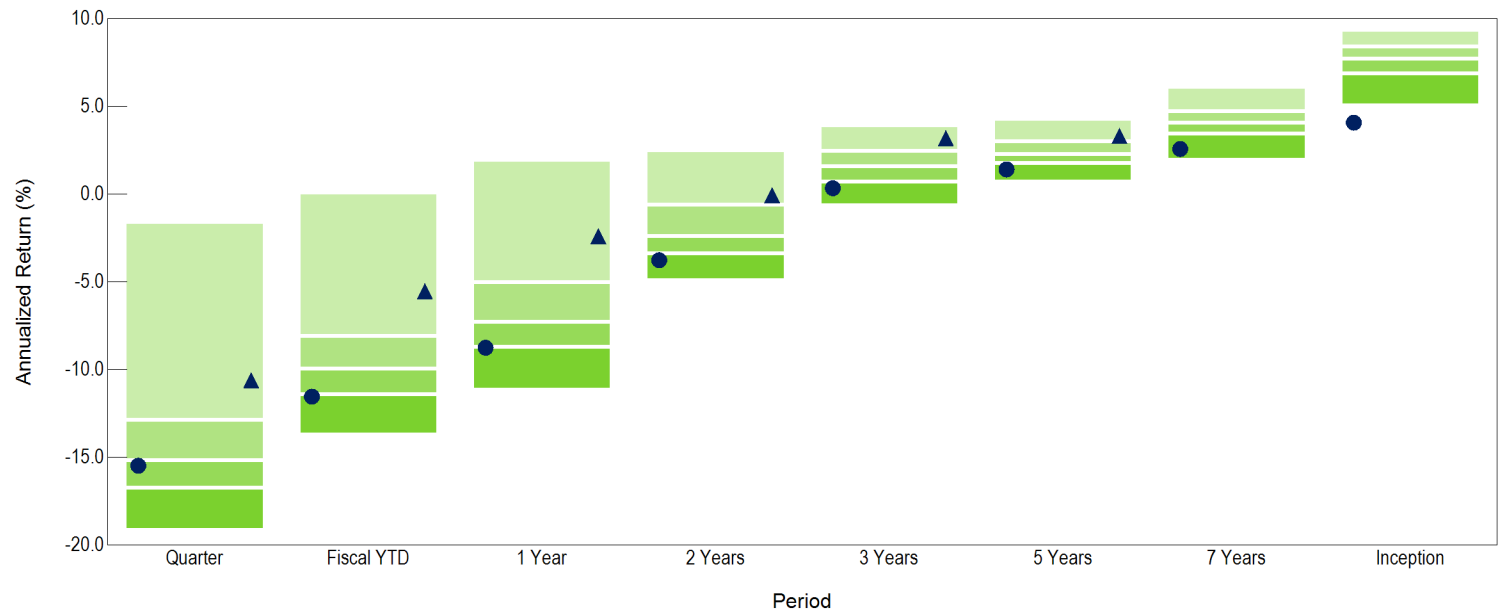
	Return (Rank)															
5th Percentile	1.5	4.8	10.1	7.5	7.8	5.7	7.0	10.2								
25th Percentile	-0.7	1.7	4.1	4.1	3.9	3.6	4.1	6.2								
Median	-3.3	-0.4	2.0	2.9	3.1	2.9	3.2	5.0								
75th Percentile	-6.3	-2.5	0.0	1.9	2.3	2.3	2.2	3.7								
95th Percentile	-9.1	-4.7	-2.4	0.2	1.3	1.4	1.4	1.8								
# of Portfolios	429	425	424	402	380	339	314	247								
● Long Term Investment Pool	-15.5	(99)	-11.5	(99)	-8.8	(99)	-3.8	(99)	0.3	(99)	1.4	(95)	2.6	(70)	4.1	(66)
▲ Long Term Allocation Index	-10.6	(98)	-5.5	(97)	-2.4	(96)	-0.1	(97)	3.2	(46)	3.3	(31)	--	(--)	--	(--)

-The above Return Summary vs. Peer Universe analytic is based on the Long Term Investment Pool.



RETURN SUMMARY VS. PEER UNIVERSE

Long Term Investment Pool vs. InvMetrics All E&F < \$50mm Net



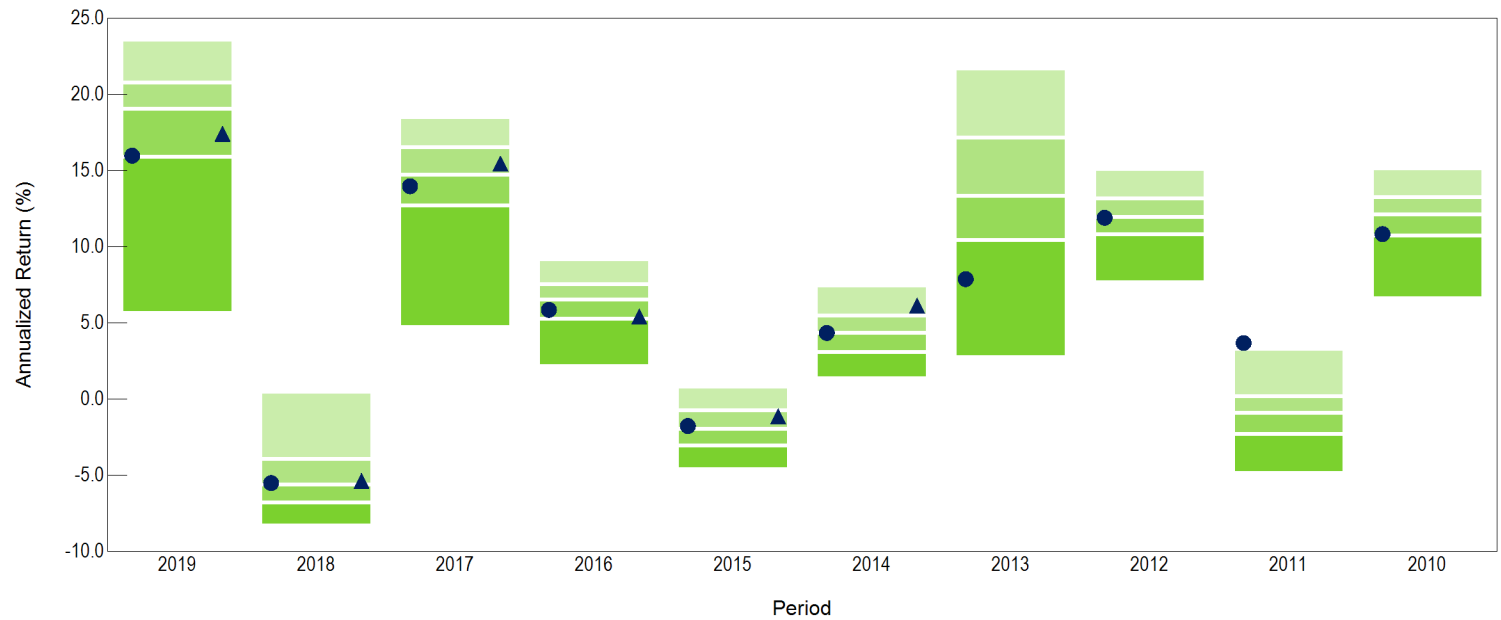
	Return (Rank)															
5th Percentile	-1.6	0.1	1.9	2.5	3.9	4.3	6.1	9.3								
25th Percentile	-12.9	-8.1	-5.0	-0.6	2.5	3.0	4.7	8.4								
Median	-15.1	-9.9	-7.3	-2.4	1.6	2.3	4.1	7.8								
75th Percentile	-16.7	-11.4	-8.7	-3.4	0.7	1.8	3.5	6.9								
95th Percentile	-19.1	-13.7	-11.1	-4.9	-0.6	0.7	2.0	5.1								
# of Portfolios	528	517	509	484	445	380	319	224								
● Long Term Investment Pool	-15.5	(55)	-11.5	(78)	-8.8	(77)	-3.8	(83)	0.3	(87)	1.4	(86)	2.6	(89)	4.1	(98)
▲ Long Term Allocation Index	-10.6	(15)	-5.5	(16)	-2.4	(15)	-0.1	(21)	3.2	(13)	3.3	(17)	--	(--)	--	(--)

-The above Return Summary vs. Peer Universe analytic is based on the Long Term Investment Pool.



