

**MCERA INVESTMENT RETIREMENT BOARD AGENDA**  
**THURSDAY, APRIL 23, 2020**  
**MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**TELEPHONE NUMBER: 1-310-372-7549, CONFERENCE CODE: 975839**

**Important Notice Regarding SARS-COV-2**

**Based on guidance from the California Department of Public Health and the California Governor's Office, in order to minimize the spread of the SARS-COV-2 virus, MCERA's building will be closed to the public during MCERA Board meetings. Members of the MCERA Board will participate in this meeting offsite via conference call. Members of the public may listen to the meeting and offer public comment telephonically by calling into the telephone number provided above and entering the stated conference code. If you have any issues participating in the meeting telephonically or require reasonable accommodation for your participation, please contact MCERA staff at 209-726-2724.**

**Please turn your cell phone or other electronic device to non-audible mode or mute.**

**CALL TO ORDER: 8:15 A.M.**

- ROLL CALL.
- APPROVAL OF MINUTES – April 9, 2020.

**PUBLIC COMMENT**

Members of the public may comment on any item under the Board's jurisdiction. Matters presented under this item will not be discussed or acted upon by the Board at this time. For agenda items, the public may make comments at the time the item comes up for Board consideration. Persons addressing the Board will be limited to a maximum of five (5) minutes in total. Please state your name for the record.

**CLOSED SESSION**

As provided in the Ralph M. Brown Act, Government Code sections 54950 et seq., the Board may meet in closed session with members of its staff, county employees and its attorneys. These sessions are not open to the public and may not be attended by members of the public. The matters the Board will meet on in closed session are identified below. Any public reports of action taken in the closed session will be made in accordance with Government Code sections 54957.1.

1. DISCUSSION AND POSSIBLE ACTION REGARDING INVESTMENTS IN RECOMMENDED FUNDS, ROLL CALL VOTE REQUIRED.  
(Govt. Code § 54956.81)
  1. Discussion on MCERA alternative investment portfolio with market updates.
  2. Discussion and possible adoption of Funds/Managers recommendations – Cliffwater.

2. DISABILITY RETIREMENT APPLICATIONS: PERSONNEL EXCEPTION  
(Govt. Code § § 54957, 31532; Cal Const. art. I, § 1)
  1. Informal Hearing
    - a. Ramirez, Amber
  2. Formal Hearing
    - a. None
  3. Disability update and possible action:
    - a. Arroyo, Elizabeth
    - b. Cruz, Mary Kay
    - c. Elias Jr., Robert C
    - d. Herrera, Yvonne
    - e. Leyro, Domingo
    - f. Plascencia, Marcelino
    - g. Salgado, Jose
    - h. Sotelo, Maria

### **RETURN TO OPEN SESSION**

Report on any action taken in closed session.

### **BOARD ACTION<sup>1</sup>/DISCUSSION**

Pursuant to Govt. Code § 31594 and MCERA's Investment Objectives & Policy Statement due diligence analysis requirement:

1. Presentation and discussion of Quarterly Investment Performance with update on capital markets and possible Board action on any funds or managers – Cliffwater.
2. Presentation and discussion of the 2020 March Monthly Investment Performance Report with update on capital markets and possible Board action on any item or funds/managers – Meketa.
3. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:
  - a. No training or travel scheduled during this time.

### **INFORMATION ONLY**

### **MCERA UPCOMING BOARD MEETINGS:**

Please note: The MCERA Board Meeting and/or Education Day times and dates may be changed in accordance with the Ralph M. Brown Act by the MCERA Board as required.

- May 14, 2020
- May 28, 2020

### **ADJOURNMENT**

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<sup>1</sup> "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

All supporting documentation is available for public review online at

[www.co.merced.ca.us/retirement](http://www.co.merced.ca.us/retirement)

Any material related to an item on this Agenda submitted to the Merced County Employees' Retirement Association, after distribution of the Agenda packet is available for public inspection at

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Persons who require accommodation for a disability in order to review an agenda, or to participate in a meeting of the Merced County Employees' Retirement Association per the American Disabilities Act (ADA), may obtain assistance by requesting such accommodation by emailing the Merced County Employees' Association at [MCERA@co.merced.ca.us](mailto:MCERA@co.merced.ca.us), or telephonically by calling (209) 726-2724. Any such request for accommodation should be made at least 48 hours prior to the scheduled meeting for which assistance is requested.

# Minutes from April 9, 2020

## MCERA RETIREMENT BOARD MEETING AGENDA THURSDAY, APRIL 09, 2020 MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION TELEPHONE NUMBER: 1-310-372-7549, Conference Code: 975839

### **CALL TO ORDER: 8:15 A.M.**

**Board Members Present:** Ryan Paskin, Scott Johnston, Al Peterson, David Ness, Darlene Ingersoll, Scott Silveira, Michael Rhodes, Janey Cabral, Karen Adams, Kalisa Rochester (arrived at 8:32am), Jason Goins. **Staff:** Kristie Santos, Alexis Curry, Mark Harman, Ninebra Maryoonani, Martha Sanchez, Sheri Villagrana and Brenda Mojica.

APPROVAL OF MINUTES – March 12, 2020.

**Motion to approve the March 12, 2020 meeting minutes.**

Ness/Ingersoll U/A (9-0)

### **PUBLIC COMMENT**

No Comment.

### **CONSENT CALENDAR**

**RETIREMENTS:** Pursuant to Govt. Code § 31663.25 or § 31672

All items of earnable compensation for service or disability retirements listed below are in compliance with the pay code schedule approved by the Board of Retirement. The retirement is authorized; however, administrative adjustments may be necessary to alter the amount due to: audit, late arrival of data, court order, etc.

a. Sayaovang, Hoyu	HSA	14 Yrs. Svc.	Eff. 03/14/2020
b. Xiong, Wangki	HSA	30 Yrs. Svc.	Eff. 03/14/2020
c. Smith, Lizabeth	Health-Adm.	21 Yrs. Svc.	Eff. 03/14/2020
d. Thao, May Lee	HSA	30 Yrs. Svc.	Eff. 03/28/2020
e. Mcmillan, Robert	Animal Control	29 Yrs. Svc.	Eff. 03/28/2020
f. Fincher, James	County Counsel	18 Yrs. Svc.	Eff. 03/28/2020
g. Lerma, Colleen	HSA	10 Yrs. Svc.	Eff. 03/28/2020
h. Sziraki, Leslie	Sheriff	23 Yrs. Svc.	Eff. 03/14/2020
i. Campanella, Tina	HSA	19 Yrs. Svc.	Eff. 03/14/2020
j. Simmers-Tilma, Carol	Health	24 Yrs. Svc.	Eff. 03/31/2020
k. Flores, Martha	HSA	32 Yrs. Svc.	Eff. 03/28/2020
l. Koumarios, Corinne	Child Support	25 Yrs. Svc.	Eff. 03/28/2020
m. Ramirez, Linda (NSCD)	HSA	22 Yrs. Svc.	Eff. 10/10/2017
n. Pitcock, Elizabeth	District Attorney	12 Yrs. Svc.	Eff. 03/21/2020
o. Valizan, Stephen	DPW	22 Yrs. Svc.	Eff. 03/28/2020
p. Taylor, Mark	HSA	26 Yrs. Svc.	Eff. 03/28/2020
q. Kettering, Jefferey	Probation	29 Yrs. Svc.	Eff. 03/28/2020
r. Keyes, Mark	DPW	15 Yrs. Svc.	Eff. 03/17/2020
s. Gallagher, Vince	Sheriff	27 Yrs. Svc.	Eff. 03/28/2020
t. Richardson, Terry	DPW	28 Yrs. Svc.	Eff. 03/28/2020
u. Lima, Larry	Agricultural Bio.	31 Yrs. Svc.	Eff. 03/28/2020
v. Presol, Kelley	Child Support	32 Yrs. Svc.	Eff. 03/28/2020
w. Salas, Sherrilynn	Mental Health	13 Yrs. Svc.	Eff. 04/01/2020
x. Ortiz, Kim	District Attorney	12 Yrs. Svc.	Eff. 04/01/2020

YTD fiscal year 2019/2020 retirees: 086

YTD fiscal year 2018/2019 retirees: 101

YTD fiscal year 2017/2018 retirees: 083\*

\*Count for FY 2017/2018 increased by one for retro approved disability in 2020.