RETURN SUMMARY VS. PEER UNIVERSE

Long Term Investment Pool vs. InvMetrics All E&F < \$50mm Net



	Return (Rank)																			
5th Percentile	23.6	0.5	18.5	9.2	0.8	7.5	21.7	15.1	3.3	15.1										
25th Percentile	20.8	-3.9	16.6	7.6	-0.7	5.5	17.2	13.2	0.2	13.3										
Median	19.1	-5.6	14.8	6.6	-1.9	4.4	13.4	12.0	-0.9	12.1										
75th Percentile	15.9	-6.8	12.7	5.3	-3.0	3.1	10.5	10.9	-2.3	10.7										
95th Percentile	5.7	-8.3	4.8	2.2	-4.6	1.4	2.8	7.7	-4.8	6.7										
# of Portfolios	528	673	486	496	466	400	267	249	216	194										
● Long Term Investment Pool	16.0	(75)	-5.5	(49)	14.0	(62)	5.9	(68)	-1.8	(46)	4.3	(51)	7.9	(84)	11.9	(53)	3.7	(4)	10.8	(74)
▲ Long Term Allocation Index	17.4	(68)	-5.4	(46)	15.5	(42)	5.4	(73)	-1.1	(35)	6.2	(14)	--	(--)	--	(--)	--	(--)	--	(--)

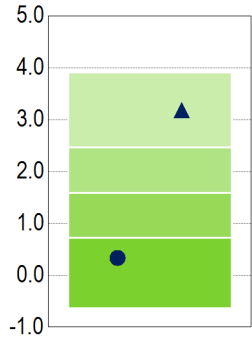
-The above Return Summary vs. Peer Universe analytic is based on the Long Term Investment Pool.



RISK STATISTICS VS. PEER UNIVERSE

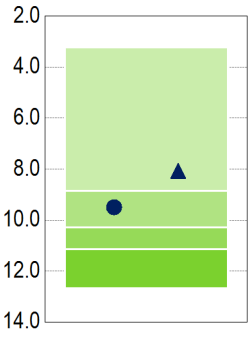
Long Term Investment Pool vs. InvMetrics All E&F < \$50mm Net 3 Years

Anlzd Return



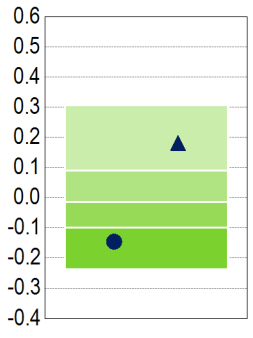
● Long Term Investment Pool	
Value	0.33
Rank	87
▲ Long Term Allocation Index	
Value	3.18
Rank	13
Universe	
5th %tile	3.91
25th %tile	2.47
Median	1.60
75th %tile	0.73
95th %tile	-0.62

Anlzd Standard Deviation



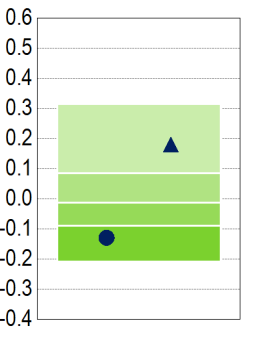
● Long Term Investment Pool	
Value	9.50
Rank	35
▲ Long Term Allocation Index	
Value	8.07
Rank	15
Universe	
5th %tile	3.21
25th %tile	8.83
Median	10.27
75th %tile	11.12
95th %tile	12.65

Sharpe Ratio



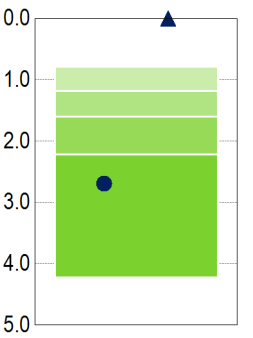
● Long Term Investment Pool	
Value	-0.15
Rank	87
▲ Long Term Allocation Index	
Value	0.18
Rank	13
Universe	
5th %tile	0.31
25th %tile	0.09
Median	-0.01
75th %tile	-0.10
95th %tile	-0.24

Sortino Ratio RF



● Long Term Investment Pool	
Value	-0.13
Rank	87
▲ Long Term Allocation Index	
Value	0.18
Rank	13
Universe	
5th %tile	0.32
25th %tile	0.09
Median	-0.01
75th %tile	-0.09
95th %tile	-0.21

Tracking Error



● Long Term Investment Pool	
Value	2.69
Rank	87
▲ Long Term Allocation Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.79
25th %tile	1.18
Median	1.60
75th %tile	2.21
95th %tile	4.21

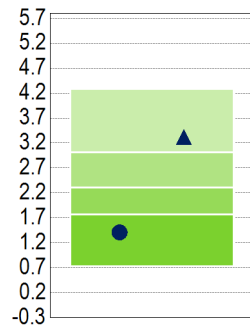
-The above Risk Statistics vs. Peer Universe analytics are based on the Long Term Investment Pool.



RISK STATISTICS VS. PEER UNIVERSE

Long Term Investment Pool vs. InvMetrics All E&F < \$50mm Net 5 Years

Anlzd Return

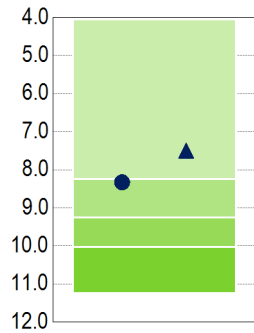


● Long Term Investment Pool
Value 1.41
Rank 86

▲ Long Term Allocation Index
Value 3.32
Rank 17

Universe
5th %tile 4.29
25th %tile 3.03
Median 2.32
75th %tile 1.78
95th %tile 0.74

Anlzd Standard Deviation

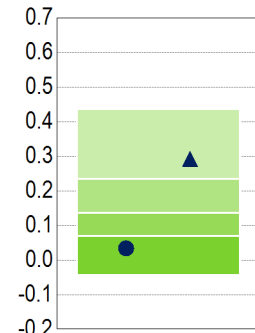


● Long Term Investment Pool
Value 8.33
Rank 27

▲ Long Term Allocation Index
Value 7.50
Rank 16

Universe
5th %tile 4.05
25th %tile 8.23
Median 9.24
75th %tile 10.02
95th %tile 11.23

Sharpe Ratio

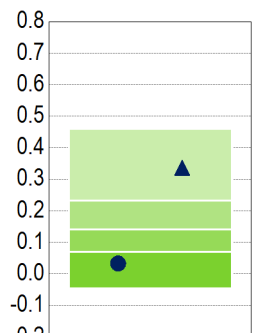


● Long Term Investment Pool
Value 0.03
Rank 85

▲ Long Term Allocation Index
Value 0.29
Rank 15

Universe
5th %tile 0.44
25th %tile 0.24
Median 0.14
75th %tile 0.07
95th %tile -0.04

Sortino Ratio RF

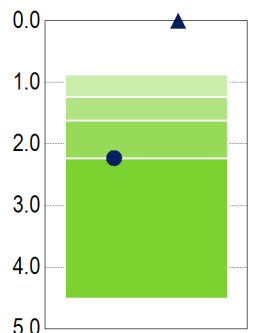


● Long Term Investment Pool
Value 0.03
Rank 84

▲ Long Term Allocation Index
Value 0.34
Rank 12

Universe
5th %tile 0.46
25th %tile 0.23
Median 0.14
75th %tile 0.07
95th %tile -0.04

Tracking Error



● Long Term Investment Pool
Value 2.23
Rank 76

▲ Long Term Allocation Index
Value 0.00
Rank 1

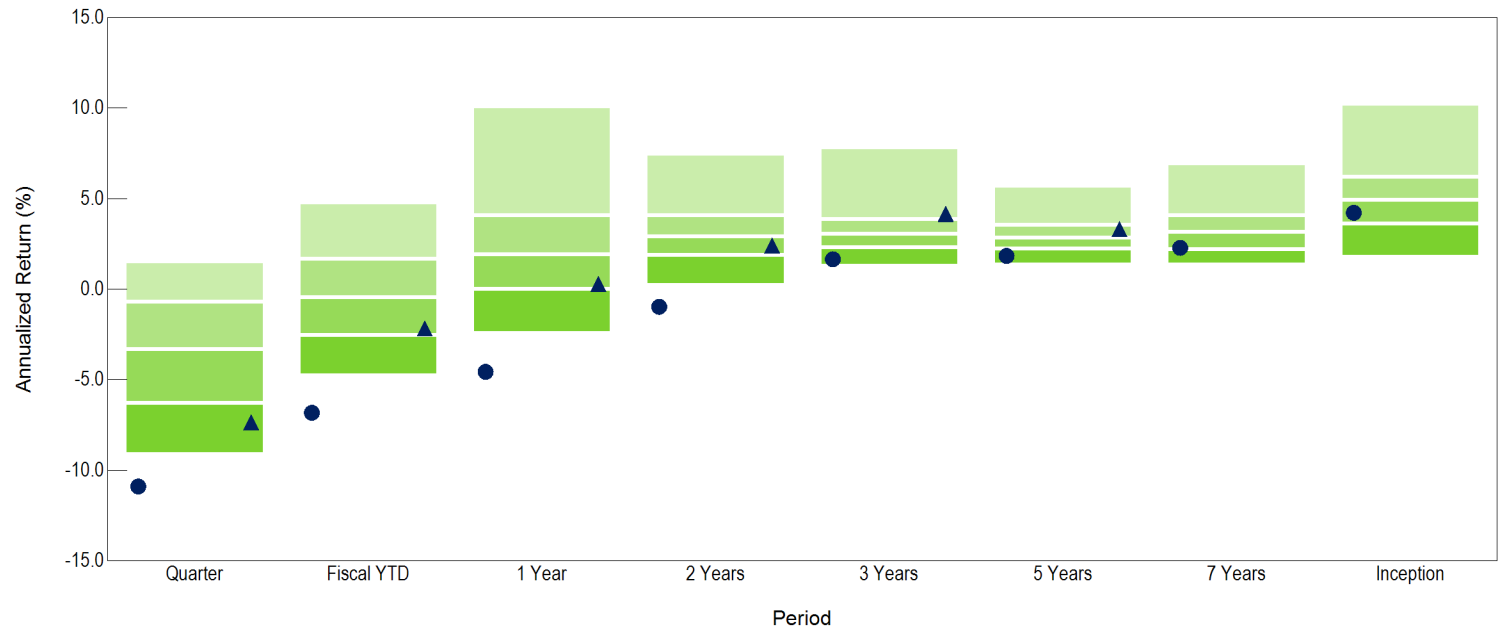
Universe
5th %tile 0.87
25th %tile 1.22
Median 1.61
75th %tile 2.22
95th %tile 4.50

-The above Risk Statistics vs. Peer Universe analytics are based on the Long Term Investment Pool.



RETURN SUMMARY VS. PEER UNIVERSE

Board of Regents Total Composite vs. InvMetrics Trust Funds >60% Fixed Income Net

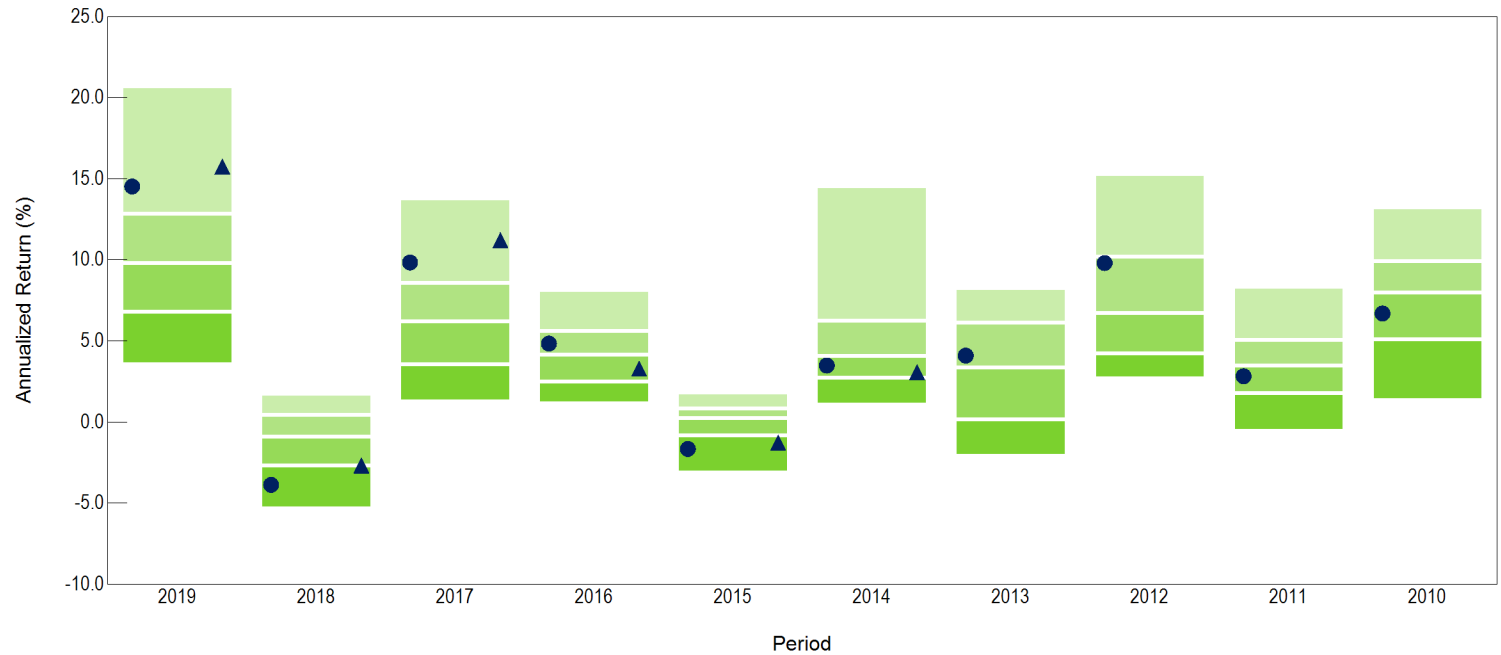


	Return (Rank)															
5th Percentile	1.5	4.8	10.1	7.5	7.8	5.7	7.0	10.2								
25th Percentile	-0.7	1.7	4.1	4.1	3.9	3.6	4.1	6.2								
Median	-3.3	-0.4	2.0	2.9	3.1	2.9	3.2	5.0								
75th Percentile	-6.3	-2.5	0.0	1.9	2.3	2.3	2.2	3.7								
95th Percentile	-9.1	-4.7	-2.4	0.2	1.3	1.4	1.4	1.8								
# of Portfolios	429	425	424	402	380	339	314	247								
● Board of Regents Total Composite	-10.9	(99)	-6.8	(99)	-4.6	(99)	-1.0	(99)	1.7	(93)	1.8	(87)	2.3	(75)	4.2	(64)
▲ Allocation Index	-7.4	(85)	-2.2	(71)	0.3	(72)	2.4	(66)	4.2	(22)	3.3	(31)	--	(--)	--	(--)



RETURN SUMMARY VS. PEER UNIVERSE

Board of Regents Total Composite vs. InvMetrics Trust Funds >60% Fixed Income Net



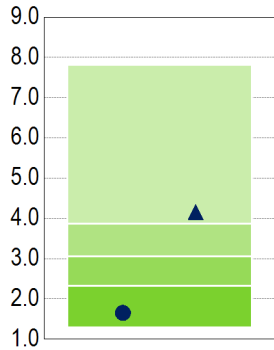
	Return (Rank)													
	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
5th Percentile	20.7	1.7	13.8	8.1	1.8	14.5	8.3	15.3	8.3	13.2				
25th Percentile	12.9	0.5	8.6	5.6	0.9	6.3	6.2	10.2	5.1	9.9				
Median	9.8	-0.9	6.2	4.2	0.3	4.1	3.4	6.7	3.5	8.0				
75th Percentile	6.8	-2.7	3.6	2.5	-0.8	2.7	0.2	4.3	1.8	5.1				
95th Percentile	3.6	-5.3	1.3	1.2	-3.1	1.1	-2.1	2.7	-0.5	1.4				
# of Portfolios	401	429	336	298	309	201	46	46	44	43				
● Board of Regents Total Composite	14.5 (17)	-3.9 (87)	9.8 (17)	4.8 (38)	-1.7 (84)	3.5 (63)	4.1 (44)	9.8 (29)	2.8 (55)	6.7 (59)				
▲ Allocation Index	15.7 (13)	-2.7 (76)	11.2 (11)	3.3 (64)	-1.3 (80)	3.1 (70)	-- (--)	-- (--)	-- (--)	-- (--)				



RISK STATISTICS VS. PEER UNIVERSE

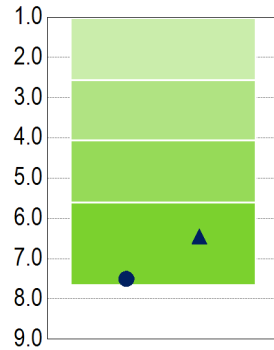
Total Composite vs. InvestorForce Trust Funds >60% Fixed Income Net
3 Years