**REFUND OF SERVICE PURCHASE:** None

**DEATH BENEFIT:** None

**QUARTERLY & MONTHLY BUDGET REPORT:** Submitted

**Motion to approve Consent Calendar.**

**Silveira/Rhodes U/A (9-0)**

### **BOARD ACTION<sup>1</sup>/DISCUSSION**

1. Discussion and possible action to approve updated Delegation of Authority Policy to allow Plan Administrator to rebalance MCERA's portfolio when needed – Staff.

**The MCERA board voted to approve the updated Delegation of Authority Policy to allow the Plan Administrator to rebalance MCERA's portfolio.**

**Adams/Ingersoll U/A (9-0)**

2. Discussion and possible action on Meketa Group's overview of the markets and possible recommendation to rebalance – Meketa.

**The MCERA board voted to accept Meketa Group's recommendation to rebalance.**

**Peterson/Adams U/A (9-0)**

3. Discussion and possible action to approve new pay codes as requested by the County of Merced and the Superior Courts of Merced – Staff.

**The MCERA board voted to approve the new pay codes as requested by the County of Merced and the Superior Courts of Merced.**

**Ingersoll/Silveira U/A (9-0)**

4. Discussion and update to Board on MCERA Emergency Preparedness – Staff.

**No Action was taken.**

5. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:

- No travel at this time.

**No Action was taken.**

### **INFORMATION ONLY**

**No information provided.**

### **ADJOURNMENT**

The meeting adjourned at 8:57 A.M

Respectfully submitted,

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Ryan Paskin, Chair

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Al Peterson, Secretary

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\_\_\_\_\_  
Date

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INVESTMENT ADVISORY SERVICES

Los Angeles • New York

Alternative Investment Performance  
Merced County Employees' Retirement Association

Presented April 23, 2020

# MCERA Private Equity Capital Budget & Implementation Plan

## 15% fund level target

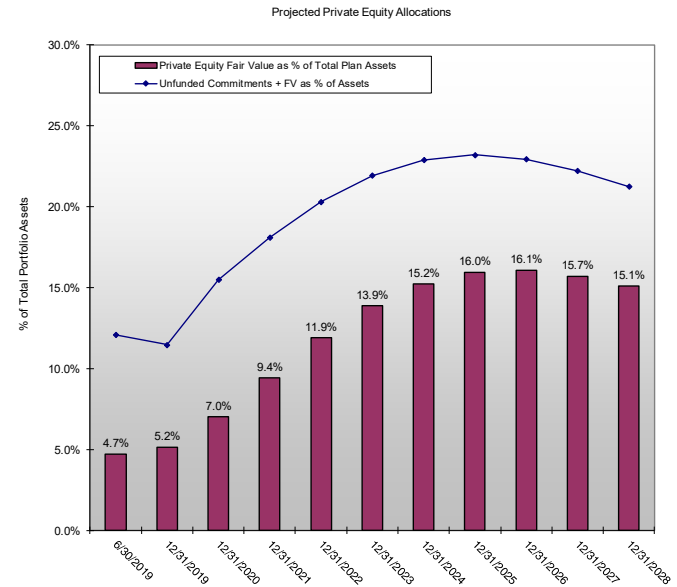
- Annual capital budget target of \$40 million, range of \$30-\$50 million
- Target 4-7 investments, range of \$5-\$15 million per inv; average size of \$8 million per

## Performance comparisons:

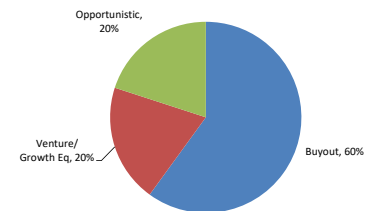
- *Long term investment objective:* Earn a return premium over public equity (Russell 3000 + 3%)
- *Recommended primary asset class benchmark:* Cambridge Associates Global Private Equity & VC Index
- *Recommended fund benchmarks:* Each fund will be compared to the Cambridge Associates strategy universe for the respective vintage years and each vintage year will be compared to Cambridge Associates Global Private Equity & VC Index

## MCERA CY 2019 commitments:

- Summit X – growth capital (VY 2019), \$8 mm
- Genstar IX – mid market buyout (VY 2019), \$8 mm
- Spark Capital VI – early stage VC (VY 2020), \$3 mm
- Spark Capital Growth III – late stage VC (VY 2020), \$6 mm
- Accel-KKR Capital VI – software buyout (VY 2020), \$5 mm
- Cortec VII – lower mid mkt buyout (VY 2019), \$10 mm



## Target Strategy Diversification



	Target	Ranges
Buyout	60%	40-80%
Venture/Growth Eq	20%	10-30%
Opportunistic	20%	10-30%
	100%	

Note: MCERA’s existing private equity portfolio was modeled using vintage year drawdown/return of capital assumptions patterned after historical category averages. Total fund growth of 5.5%.



# MCERA Private Equity Investment Structure & Portfolio Assessment

## Investment structure (15% fund target; 5% invested as of Sep 2019):

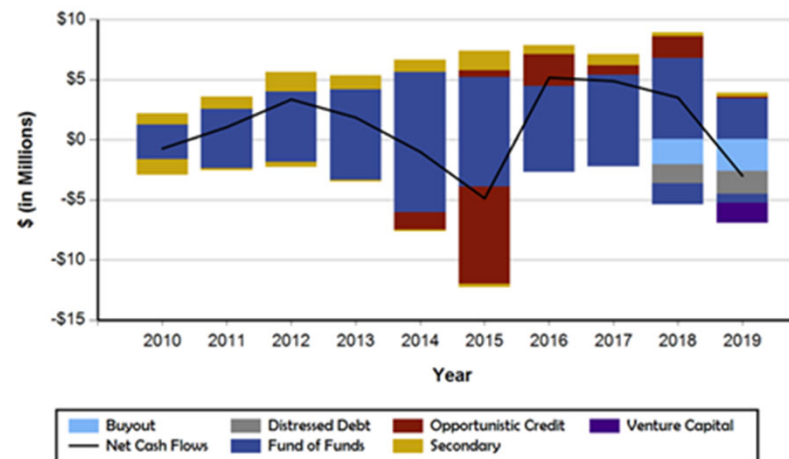
- Current portfolio is barbelled with half of commitments in 2007 & earlier FoFs and half in 2011 & later FoFs
  - Overall portfolio has not met performance expectations; 2011 & later portfolio is still in development with the funds in VY 2017-2019 in their investment period
  - Modest quarterly performance improvement due to VY 2004 fund; contributions & distributions are similar over the past year as the newer portfolios are being built out and FoFs are returning capital
  - Portfolio is diversified by strategy but overall it is in a negative cash flow situation

### Annual Summary

(in thousands)

	Total Partnerships	Total Commitments	(A) Contributions	(B) Distributions	(C) Fair Value	(B+C) Total Value	(B+C-A) Gain/ Loss	Net IRR	Benchmark
September 30, 2018	25	\$99,029	\$62,526	\$51,884	\$39,589	\$91,473	\$28,946	8.47%	10.98%
September 30, 2019	30	\$130,864	\$71,521	\$60,399	\$43,569	\$103,967	\$32,447	8.51%	11.32%
Annual Change	5	\$31,835	\$8,995	\$8,515	\$3,980	\$12,494	\$3,501		

Annual Cash Flow



Note: Net cash flow is the for the respective calendar year.