Anlzd Return



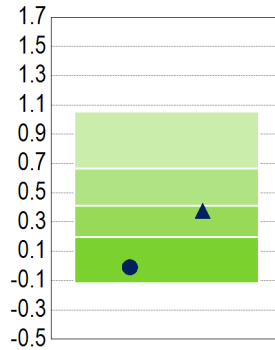
● Board of Regents Total Composite	
Value	1.65
Rank	93
▲ Allocation Index	
Value	4.16
Rank	22
Universe	
5th %tile	7.81
25th %tile	3.89
Median	3.08
75th %tile	2.33
95th %tile	1.31

Anlzd Standard Deviation



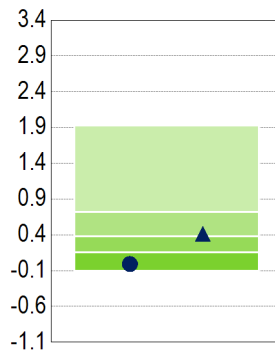
● Board of Regents Total Composite	
Value	7.50
Rank	95
▲ Allocation Index	
Value	6.45
Rank	86
Universe	
5th %tile	1.02
25th %tile	2.55
Median	4.05
75th %tile	5.59
95th %tile	7.64

Sharpe Ratio



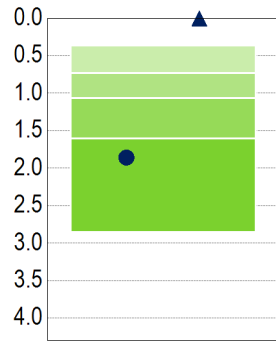
● Board of Regents Total Composite	
Value	-0.01
Rank	92
▲ Allocation Index	
Value	0.38
Rank	54
Universe	
5th %tile	1.06
25th %tile	0.67
Median	0.41
75th %tile	0.20
95th %tile	-0.11

Sortino Ratio RF



● Board of Regents Total Composite	
Value	-0.01
Rank	92
▲ Allocation Index	
Value	0.41
Rank	48
Universe	
5th %tile	1.93
25th %tile	0.73
Median	0.38
75th %tile	0.16
95th %tile	-0.10

Tracking Error



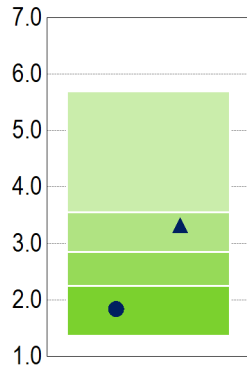
● Board of Regents Total Composite	
Value	1.86
Rank	81
▲ Allocation Index	
Value	0.00
Rank	1
Universe	
5th %tile	0.36
25th %tile	0.72
Median	1.06
75th %tile	1.60
95th %tile	2.84



RISK STATISTICS VS. PEER UNIVERSE

Total Composite vs. InvestorForce Trust Funds >60% Fixed Income Net
5 Years

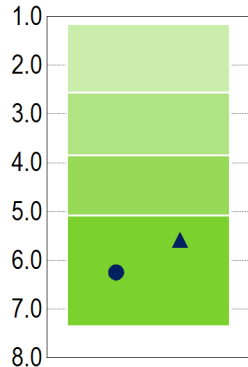
Anlzd Return



● Board of Regents Total Comp
Value 1.84
Rank 87
▲ Allocation Index
Value 3.32
Rank 31

Universe
5th %tile 5.69
25th %tile 3.57
Median 2.86
75th %tile 2.26
95th %tile 1.37

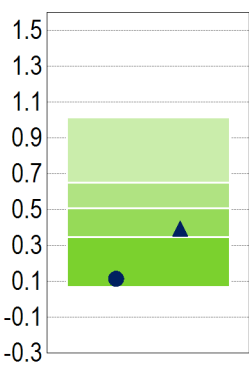
Anlzd Standard Deviation



● Board of Regents Total Comp
Value 6.25
Rank 87
▲ Allocation Index
Value 5.58
Rank 81

Universe
5th %tile 1.16
25th %tile 2.55
Median 3.84
75th %tile 5.07
95th %tile 7.34

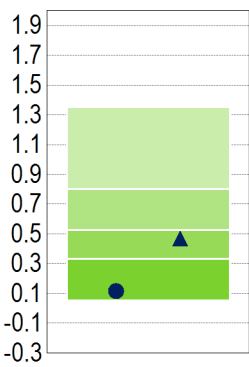
Sharpe Ratio



● Board of Regents Total Comp
Value 0.11
Rank 93
▲ Allocation Index
Value 0.39
Rank 70

Universe
5th %tile 1.01
25th %tile 0.65
Median 0.51
75th %tile 0.35
95th %tile 0.07

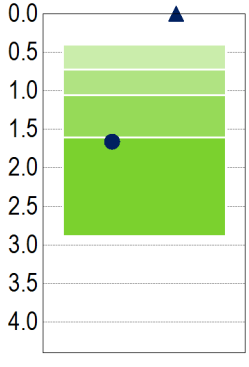
Sortino Ratio RF



● Board of Regents Total Comp
Value 0.12
Rank 93
▲ Allocation Index
Value 0.47
Rank 59

Universe
5th %tile 1.35
25th %tile 0.81
Median 0.53
75th %tile 0.34
95th %tile 0.06

Tracking Error



● Board of Regents Total Comp
Value 1.66
Rank 77
▲ Allocation Index
Value 0.00
Rank 1

Universe
5th %tile 0.40
25th %tile 0.71
Median 1.05
75th %tile 1.59
95th %tile 2.88



APPENDIX

NEPC, LLC

NEPC Q1 2020 ASSUMPTIONS

NEPC, LLC

ASSET CLASS ASSUMPTIONS OVERVIEW

This report details NEPC 3/31/2020 Capital Market Assumptions

Assumptions are published quarterly reflecting quarter-end market data

Forward-looking asset class returns are higher and materially differ from the prior quarter in terms of the range of potential outcomes

Embrace diversification to navigate the wide paths of potential economic scenarios

We recommend investors consider increasing strategic targets to equity and credit as the long-term return differential over Treasuries is wider

We encourage a focus on strategic asset allocation as a 10-year horizon is representative of a long-term strategic view and should not be conflated with shorter-term market views

The use of quarterly capital market assumptions should be aligned with clients' fiscal year or planning cycle and many will use 12/31

We expect clients will use one set of assumptions for asset allocation projects but given recent market activity, we anticipate greater use of 3/31 assumptions

We recommend using 3/31 assumptions to examine pending asset allocation changes based on last quarter's capital market assumptions and current opportunities. In addition, clients in the process of resetting expected return assumptions should use 3/31 data

The availability of quarterly assumptions carry practical considerations

Quarterly assumptions should be used in conjunction with quarterly asset values but private markets are a complication where losses have yet to be reflected

Clients needing a calendar year assumption before January can use 9/30 assumptions



ASSUMPTION DEVELOPMENT

Capital market assumptions are published for over 65 asset classes

Assumptions include 10-year and 30-year return forecasts, volatility expectations, and correlations

NEPC publishes both 10- and 30-year return forecasts

10-year forecasts are appropriate for strategic asset allocation analysis and are influenced by global forecasts/pricing of growth, inflation, and yield, with spreads and valuations converging to NEPC-defined terminal values

30-year forecasts are appropriate for actuarial inputs and long-term planning

Based on data as of March 31, 2020

Assumptions are developed by the Asset Allocation Committee and approved by the Partners Research Committee (PRC)

Assumptions are developed with proprietary valuation models and rely on a core building block methodology

Asset Allocation Process

Finalize List of New Asset Classes

Discuss Outlook with NEPC Beta Groups

Calculate Asset Class Volatility and Correlation Assumptions

Set Model Terminal Values, Reflecting Long-Term Views on Key Inputs

Update Asset Models as of Quarter-End

Review Model Output and Produce Updated Return Assumptions

Present Draft Assumptions to the PRC

Assumptions published on the 15th calendar day following quarter-end



BUILDING BLOCKS METHODOLOGY

Forward-looking asset class models incorporate current and forecasted market and economic data to inform expected returns

Quantitative inputs combined with a conversion to long-term terminal values drive the 10-year outlook

Asset components are aggregated to capture core drivers of return across asset classes – forming the foundation of our building blocks framework

Building block components will differ for equity, fixed income, and real assets



10 YEAR RETURN ASSUMPTIONS (ANNUALIZED)

	Asset Class	2019 Q4	2020 Q1	Change
	Cash	1.8%	0.7%	-1.1%
	US Inflation	2.3%	1.7%	-0.6%
Equity	Large Cap Equities	5.0%	6.6%	1.6%
	International Equities (Unhedged)	6.0%	7.5%	1.5%
	Emerging International Equities	9.0%	10.2%	1.2%
	<i>Global Equity*</i>	6.2%	7.7%	1.5%
	<i>Private Equity*</i>	9.4%	10.9%	1.5%
Fixed Income	Treasuries	1.9%	0.6%	-1.3%
	<i>Core Bonds*</i>	2.5%	1.6%	-0.9%
	TIPS	2.2%	1.2%	-1.0%
	High Yield Bonds	4.1%	5.6%	1.5%
	<i>Private Debt*</i>	6.7%	8.0%	1.3%
Real Assets	Commodities	4.0%	1.4%	-2.6%
	REITs	5.4%	7.0%	1.6%
	Core Real Estate	5.2%	4.5%	-0.7%
	Private Real Assets: Infrastructure/Land	5.9%	6.2%	0.3%
Multi-Asset	<i>US 60/40*</i>	4.3%	4.9%	0.6%
	<i>Global 60/40*</i>	4.4%	5.3%	0.9%
	<i>Hedge Funds*</i>	5.0%	5.0%	0.0%

*Calculated as a blend of other asset classes



MACRO ASSUMPTIONS

NEPC, LLC

INFLATION OVERVIEW

Inflation is an integral component of our asset allocation assumptions

Represents an essential building block for developing asset class returns

Inflation building blocks are model-driven and informed by multiple sources for both the US and global asset classes

Includes forecasts from international organizations (e.g. IMF), local consumer and producer price indices, break-even inflation expectations, and global interest rate curves

NEPC's US inflation expectation has come down and incorporates the material decline of inflation break-even rates due to COVID-19

We anticipate meaningful volatility from quarter to quarter in our inflation assumption as market-based inflation expectations discount the potential economic scenarios

Market-based inflation expectations reflect little to no inflation pressure

Inflation break-evens (difference between Treasury and TIPS yields) suggest inflation will be near current levels for the next twenty years

NEPC's return assumptions incorporate higher inflation expectations than break-evens, but are in line with IMF forecasts and are well below long-term averages

Region	10-Year Inflation Assumption	30-Year Inflation Assumption
United States	1.7%	2.4%



US CASH EXPECTATIONS

Cash is a foundation for all asset classes

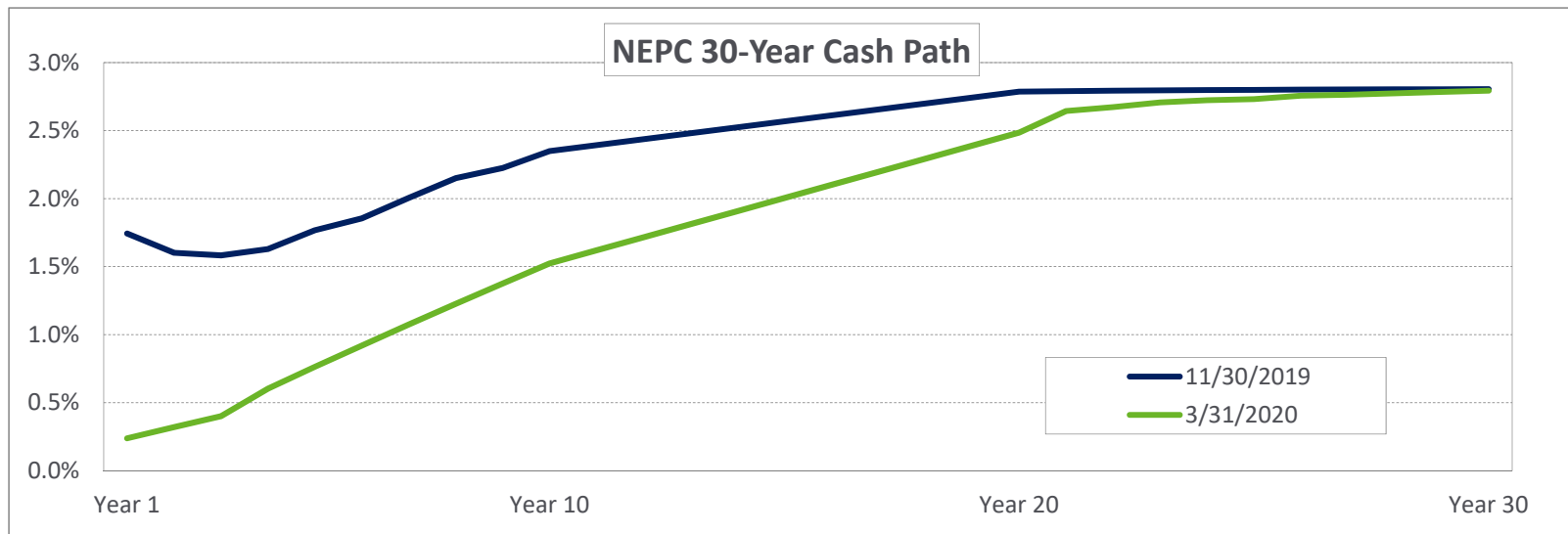
The assumption flows through as a direct building block component and as a relative value adjustment (cash + risk premia) in long-term return projections

Long-term cash assumption is a result of forecasted inflation plus a real interest rate path

US nominal rates are at a historically low point for NEPC's forecasts

This level reflects recent rate cuts by the Federal Reserve and muted inflation pressures

Market expectations for a relatively flat curve and negligible inflation expectations create a slow and muted trend for cash to reach terminal value assumptions



Source: Bloomberg, FactSet, NEPC



GLOBAL INTEREST RATE EXPECTATIONS

US real yields moved materially lower with recent Fed rate cuts

The real yield curve shifted down across the curve, reflecting lower growth expectations

Low real rates depress the return outlook for all assets in the long-term

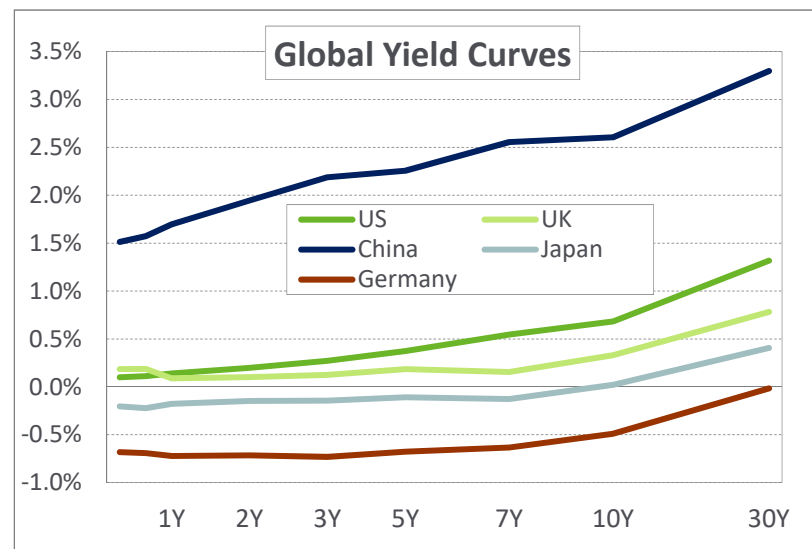
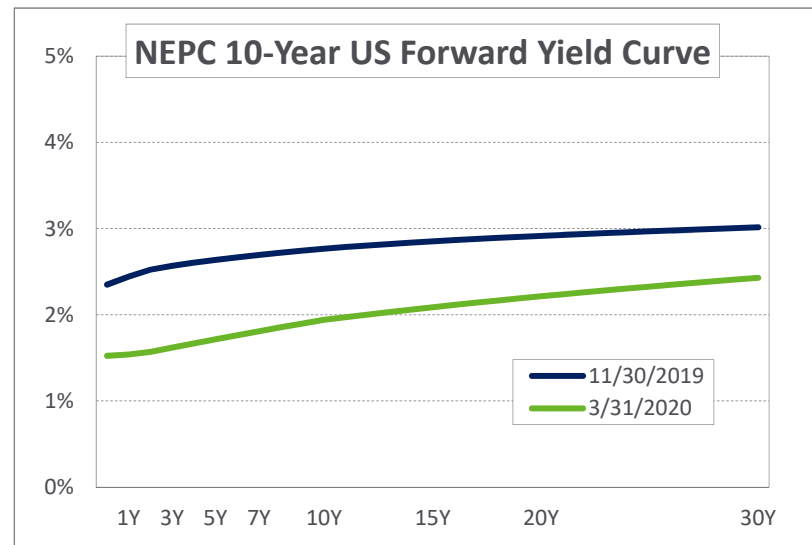
The Fed's shift to a prolonged easing environment and lower inflation expectations have suppressed yield forecasts