## MCERA Private Equity Performance – as of Sep 30, 2019

Partnership Name (\$000)	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/ Loss	Net IRR	IRR Bench.	TVPI	TVPI Bench.
<b>Vintage Year 2004</b>													
Invesco Partnership Fund IV, L.P.	Fund of Funds	10,000	2,417	7,898	76%	16,070	188	16,258	8,360	11.77%	7.49%	2.06	1.55
Vintage Year 2004 Total		10,000	2,417	7,898	76%	16,070	188	16,258	8,360	11.77%	7.85%	2.06	1.51
<b>Vintage Year 2005</b>													
ASP 2005 Non-US Fund	Fund of Funds	1,500	74	1,426	95%	1,670	277	1,947	522	4.81%	4.67%	1.37	1.36
ASP 2005 US Fund	Fund of Funds	3,500	177	3,323	95%	4,457	697	5,155	1,831	6.90%	7.50%	1.55	1.57
Pantheon Ventures Euro Fund IV	Fund of Funds	1,092	52	1,278	95%	1,549	115	1,664	386	4.65%	4.67%	1.30	1.36
Pantheon Ventures USA Fund VI	Fund of Funds	3,750	206	3,544	95%	4,811	736	5,547	2,003	6.93%	7.50%	1.57	1.57
Vintage Year 2005 Total		9,842	509	9,570	95%	12,487	1,826	14,313	4,742	6.35%	7.46%	1.50	1.46
<b>Vintage Year 2006</b>													
Pantheon Global Secondary Fund III "B"	Secondary	10,000	540	9,460	95%	9,710	972	10,682	1,222	2.18%	8.56%	1.13	1.42
Vintage Year 2006 Total		10,000	540	9,460	95%	9,710	972	10,682	1,222	2.18%	7.26%	1.13	1.48
<b>Vintage Year 2007</b>													
ASP 2007 Direct Fund	Fund of Funds	450	12	438	97%	745	290	1,035	597	12.09%	10.98%	2.36	1.80
ASP 2007 Non-US Fund	Fund of Funds	1,575	78	1,497	95%	1,613	697	2,311	814	7.68%	7.31%	1.54	1.44
ASP 2007 US Fund	Fund of Funds	2,475	115	2,360	95%	3,245	1,130	4,374	2,014	11.82%	10.98%	1.85	1.80
Vintage Year 2007 Total		4,500	205	4,295	95%	5,603	2,117	7,720	3,425	10.55%	8.91%	1.80	1.58
<b>Vintage Year 2011</b>													
ASP 2011 Direct Fund	Fund of Funds	500	43	457	91%	482	373	855	398	15.09%	16.40%	1.87	1.80
ASP 2011 Emerging Markets Fund	Fund of Funds	500	64	436	87%	156	606	762	326	12.81%	11.09%	1.75	1.63
ASP 2011 Non-US Developed Fund	Fund of Funds	1,500	322	1,178	79%	898	1,012	1,910	732	12.69%	11.09%	1.62	1.63
ASP 2011 US Fund	Fund of Funds	2,500	326	2,175	87%	1,325	2,378	3,703	1,528	14.13%	16.40%	1.70	1.80
Pantheon Asia Fund VI	Fund of Funds	1,000	139	862	86%	369	979	1,348	486	10.66%	11.09%	1.56	1.63
Pantheon Euro Fund VII	Fund of Funds	1,523	219	1,478	86%	944	1,252	2,196	718	9.69%	11.09%	1.49	1.63
Pantheon Ventures USA Fund IX	Fund of Funds	2,000	254	1,746	87%	1,170	1,860	3,030	1,284	13.48%	16.40%	1.74	1.80
Vintage Year 2011 Total		9,523	1,368	8,332	86%	5,344	8,460	13,804	5,472	12.64%	12.98%	1.66	1.68
<b>Vintage Year 2013</b>													
Invesco Partnership Fund VI, L.P.	Fund of Funds	5,000	1,548	3,958	69%	989	6,779	7,768	3,810	17.21%	17.03%	1.96	1.59
Vintage Year 2013 Total		5,000	1,548	3,958	69%	989	6,779	7,768	3,810	17.21%	13.06%	1.96	1.47

Note: The benchmark represents the Cambridge Associates LLC median for the respective strategy and vintage year. At the vintage year level, the Cambridge Associates LLC Global Private Equity & VC<sup>®</sup> median is used for the respective vintage year.

# MCERA Private Equity Performance – as of Sep 30, 2019

Partnership Name (\$000)	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/ Loss	Net IRR	IRR Bench.	TVPI	TVPI Bench.
<b>Vintage Year 2014</b>													
Ocean Avenue Fund II	Fund of Funds	10,000	1,300	8,700	87%	4,147	9,894	14,040	5,340	15.51%	15.01%	1.61	1.48
Raven Asset-Based Opportunity Fund II	Opportunistic Credit	10,000	474	9,526	95%	5,958	3,531	9,489	-37	-0.13%	8.28%	1.00	1.23
<b>Vintage Year 2014 Total</b>		<b>20,000</b>	<b>1,774</b>	<b>18,226</b>	<b>91%</b>	<b>10,104</b>	<b>13,425</b>	<b>23,529</b>	<b>5,303</b>	<b>8.30%</b>	<b>14.92%</b>	<b>1.29</b>	<b>1.51</b>
<b>Vintage Year 2017</b>													
GTCR XII	Buyout	5,000	3,712	1,288	26%	90	1,219	1,309	21	N/M	N/M	1.02	1.13
<b>Vintage Year 2017 Total</b>		<b>5,000</b>	<b>3,712</b>	<b>1,288</b>	<b>26%</b>	<b>90</b>	<b>1,219</b>	<b>1,309</b>	<b>21</b>	<b>N/M</b>	<b>N/M</b>	<b>1.02</b>	<b>1.13</b>
<b>Vintage Year 2018</b>													
Carrick Capital Partners III, L.P.	Buyout	5,000	3,802	1,198	24%	0	1,305	1,305	107	N/M	N/M	1.09	1.01
Cressey & Company Fund VI LP	Buyout	5,000	3,900	1,100	22%	0	1,062	1,062	-38	N/M	N/M	0.97	1.01
Davidson Kempner Long-Term Distressed	Opportunistic Distressed Debt	5,000	1,550	3,450	69%	0	3,682	3,682	232	N/M	N/M	1.07	N/A
<b>Vintage Year 2018 Total</b>		<b>15,000</b>	<b>9,252</b>	<b>5,748</b>	<b>38%</b>	<b>0</b>	<b>6,049</b>	<b>6,049</b>	<b>301</b>	<b>N/M</b>	<b>N/M</b>	<b>1.05</b>	<b>1.00</b>
<b>Vintage Year 2019</b>													
Accel-KKR Capital Partners VI, LP	Buyout	8,000	8,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
Accel-KKR Growth Capital Partners III	Buyout	5,000	4,698	302	6%	0	224	224	-78	N/M	N/M	N/A	N/A
Genstar Capital Partners IX, L.P.	Buyout	7,000	6,206	794	11%	0	761	761	-33	N/M	N/M	N/A	N/A
Summit Partners Growth Equity Fund X-A, L.P.	Buyout	8,000	8,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
Spark Capital Growth Fund III, L.P.	Venture Capital	6,000	6,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
Spark Capital VI, L.P.	Venture Capital	3,000	3,000	0	0%	0	0	0	0	N/M	N/M	N/A	N/A
TCV X, L.P.	Venture Capital	5,000	3,351	1,649	33%	0	1,549	1,549	-100	N/M	N/M	N/A	N/A
<b>Vintage Year 2019 Total</b>		<b>42,000</b>	<b>39,255</b>	<b>2,745</b>	<b>7%</b>	<b>0</b>	<b>2,535</b>	<b>2,535</b>	<b>-210</b>	<b>N/M</b>	<b>N/M</b>	<b>N/A</b>	<b>0.91</b>
<b>Total Portfolio:</b>		<b>130,864</b>	<b>60,581</b>	<b>71,521</b>	<b>54%</b>	<b>60,399</b>	<b>43,569</b>	<b>103,967</b>	<b>32,447</b>	<b>8.51%</b>	<b>11.32%</b>	<b>1.45</b>	
<b>Portfolio Strategy Totals</b>													
Buyout		43,000	38,318	4,682	11%	90	4,572	4,662	-21	N/M		1.00	
Distressed Debt		5,000	1,550	3,450	69%	0	3,682	3,682	232	N/M		1.07	
Fund of Funds		40,175	6,399	34,599	84%	37,441	24,324	61,765	27,166	11.28%		1.79	
Non-US		8,689	949	8,155	89%	7,200	4,939	12,139	3,984	7.54%		1.49	
Opportunistic Credit		10,000	474	9,526	95%	5,958	3,531	9,489	-37	-0.13%		1.00	
Secondary		10,000	540	9,460	95%	9,710	972	10,682	1,222	2.18%		1.13	
Venture Capital		14,000	12,351	1,649	12%	0	1,549	1,549	-100	N/M		N/A	
<b>Total Portfolio:</b>		<b>130,864</b>	<b>60,581</b>	<b>71,521</b>	<b>54%</b>	<b>60,399</b>	<b>43,569</b>	<b>103,967</b>	<b>32,447</b>	<b>8.51%</b>	<b>11.32%</b>	<b>1.45</b>	