Government bond yields remain low across much of the world

Several developed country yield curves outside the US are in negative territory with weak growth, continued monetary stimulus, and muted inflation

The outlook for non-US developed fixed income is poor given negative real and nominal yields

However, emerging market local interest rates are elevated relative to the developed world



Source: (Top) FactSet, NEPC
Source: (Bottom) FactSet, NEPC



EQUITY ASSUMPTIONS

NEPC, LLC

EQUITY ASSUMPTIONS OVERVIEW

Equity return assumptions are materially higher from the prior quarter due to depressed valuation levels following the recent equity downturn

The discounting of future cash flows with lower interest rates and inflation levels also support higher equity valuation multiples over the long-term

We recommend investors consider increasing strategic targets to equity as the equity risk premia is elevated relative to cash and Treasuries

The higher relative return assumption of equities vs Treasuries is amidst unprecedented uncertainty and the sizing of higher strategic equity targets should be calibrated carefully

The return assumption for emerging market equity remains elevated and we continue to believe a modest strategic overweight is appropriate

We encourage the use of EAFE exposure as a funding source for an EM equity overweight

NEPC encourages maintaining a strategic bias to US and international small cap relative to the exposure in MSCI ACWI IMI

The overweight should be considered relative to total equity beta exposure. For example, investors with large private equity allocations might adopt an index weight to small caps



EQUITY: ASSUMPTIONS

Equity Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Valuation	An input representing P/E multiple contraction or expansion relative to long-term trend
Inflation	Represents market-specific inflation derived from index country revenue contribution and region-specific forecasted inflation
Real Earnings Growth	Reflects market-specific real growth for each equity asset class as a weighted-average derived from index country revenue contribution and forecasted GDP growth
Dividend Yield	Informed by current income distributed to shareholders with adjustments made to reflect market conditions and trends

Asset Class	2020 Q1 10-Year Return	Change from 11/30/19
US Large Cap	6.6%	+1.6%
US Small/Mid-Cap	7.3%	+1.8%
US Micro Cap	8.4%	+1.4%
International (Unhedged)	7.5%	+1.5%
International Small Cap	7.8%	+1.4%
Emerging Markets	10.2%	+1.2%
Emerging Markets Small Cap	10.2%	+1.0%
China Equity	8.9%	+0.1%
Hedge Funds – Long/Short	4.8%	-
Global Equity	7.7%	+1.5%
Private Equity	10.9%	+1.5%

Source: NEPC



FIXED INCOME ASSUMPTIONS

NEPC, LLC

FIXED INCOME ASSUMPTIONS OVERVIEW

Credit return assumptions are higher from the prior quarter due to elevated credit spread levels following the recent market downturn

Safe-haven fixed income return assumptions are materially lower due to falling interest rates and market-based inflation expectations

While return assumptions are low for safe-haven assets, we encourage maintaining an allocation to Treasuries to provide portfolio balance

For investors without a natural hedge, NEPC suggests a strategic safe-haven allocation of 50% Treasuries and 50% TIPS to provide a balanced portfolio diversification benefit

We recommend investors consider increasing strategic targets to return-seeking credit as elevated spreads tend to lead to higher returns

A strategic allocation to return-seeking credit can enhance risk-adjusted returns with additional yield and diversification benefits

NEPC recommends an equal weight target to bank loans, blended emerging market debt, and high-yield for return-seeking public credit

In this framework, investors should consider sourcing capital calls for private debt from bank loans and high yield but only in a “normal” market environment



FIXED INCOME: ASSUMPTIONS

Fixed Income Building Blocks	
Illiquidity Premium	The additional return expected for investments carrying liquidity risk
Government Rates Price Change	The valuation change resulting from a change in the current yield curve to forecasted rates
Credit Deterioration	The average loss for credit securities associated with an expected default cycle and recovery rates
Spread Price Change	The valuation change resulting from a change in credit spreads over the duration of the investment and highly sensitive to economic cycles
Credit Spread	Additional yield premium provided by securities with credit risk
Government Rates	The yield attributed to sovereign bonds that do not have credit risk associated with their valuation

Asset Class	2020 Q1 10-Year Return	Change from 11/30/19
TIPS	1.2%	-1.0%
Treasuries	0.6%	-1.3%
Investment-Grade Corporate Credit	3.9%	+0.5%
MBS	0.9%	-1.6%
High-Yield Bonds	5.6%	+1.5%
Bank Loans	5.5%	+0.7%
EMD (External)	5.7%	+1.6%
EMD (Local Currency)	5.9%	+0.5%
Non-US Bonds (Unhedged)	0.7%	+0.5%
Municipal Bonds (1-10 Year)	1.5%	-0.4%
High-Yield Municipal Bonds	4.4%	+1.2%
Hedge Funds – Credit	5.0%	+0.2%
Core Bonds	1.6%	-0.9%
Private Debt	8.0%	+1.3%

Source: NEPC



REAL ASSETS ASSUMPTIONS

NEPC, LLC

REAL ASSET ASSUMPTIONS OVERVIEW

The strategic outlook for real assets reflects a high level of uncertainty due to the dislocation in energy prices and market-based inflation levels

Real assets offer a meaningful portfolio diversification benefit but are exposed to the wide range of potential inflation scenarios in the current economic environment

Energy-related asset class returns are higher but dividend and growth inputs are heavily discounted to reflect the economic distress

For most clients, we recommend that no new energy investments be made at this time but also do not recommend selling liquid exposure at distressed prices

In addition, NEPC's Real Asset team has formed a Distressed Energy Working Group to detail current market views and assess near-term investment opportunities

Real assets exhibit different betas to inflation and inflation-sensitive objectives should influence an investor's strategic allocation decision

Within real asset exposures, NEPC recommends a strategic allocation to infrastructure and real estate, which offer inflation-sensitive income. For total return-focused investors, private real assets are preferred over public market proxies.

We encourage investors to remove commodity futures from strategic asset allocation targets due to the low expected return assumption

While commodities provide a pure market beta to inflation, a persistently negative roll yield reduces expected long-term returns



REAL ASSETS: ASSUMPTIONS

Real Assets Building Blocks		Asset Class	2020 10-Year Return	Change from 11/30/19
Illiquidity Premium	The additional return expected for investments carrying liquidity risk	Commodities	1.4%	-2.6%
Valuation	The expected change in price of the underlying asset reverting to a long-term real average or terminal value assumption	Midstream Energy	8.1%	+0.7%
Inflation	Incorporates the inflation paths as defined by TIPS breakeven expectations and NEPC expected inflation assumptions	REITs	7.0%	+1.6%
Growth	Reflects market-specific growth for each equity asset class as a weighted-average derived from index country revenue contribution and forecasted GDP growth	Public Infrastructure	6.8%	+1.5%
Real Income	Represents the inflation-adjusted income produced by the underlying tangible or physical asset	Public Resource Equity	8.2%	+0.9%
		Core Real Estate	4.5%	-0.7%
		Non-Core Real Estate	5.4%	-1.0%
		Private RE Debt	4.6%	-0.4%
		Private Real Assets: Energy/ Metals	8.9%	-0.2%
		Private Real Assets: Infra/Land	6.2%	+0.3%