Note: The benchmark represents the Cambridge Associates LLC median for the respective strategy and vintage year. At the vintage year level, the Cambridge Associates LLC Global Private Equity & VC<sup>®</sup> median is used for the respective vintage year.

# MCERA Real Estate Capital Budget & Implementation Plan

## 8% fund level target

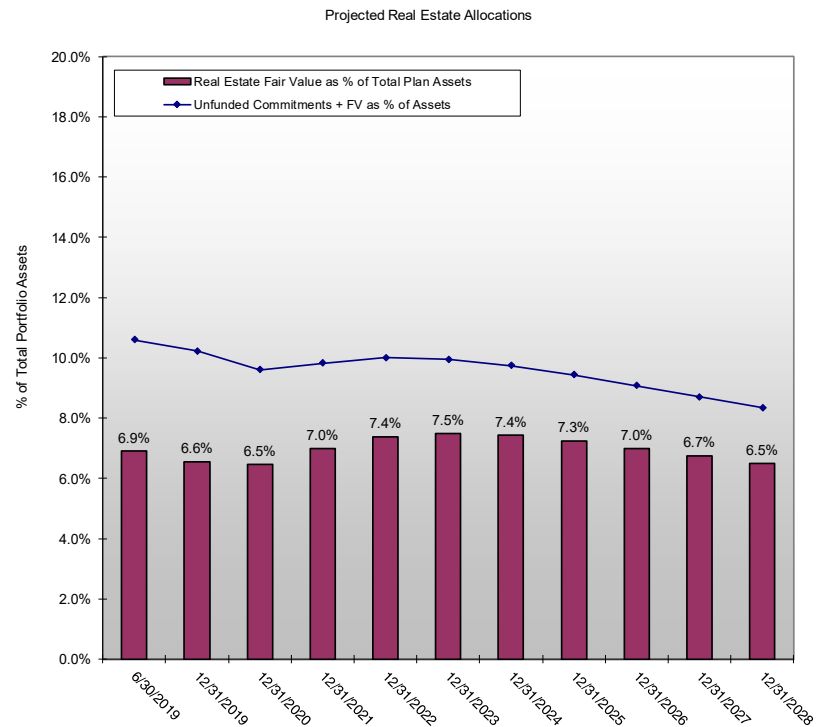
- Annual capital budget target of \$15 million, range of \$10-\$25 million
- Target 2-4 investments, range of \$4-\$7 million per inv
  - Average investment size of \$5 million
  - If an average of 2-4 GP partnership commitments per year, expect a total of 8-16 GP relationships over a 4 year fund raising cycle
- Retain core real estate exposure but lower it to 25% of the portfolio due to current valuations; use REITS as a substitute until funding private real estate investments is needed

## Performance comparisons:

- *Long term investment objective:* Earn a return premium over inflation (CPI-U + 5%)
- *Recommended primary asset class benchmark:* NCREIF NFI-ODCE; revisit over time as the structure of the portfolio changes
- *Recommended fund benchmarks:* Cambridge Associates strategy universe for the respective vintage years and each vintage year will be compared to Cambridge Associates Global Real Estate Index

## MCERA CY 2019 commitments (\$5 mm):

- Rockpoint VI –opportunistic RE (VY 2019)



Note: MCERA’s existing real estate portfolio was modeled using vintage year drawdown/return of capital assumptions patterned after historical averages. Total fund growth rate of 5.5%.

# MCERA Real Estate Investment Structure & Portfolio Assessment

## Real estate investment structure (8% target, 6.9% actual as of Sep 2019)

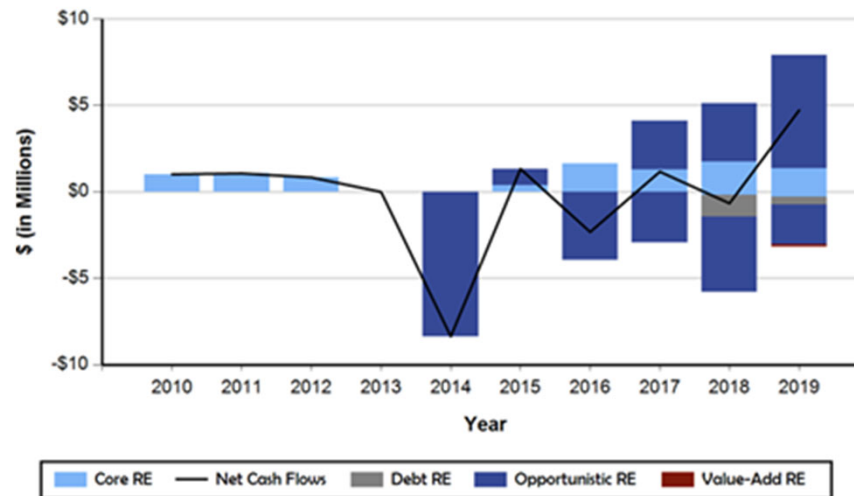
- MCERA invested in 1999 in a private core real estate fund; gains have been re-invested in the fund
- Distributions exceed contributions by \$4 million over the past year as overall RE activity has declined and Greenfield has been making distributions

### Annual Summary

(in thousands)

	Total Partnerships	Total Commitments	(A) Contributions	(B) Distributions	(C) Fair Value	(B+C) Total Value	(B+C-A) Gain/ Loss	Net IRR	Benchmark
September 30, 2018	5	\$53,810	\$35,136	\$26,745	\$60,895	\$87,640	\$52,504	9.33%	8.57%
September 30, 2019	8	\$67,990	\$40,366	\$35,664	\$58,343	\$94,007	\$53,641	9.00%	8.88%
Annual Change	3	\$14,180	\$5,230	\$8,919	-\$2,552	\$6,367	\$1,137		

Annual Cash Flow



Note: Net cash flow is the for the respective calendar year.

# MCERA Real Estate Performance – as of Sep 30, 2019

## Real Estate Portfolio

- MCERA began investing in the UBS Trumbull core real estate fund in 1999 and this represents the bulk of the real estate portfolio
  - Opportunistic funds began being added in 2014 and they are in the early stages of development with the VY 2016 fund now out of its “j-curve”
  - Valuation had modest quarterly gains due to gains in the Taconic portfolio
- Overall performance has met objectives, driven by the core RE fund; opportunistic fund performance is not meaningful

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/ Loss	Net IRR	IRR Bench.	TVPI
<i>(in thousands)</i>												
<b>Vintage Year 1999</b>												
UBS Trumbull Property Fund	Core RE	17,000	0	17,460	100%	22,814	41,038	63,852	46,392	8.84%	10.20%	3.66
Vintage Year 1999 Total		17,000	0	17,460	100%	22,814	41,038	63,852	46,392	8.84%	12.95%	3.66
<b>Vintage Year 2014</b>												
Greenfield Acquisition Partners VII, L.P.	Opportunistic RE	13,000	1,876	12,662	86%	10,070	8,927	18,997	6,335	13.05%	13.08%	1.50
Vintage Year 2014 Total		13,000	1,876	12,662	86%	10,070	8,927	18,997	6,335	13.05%	11.58%	1.50
<b>Vintage Year 2016</b>												
Patron Capital Fund V	Opportunistic RE	12,990	6,117	7,265	53%	2,780	5,476	8,255	990	8.72%	11.25%	1.14
Vintage Year 2016 Total		12,990	6,117	7,265	53%	2,780	5,476	8,255	990	8.72%	11.05%	1.14
<b>Vintage Year 2017</b>												
Carlyle Realty Partners VIII, L.P.	Opportunistic RE	5,000	4,223	778	16%	1	679	680	-98	N/M	N/M	0.87
Vintage Year 2017 Total		5,000	4,223	778	16%	1	679	680	-98	N/M	N/M	0.87
<b>Vintage Year 2018</b>												
Taconic CRE Dislocation Fund II	Debt RE	5,000	3,300	1,700	34%	0	1,873	1,873	173	N/M	N/M	1.10
AG Realty Value Fund X, L.P.	Opportunistic RE	5,000	4,625	375	8%	0	306	306	-69	N/M	N/M	0.82
Vintage Year 2018 Total		10,000	7,925	2,075	21%	0	2,178	2,178	103	N/M	N/M	1.05
<b>Vintage Year 2019</b>												
Rockpoint Real Estate Fund VI, L.P.	Opportunistic RE	5,000	5,000	0	0%	0	-25	-25	-25	N/M	N/M	0.00
Carmel Partners Investment Fund VII, L.P Value-Add RE		5,000	4,874	126	3%	0	69	69	-57	N/M	N/M	0.55
Vintage Year 2019 Total		10,000	9,874	126	1%	0	44	44	-82	N/M	N/M	0.35
<b>Total Portfolio:</b>		<b>67,990</b>	<b>30,015</b>	<b>40,366</b>	<b>56%</b>	<b>35,664</b>	<b>58,343</b>	<b>94,007</b>	<b>53,641</b>	<b>9.00%</b>	<b>8.88%</b>	<b>2.33</b>

Note: The benchmark at the total portfolio level is NCREIF NFI-ODCE . Private real estate benchmark at the fund level is the Cambridge Value Add or Opportunistic RE Indices while the Cambridge Global Real Estate Index at the vintage year level.

# MCERA Real Asset Capital Budget & Implementation Plan

## 5% fund level target

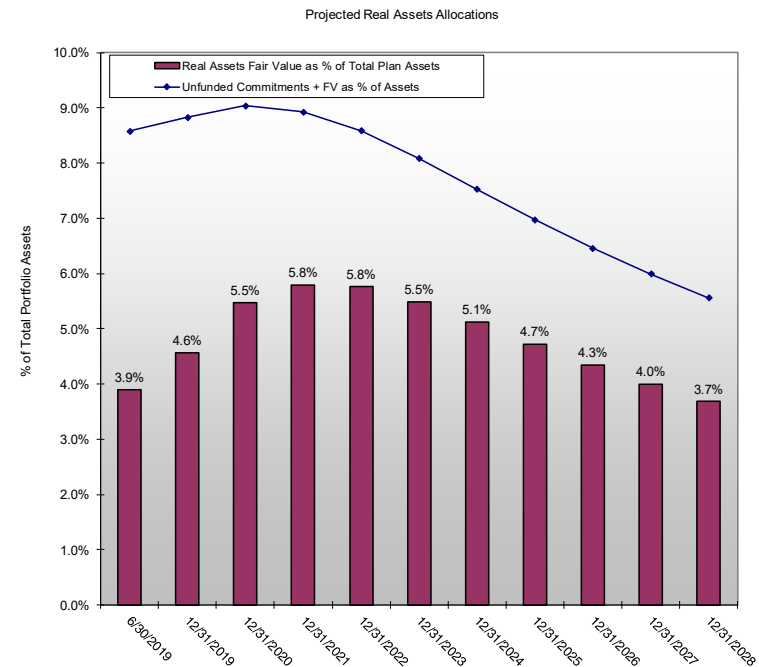
- Annual capital budget target of \$10 million, range of \$5-\$15 million
- Target 2-4 investments, range of \$3-\$7 million per inv
  - Average investment size of \$5 million
  - If an average of 2-4 GP partnership commitments per year, expect a total of 8-16 GP relationships over a 4 year fund raising cycle
- Portfolio targeted to be equally split between infrastructure and energy/natural resource funds

## Performance comparisons:

- *Long term investment objective:* Earn a return premium over inflation (CPI-U + 5%)
- *Recommended primary asset class benchmark:* 50/50 Cambridge Global Infrastructure/Cambridge Energy Upstream & Royalties and Private Energy Index
- *Recommended fund benchmarks:* Each fund will be compared to the Cambridge Associates strategy universe for the respective vintage years and each vintage year will be compared to the 50/50 index

## MCERA CY 2019 commitments (\$5 mm):

- Tailwater IV – mid-stream energy (VY 2019)



Note: MCERA’s existing real asset portfolio was modeled using vintage year drawdown/return of capital assumptions patterned after historical category averages. Total fund growth rate of 5.5%.

# MCERA Real Assets Investment Structure & Portfolio Assessment

## Real assets investment structure (5% target, 6.4% actual as of Sep 2019)

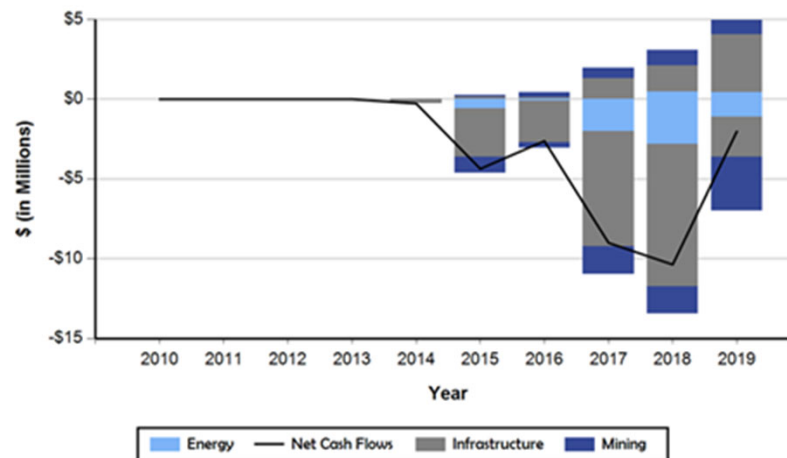
- Program is designed to be equally divided between private infrastructure and natural resource funds along with a public real asset component
- Private fund commitments began in 2014 to infrastructure and 2015 to natural resources
- The overall portfolio is immature with the funds in the early stage of development
  - Contributions exceed distributions by \$6 mm as the newer funds are being built out

### Annual Summary

(in thousands)

	Total Partnerships	Total Commitments	(A) Contributions	(B) Distributions	(C) Fair Value	(B+C) Total Value	(B+C-A) Gain/ Loss	Net IRR	Benchmark
September 30, 2018	9	\$55,500	\$27,666	\$4,517	\$27,599	\$32,117	\$4,451	12.65%	4.03%
September 30, 2019	15	\$69,890	\$39,367	\$10,731	\$36,436	\$47,167	\$7,800	11.91%	0.59%
Annual Change	6	\$14,390	\$11,701	\$6,214	\$8,837	\$15,050	\$3,349		

Annual Cash Flow



Note: Net cash flow is the for the respective calendar year.