Source: NEPC



MARKET REVIEW

NEPC, LLC

CALENDAR YEAR INDEX PERFORMANCE

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Mar	YTD
S&P 500	15.1%	2.1%	16.0%	32.4%	13.7%	1.4%	12.0%	21.8%	-4.4%	31.5%	-12.4%	-19.6%
Russell 1000	16.1%	1.5%	16.4%	33.1%	13.2%	0.9%	12.1%	21.7%	-4.8%	31.4%	-13.2%	-20.2%
Russell 2000	26.9%	-4.2%	16.3%	38.8%	4.9%	-4.4%	21.3%	14.6%	-11.0%	25.5%	-21.7%	-30.6%
Russell 2500	26.7%	-2.5%	17.9%	36.8%	7.1%	-2.9%	17.6%	16.8%	-10.0%	27.8%	-21.7%	-29.7%
MSCI EAFE	7.8%	-12.1%	17.3%	22.8%	-4.9%	-0.8%	1.0%	25.0%	-13.8%	22.0%	-13.3%	-22.8%
MSCI EM	18.9%	-18.4%	18.2%	-2.6%	-2.2%	-14.9%	11.2%	37.3%	-14.6%	18.4%	-15.4%	-23.6%
MSCI ACWI	12.7%	-7.3%	16.1%	22.8%	4.2%	-2.4%	7.9%	24.0%	-9.4%	26.6%	-13.5%	-21.4%
Private Equity*	19.8%	9.5%	12.6%	22.3%	14.6%	10.4%	10.3%	21.0%	13.1%	11.0%	-	11.0%
BC TIPS	6.3%	13.6%	7.0%	-8.6%	3.6%	-1.4%	4.7%	3.0%	-1.3%	8.4%	-1.8%	1.7%
BC Municipal	2.4%	10.7%	6.8%	-2.6%	9.1%	3.3%	0.2%	5.4%	1.3%	7.5%	-3.6%	-0.6%
BC Muni High Yield	7.8%	9.2%	18.1%	-5.5%	13.8%	1.8%	3.0%	9.7%	4.8%	10.7%	-11.0%	-6.9%
BC US Corporate HY	15.1%	5.0%	15.8%	7.4%	2.5%	-4.5%	17.1%	7.5%	-2.1%	14.3%	-11.5%	-12.7%
BC US Agg Bond	6.5%	7.8%	4.2%	-2.0%	6.0%	0.5%	2.6%	3.5%	0.0%	8.7%	-0.6%	3.1%
BC Global Agg	5.5%	5.6%	4.3%	-2.6%	0.6%	-3.2%	2.1%	7.4%	-1.2%	6.8%	-2.2%	-0.3%
BC Long Treasuries	9.4%	29.9%	3.6%	-12.7%	25.1%	-1.2%	1.3%	8.5%	-1.8%	14.8%	6.1%	20.9%
BC US Long Credit	10.7%	17.1%	12.7%	-6.6%	16.4%	-4.6%	10.2%	12.2%	-6.8%	23.4%	-10.2%	-4.7%
BC US STRIPS 20+ Yr	10.9%	58.5%	3.0%	-21.0%	46.4%	-3.7%	1.4%	13.7%	-4.1%	20.9%	8.6%	30.0%
JPM GBI-EM Global Div	15.7%	-1.8%	16.8%	-9.0%	-5.7%	-14.9%	9.9%	15.2%	-6.2%	13.5%	-11.1%	-15.2%
JPM EMBI Glob Div	12.2%	7.3%	17.4%	-5.3%	7.4%	1.2%	10.2%	10.3%	-4.3%	15.0%	-13.8%	-13.4%
CS Hedge Fund	10.9%	-2.5%	7.7%	9.7%	4.1%	-0.7%	1.2%	7.1%	-3.2%	9.3%	-	-1.8%
BBG Commodity	16.8%	-13.3%	-1.1%	-9.5%	-17.0%	-24.7%	11.8%	1.7%	-11.2%	7.7%	-12.8%	-23.3%
Alerian MLP	35.9%	13.9%	4.8%	27.6%	4.8%	-32.6%	18.3%	-6.5%	-12.4%	6.6%	-47.2%	-57.2%
FTSE NAREIT Equity REITs	28.0%	8.3%	18.1%	2.5%	30.1%	3.2%	8.5%	5.2%	-4.6%	26.0%	-21.9%	-27.3%

Source: FactSet, Barclays, Thomson One

*Private Equity return represents calendar year pooled IRR and is subject to a one quarter lag



MACRO PERFORMANCE OVERVIEW

Q1 Macro Market Summary

The US announced a \$2.2 trillion dollar stimulus package, representing roughly 10% of total GDP

Government bond yields declined with the US 10-Year Treasury yields falling 124 bps, ending Q1 at historical lows

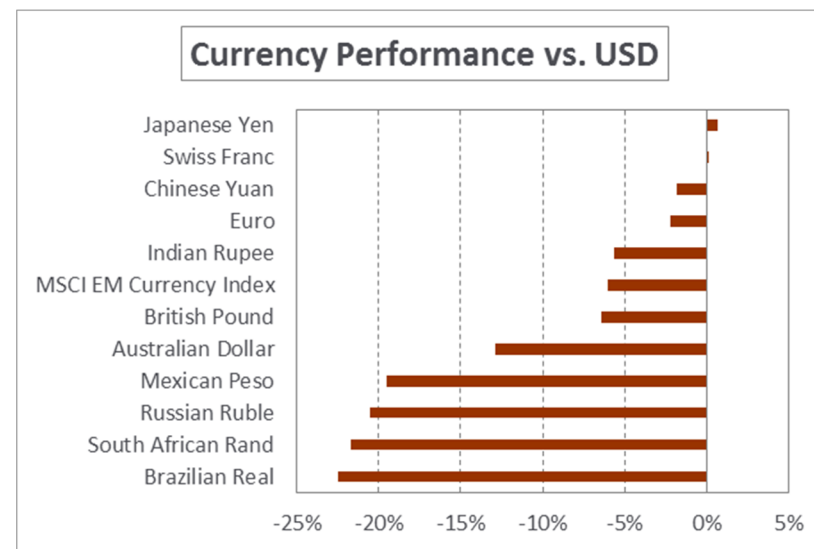
Safe-haven currencies broadly rallied, reflecting a flight-to-quality across markets

	Yield 12/31/19	Yield 03/31/20	\Delta
US 10-Year	1.92%	0.68%	-1.24%
US 30-Year	2.39%	1.32%	-1.07%
US Real 10-Year	0.15%	-0.17%	-0.32%
German 10-Year	-0.19%	-0.49%	-0.30%
Japan 10-Year	-0.02%	0.02%	0.04%
China 10-Year	3.20%	2.61%	-0.59%
EM Local Debt	5.22%	5.36%	0.14%

Source: FactSet

Central Banks	Current Rate	CPI YOY	Notes from the Quarter
Federal Reserve	0.00% - 0.25%	2.3%	The Fed cut interest rates by a total of 150 basis points in two emergency meetings in March and announced unlimited QE
European Central Bank	0.00%	1.2%	The ECB maintained its current benchmark interest rates and announced an €750 billion QE program
Bank of Japan	-0.10%	0.5%	The BoJ continued its ultra-easy QE and introduced an unscheduled policy to purchase an additional ¥1 trillion worth of government bond

Source: FactSet



Source: FactSet



EQUITY PERFORMANCE OVERVIEW

Q1 Equity Market Summary

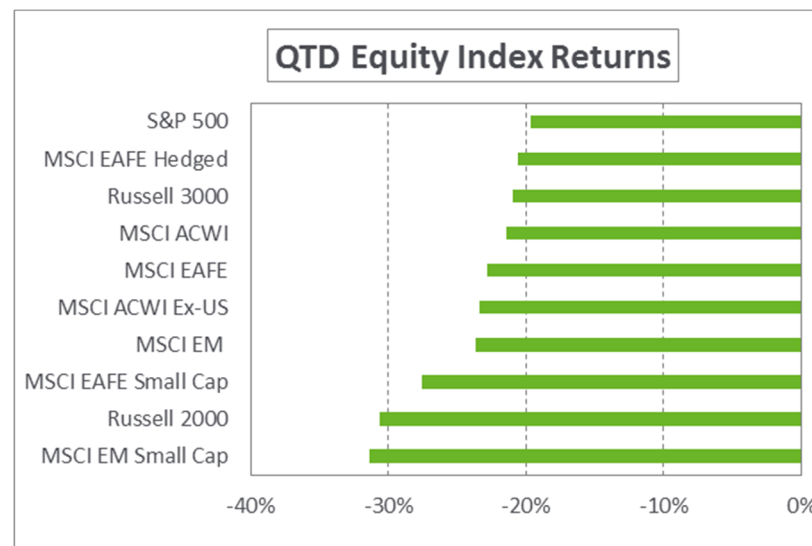
Global equities entered bear markets, falling over 20% from the peaks, amid COVID-19 concerns

Small cap equities underperformed given their sensitivity and vulnerability to an economic slowdown

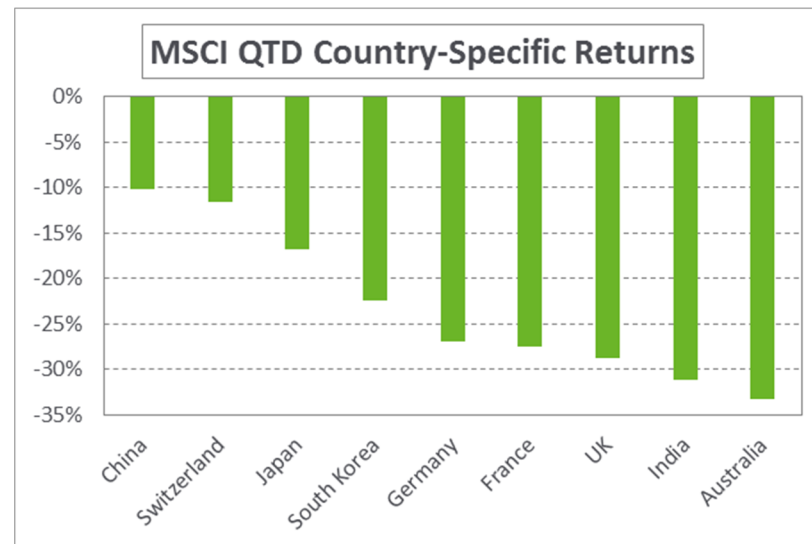
Chinese equities performed relatively well as COVID-19 cases declined and manufacturing data rebounded