# MCERA Real Assets Performance – as of Sep 30, 2019

## Real Asset Portfolio

- MCERA began allocating to real assets in 2014 via direct fund commitments
- Portfolio is in its early stages of development so performance is not meaningful; the energy infrastructure fundshad valuation improvements for the quarter; the VY 2017-19 funds are being built out

Partnership Name	Strategy	(A) Commit. Amount	Unfund. Amount	(B) Cumulat. Cont.	% Drawn	(C) Cumulat. Dist.	(D) Fair Value	(C+D) Total Value	(C+D-B) Gain/ Loss	Net IRR	IRR Bench.	TVPI
(in thousands)												
<b>Vintage Year 2014</b>												
KKR Global Infrastructure II	Infrastructure	10,000	533	10,666	95%	2,021	11,289	13,310	2,644	11.00%	10.72%	1.25
<b>Vintage Year 2014 Total</b>		<b>10,000</b>	<b>533</b>	<b>10,666</b>	<b>95%</b>	<b>2,021</b>	<b>11,289</b>	<b>13,310</b>	<b>2,644</b>	<b>11.00%</b>		<b>1.25</b>
<b>Vintage Year 2015</b>												
GSO Energy Select Opportunities Fund	Energy	7,500	3,789	4,167	49%	814	4,336	5,150	984	10.54%	9.96%	1.24
North Haven Infrastructure Partners II LP	Infrastructure	10,000	1,648	10,813	84%	4,521	8,581	13,102	2,289	11.80%	7.22%	1.21
Taurus Mining Finance Fund	Mining	5,000	1,353	4,576	73%	1,859	3,705	5,564	988	15.74%	N/A	1.22
<b>Vintage Year 2015 Total</b>		<b>22,500</b>	<b>6,790</b>	<b>19,555</b>	<b>70%</b>	<b>7,194</b>	<b>16,621</b>	<b>23,815</b>	<b>4,260</b>	<b>12.20%</b>		<b>1.22</b>
<b>Vintage Year 2016</b>												
Taurus Mining Finance Annex Fund	Mining	5,000	1,958	3,660	61%	1,136	3,258	4,394	734	26.73%	N/A	1.20
<b>Vintage Year 2016 Total</b>		<b>5,000</b>	<b>1,958</b>	<b>3,660</b>	<b>61%</b>	<b>1,136</b>	<b>3,258</b>	<b>4,394</b>	<b>734</b>	<b>26.73%</b>		<b>1.20</b>
<b>Vintage Year 2017</b>												
EnCap Energy Capital Fund XI, L.P.	Energy	5,000	3,979	1,021	20%	0	832	832	-188	-18.97%	2.37%	0.82
ISQ Global Infrastructure Fund II	Infrastructure	5,000	3,343	1,949	33%	293	1,855	2,149	200	N/M	N/M	1.10
<b>Vintage Year 2017 Total</b>		<b>10,000</b>	<b>7,323</b>	<b>2,970</b>	<b>27%</b>	<b>293</b>	<b>2,688</b>	<b>2,981</b>	<b>11</b>	<b>0.50%</b>		<b>1.00</b>
<b>Vintage Year 2018</b>												
EnCap Flatrock Midstream IV, L.P.	Energy	3,000	2,167	911	28%	78	982	1,061	150	N/M	N/M	1.16
KKR Global Infrastructure Investors III	Infrastructure	5,000	3,985	1,015	20%	9	968	977	-38	N/M	N/M	N/A
<b>Vintage Year 2018 Total</b>		<b>8,000</b>	<b>6,152</b>	<b>1,926</b>	<b>23%</b>	<b>87</b>	<b>1,951</b>	<b>2,038</b>	<b>112</b>	<b>N/M</b>		<b>1.06</b>
<b>Vintage Year 2019</b>												
Global Energy & Power Infrastructure Fund III	Energy	5,000	4,507	493	10%	0	562	562	69	N/M	N/M	1.14
Ardian Infrastructure Fund V	Infrastructure	4,390	4,293	97	2%	0	73	73	-23	N/M	N/M	N/A
<b>Vintage Year 2019 Total</b>		<b>9,390</b>	<b>8,800</b>	<b>590</b>	<b>6%</b>	<b>0</b>	<b>635</b>	<b>635</b>	<b>46</b>	<b>N/M</b>		<b>1.08</b>
<b>Vintage Year 2020</b>												
Tailwater Energy Fund IV, LP	Energy	5,000	5,000	0	0%	0	-6	-6	-6	N/M	N/M	0.00
<b>Vintage Year 2020 Total</b>		<b>5,000</b>	<b>5,000</b>	<b>0</b>	<b>0%</b>	<b>0</b>	<b>-6</b>	<b>-6</b>	<b>-6</b>	<b>N/M</b>		<b>0.00</b>
<b>Total Portfolio:</b>		<b>69,890</b>	<b>36,556</b>	<b>39,367</b>	<b>48%</b>	<b>10,731</b>	<b>36,436</b>	<b>47,167</b>	<b>7,800</b>	<b>11.91%</b>	<b>0.59%</b>	<b>1.20</b>
<b>Portfolio Strategy Totals</b>												
Energy		20,500	14,935	6,098	27%	893	6,145	7,037	939	8.39%		1.15
Infrastructure		25,000	6,165	22,494	75%	6,551	20,838	27,389	4,895	11.18%		1.22
Non-US		24,390	15,455	10,775	37%	3,288	9,453	12,741	1,966	18.72%		1.18
<b>Total Portfolio:</b>		<b>69,890</b>	<b>36,556</b>	<b>39,367</b>	<b>48%</b>	<b>10,731</b>	<b>36,436</b>	<b>47,167</b>	<b>7,800</b>	<b>11.91%</b>	<b>0.59%</b>	<b>1.20</b>

Note: Benchmark is 50% S&P Natural Resources and 50% S&P Infrastructure. Benchmarks for individual funds are the respective Cambridge strategy benchmark.

# MCERA Hedge Fund Performance – as of Jan 31, 2020

Equity oriented managers have been the best performers over the past year

Fund	Market Value	Actual %	Jan	QTD	YTD	Returns 1 Year	3 Year	5 Year	Incep	Std Dev	Sharpe Ratio	Incep Date
<b>Market Neutral</b>												
KLS Diversified Fund LP	9,167,065	5.4%	0.84%	0.84%	0.84%	-0.43%	-	-	1.29%	3.93%	-0.21	Oct-17
Laurion Capital, Ltd.	5,427,838	3.2%	1.60%	1.60%	1.60%	6.98%	-	-	5.32%	4.89%	0.61	Jul-18
Market Neutral - HF Total	14,594,903	8.7%	1.12%	1.12%	1.12%	2.20%	-	-	3.29%	3.16%	0.34	Oct-17
HFRI Relative Value (Total) Index			0.55%	0.55%	0.55%	5.55%	-	-	3.65%	2.82%	0.50	Oct-17
<b>Credit/Distressed</b>												
Silver Point Capital Fund, L.P.	12,602,845	7.5%	2.10%	2.10%	2.10%	5.58%	-	-	2.50%	4.87%	0.07	Dec-17
Credit/Distressed - HF Total	12,602,845	7.5%	2.10%	2.10%	2.10%	5.58%	-	-	2.50%	4.87%	0.07	Dec-17
HFRI ED: Distressed/Restructuring Index			1.11%	1.11%	1.11%	1.03%	-	-	1.67%	4.23%	-0.12	Dec-17
<b>Event Driven</b>												
Taconic Opportunity Fund L.P.	10,466,591	6.2%	0.32%	0.32%	0.32%	4.63%	-	-	3.99%	1.49%	1.12	Dec-18
Event Driven - HF Total	10,466,591	6.2%	0.32%	0.32%	0.32%	4.63%	-	-	3.99%	1.49%	1.12	Dec-18
HFRI Event-Driven (Total) Index			-0.17%	-0.17%	-0.17%	4.07%	-	-	4.15%	4.84%	0.39	Dec-18
<b>Equity Long/Short</b>												
Archipelago Partners, L.P.	12,431,596	7.4%	-0.30%	-0.30%	-0.30%	10.50%	-	-	5.76%	7.00%	0.52	Sep-17
First Eagle International Value Fund, LP	45,000,000	26.7%	0.00%	0.00%	0.00%	-	-	-	0.00%	-	-	Jan-20
GQG Partners International Equity Fund	45,074,718	26.7%	0.17%	0.17%	0.17%	-	-	-	0.17%	-	-	Jan-20
Marshall Wace Funds LP - MW Eureka (US) Fund	3,414,839	2.0%	0.58%	0.58%	0.58%	11.47%	-	-	6.16%	5.21%	0.74	Dec-17
Equity Long/Short - HF Total	105,921,153	62.8%	0.06%	0.06%	0.06%	10.90%	-	-	6.13%	6.11%	0.65	Sep-17
HFRI Equity Hedge (Total) Index			-0.85%	-0.85%	-0.85%	7.27%	-	-	3.93%	7.18%	0.27	Sep-17
<b>Global Macro-Discretionary</b>												
Graham Absolute Return Trading Ltd.	7,602,455	4.5%	-0.12%	-0.12%	-0.12%	5.08%	-	-	3.56%	6.63%	0.23	Sep-17
Global Macro-Discretionary - HF Total	7,602,455	4.5%	-0.12%	-0.12%	-0.12%	5.08%	-	-	3.56%	6.63%	0.23	Sep-17
HFRI Macro (Total) Index			0.62%	0.62%	0.62%	6.66%	-	-	1.76%	4.77%	-0.07	Sep-17
<b>Global Macro-Systematic</b>												
Winton Fund Limited	6,227,525	3.7%	-0.10%	-0.10%	-0.10%	5.29%	-	-	2.10%	7.13%	0.01	Nov-17
Global Macro-Systematic - HF Total	6,227,525	3.7%	-0.10%	-0.10%	-0.10%	5.29%	-	-	2.10%	7.13%	0.01	Nov-17
HFRI Macro (Total) Index			0.62%	0.62%	0.62%	6.66%	-	-	1.41%	4.74%	-0.15	Nov-17
<b>Multi-Strategy</b>												
Sculptor Domestic Partners II, L.P.	11,158,792	6.6%	2.58%	2.58%	2.58%	15.33%	9.11%	6.73%	6.74%	5.71%	0.95	Jul-14
Multi-Strategy - HF Total	11,158,792	6.6%	2.58%	2.58%	2.58%	15.33%	9.11%	6.73%	6.74%	5.71%	0.95	Jul-14
HFRI Relative Value (Total) Index			0.55%	0.55%	0.55%	5.55%	3.75%	3.96%	3.40%	2.78%	0.75	Jul-14
MCERA Hedge Fund Portfolio	168,574,265	100.0%	0.48%	0.48%	0.48%	6.56%	5.87%	3.78%	3.95%	4.06%	0.66	Jul-14
<b>Benchmarks</b>												
HFRI Fund of Funds Composite Index			0.62%	0.62%	0.62%	6.27%	3.73%	2.45%	2.44%	3.61%	0.33	Jul-14
<b>Market Indices</b>												
Libor3Month			0.15%	0.15%	0.15%	2.21%	2.00%	1.43%	1.30%	0.25%	-	Jul-14
Bloomberg Barclays US Aggregate Bond Index			1.92%	1.92%	1.92%	9.66%	4.63%	3.02%	3.44%	3.06%	0.70	Jul-14
Bloomberg Barclays US High Yield Bond Index			0.03%	0.03%	0.03%	9.39%	5.86%	6.00%	4.94%	5.29%	0.70	Jul-14
S&P 500 TR			-0.04%	-0.04%	-0.04%	21.68%	14.54%	12.37%	11.59%	11.55%	0.90	Jul-14
MSCI AC World Index Free - Net			-1.10%	-1.10%	-1.10%	16.04%	11.03%	8.51%	6.91%	11.39%	0.53	Jul-14
MSCI EAFE - Net			-2.09%	-2.09%	-2.09%	12.10%	7.76%	5.12%	2.87%	11.95%	0.19	Jul-14
MSCI EMF (Emerging Markets Free) - Net			-4.66%	-4.66%	-4.66%	3.81%	7.88%	4.48%	2.60%	15.65%	0.16	Jul-14

## Cliffwater Disclosures

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**Merced County Employees'  
Retirement Association**

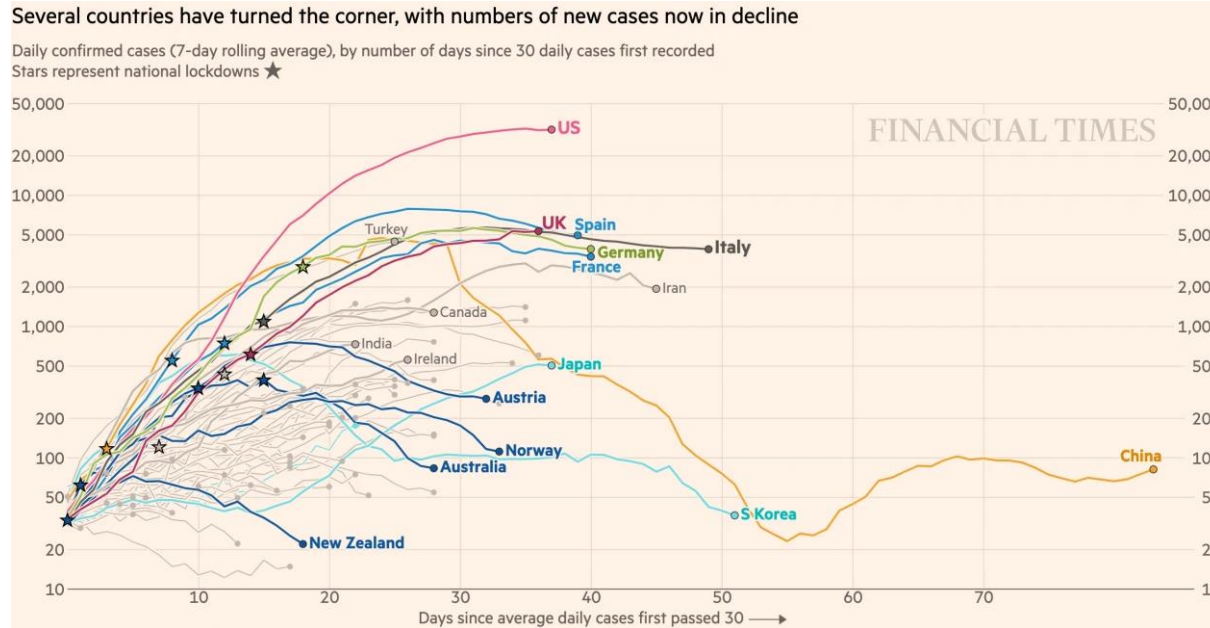
**April 23, 2020**

**Prelim Performance Report**

## **Economy and Market Update**

Data as of April 9, 2020

**Case Count by Select Country: Flattening the Curve<sup>1</sup>**



- There are now around 2.0 million cases globally across 185 countries, with the death toll well over 120,000.
- Originally China-focused, this became a global issue with the fastest spread of the virus in the US and Europe.
- New cases of the virus have declined and plateaued in China, although there are some questions around the data. New cases are starting to level-off in Europe, while the US is still experiencing growth of new cases, but at a slower pace than before.