Russell 3000 QTD Sector Returns	
Technology	-12.1%
Health Care	-12.9%
Consumer Discretionary	-20.5%
Consumer Staples	-15.1%
Energy	-51.6%
Materials & Processing	-28.3%
Producer Durables	-27.8%
Financial Services	-28.6%
Utilities	-15.1%

Source: FactSet



Source: FactSet



Source: FactSet



CREDIT PERFORMANCE OVERVIEW

Q1 Credit Market Summary

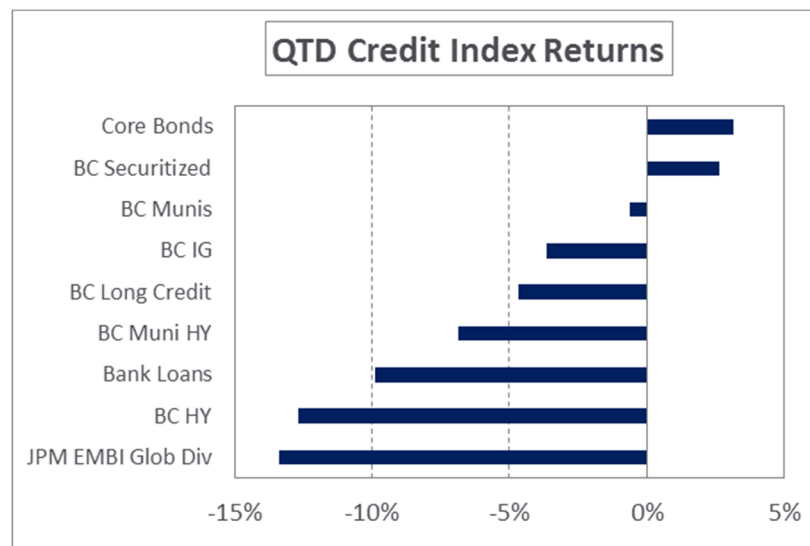
Credit spreads increased, ending the quarter well above long-term medians

US corporate high yield bonds fell 12.7% after spreads widened by 544 bps

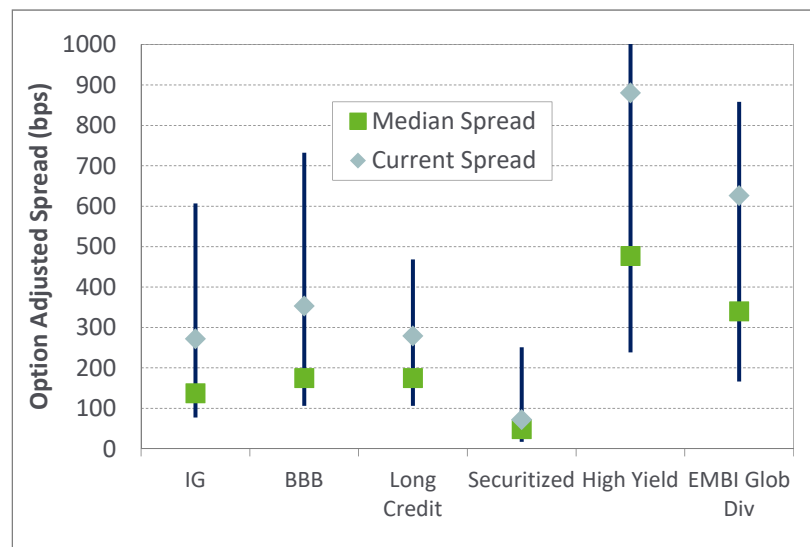
Long credit returns decreased 4.7%, reflecting spread widening, which offset the decline in rates

Credit Spread (Basis Points)	12/31/2019	3/31/2020	\Delta
BC IG Credit	93	272	179
BC Long Credit	139	279	140
BC Securitized	42	72	30
BC High Yield	336	880	544
Muni HY	226	473	247
JPM EMBI	291	626	335
Bank Loans - Libor	372	734	362

Source: FactSet



Source: FactSet



Source: FactSet; Ranges calculated since 11/30/2000



REAL ASSETS PERFORMANCE OVERVIEW

Q1 Real Assets Market Summary

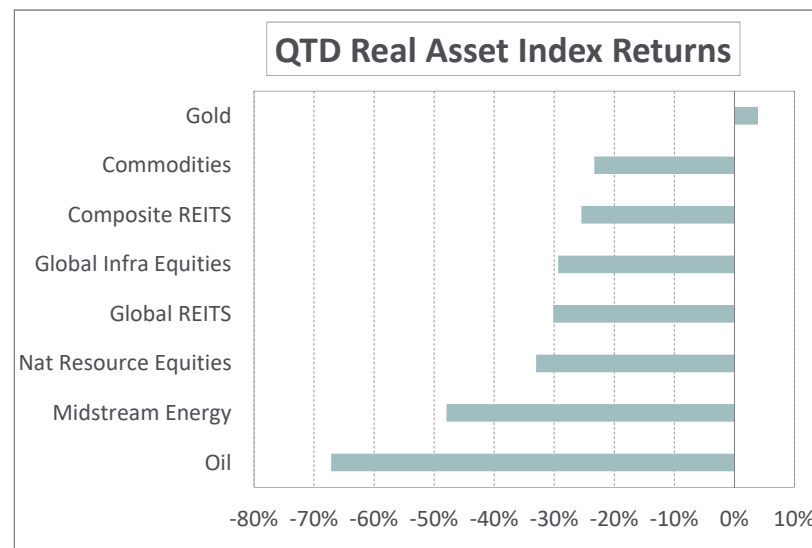
Spot WTI crude oil fell 67.1% as the Russia-Saudi Arabia price war and demand uncertainties from COVID-19 impacted both supply and demand

Commodities declined reflecting waning demand, with the exception of gold, which increased 4.0%, reflecting a flight-to-quality

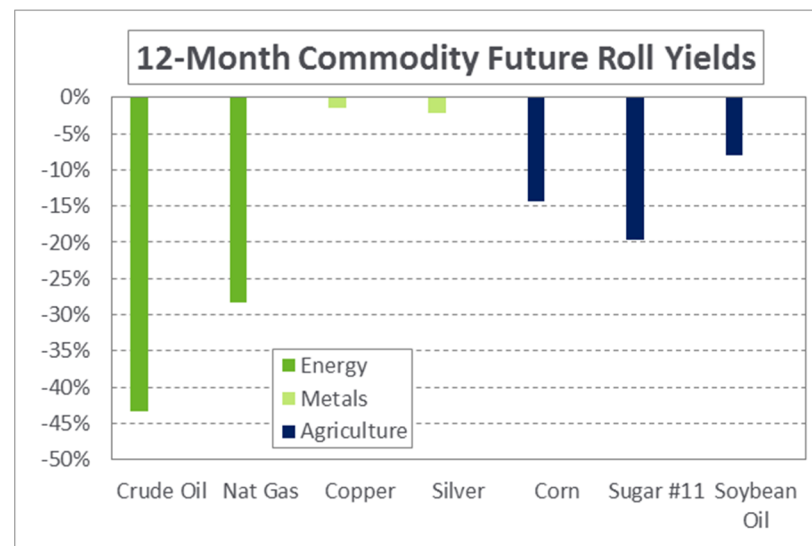
Real Asset Yields	12/31/2019	3/31/2020
Midstream Energy	6.4%	12.0%
Core Real Estate*	4.5%	4.5%
Composite REITs	4.1%	5.4%
Global REITs	4.2%	5.7%
Global Infrastructure Equities	4.0%	4.3%
Natural Resource Equities	3.9%	4.8%
US 10-Year Breakeven Inflation	1.77%	0.85%
Commodity Index Roll Yield	-1.7%	-14.3%
10-Year TIPS Real Yield	0.2%	-0.2%

Source: FactSet

Core Real Estate* yields are subject to a one quarter lag



Source: FactSet



Source: FactSet



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- 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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