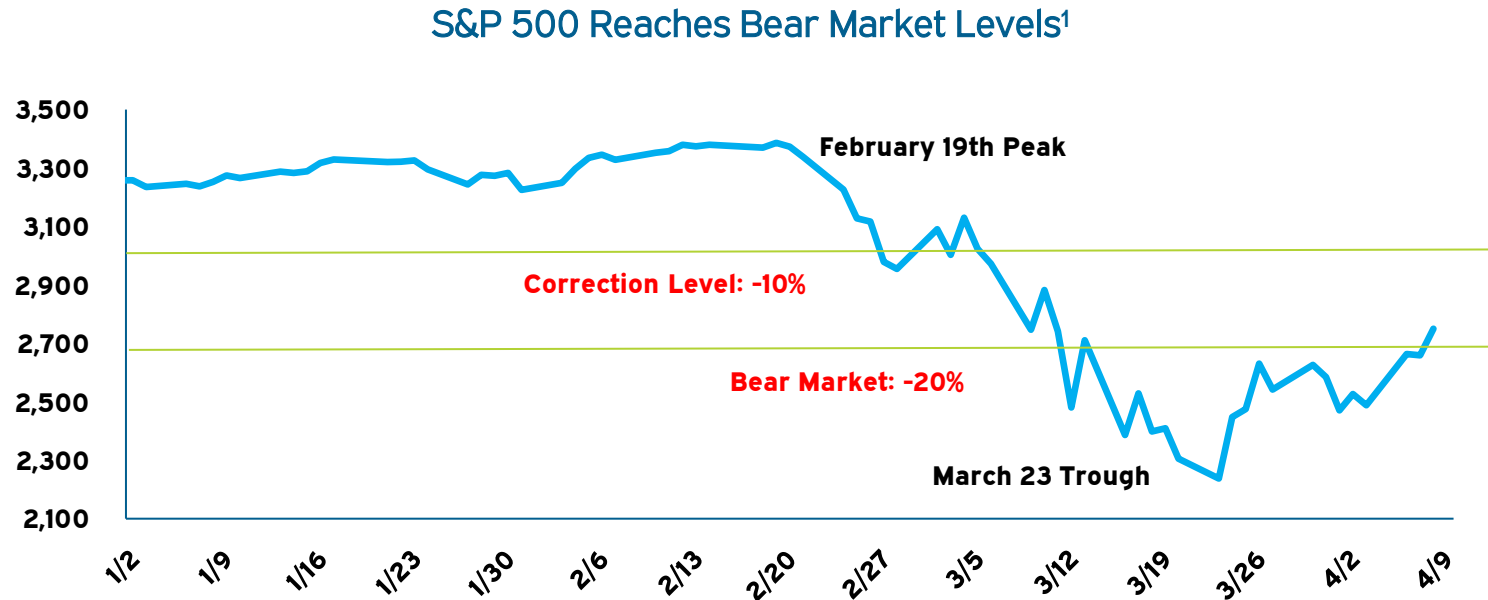
<sup>1</sup> Source: Financial Times. Virus data is as of April 13 2020 19:00 GMT. Data throughout the rest of the document is through April 9, 2020.

### Market Returns<sup>1</sup>

Indices	YTD	3 Year	5 Year	10 Year	20 Year
S&P 500	-13.2%	7.9%	8.1%	11.1%	5.1%
MSCI EAFE	-20.5%	-0.6%	-0.5%	2.9%	2.1%
MSCI Emerging Markets	-20.0%	-0.2%	-0.5%	0.8%	-
MSCI China	-7.9%	7.5%	1.8%	4.1%	-
Bloomberg Barclays Aggregate	4.0%	5.1%	3.5%	4.0%	5.1%
Bloomberg Barclays TIPS	4.4%	4.4%	3.1%	3.7%	5.5%
Bloomberg Barclays High Yield	-9.9%	1.7%	3.3%	5.9%	-
10-year US Treasury	11.7%	7.1%	3.9%	5.1%	5.6%
30-year US Treasury	26.0%	15.3%	7.4%	9.5%	8.1%

- Given uncertainty related to the ultimate impact of the virus on economic growth, company profitability, and societal norms, many investors have sought perceived safe haven assets like US Treasuries.
- Stocks experienced large declines globally, particularly in areas like Europe where the virus is actively spreading, but fiscal and monetary authorities across the globe are deploying emergency measures to moderate huge economic losses.
- The recent declines in US stocks (S&P 500) brought long-term returns to similar levels as US bonds (Bloomberg Barclays Aggregate).
- By contrast, at the end of 2019, the S&P 500's five-year annual return was 11.7%, far above the bond market's 3.1% return, indicating how dramatically long-term returns can shift.

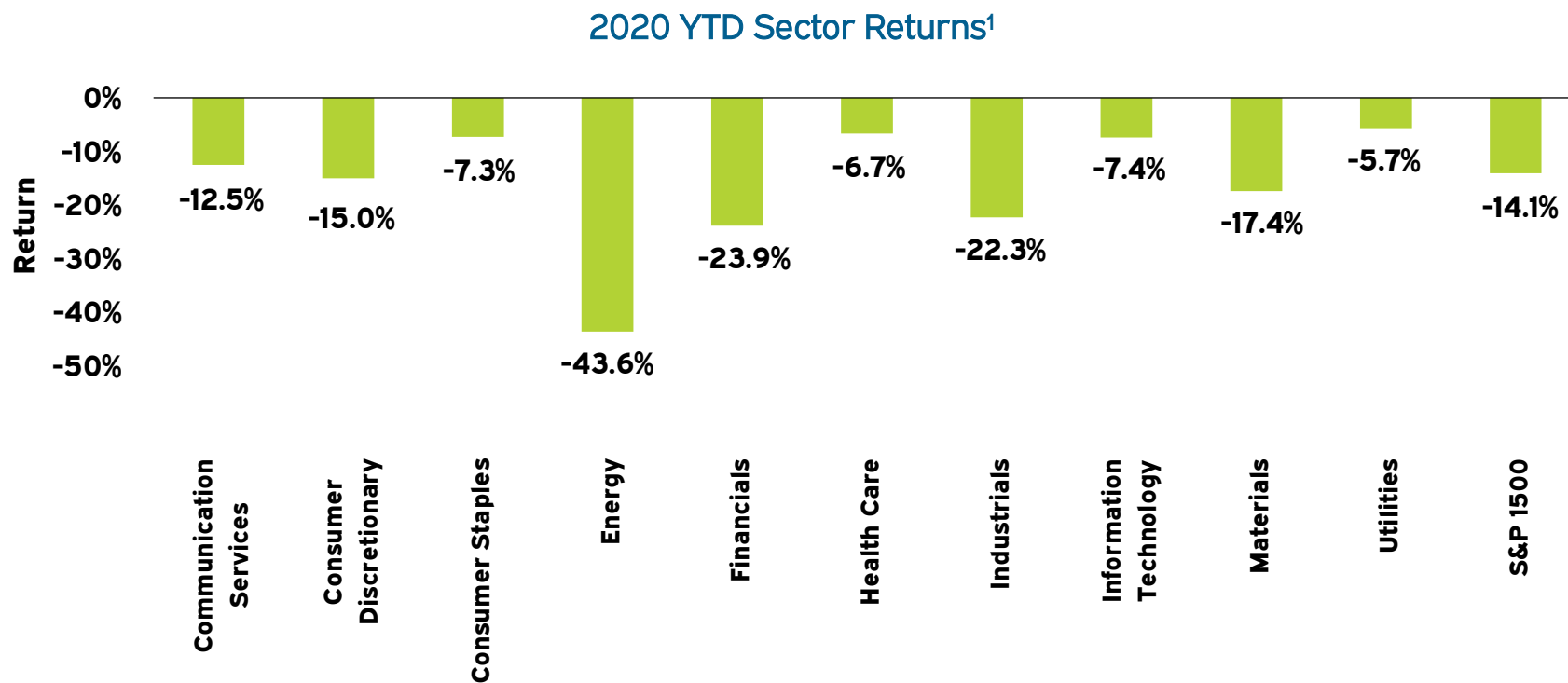
<sup>1</sup> Source: InvestorForce and Bloomberg. Data is as of April 9, 2020.



- Given all the uncertainty, US stocks declined from their recent peak into bear market (-20%) territory at the fastest pace in history.
- From the February 19 peak, the S&P 500 declined 34% in a matter of 24 trading days.
- The index recovered recently from its lows, likely due to the unprecedented monetary and fiscal stimulus announced in the US and some improvements in virus data.
- It is unclear whether the US equity market has reached a bottom, or if the recent recovery is temporary, with more declines to come as the impact of COVID-19 on the economy becomes more apparent.

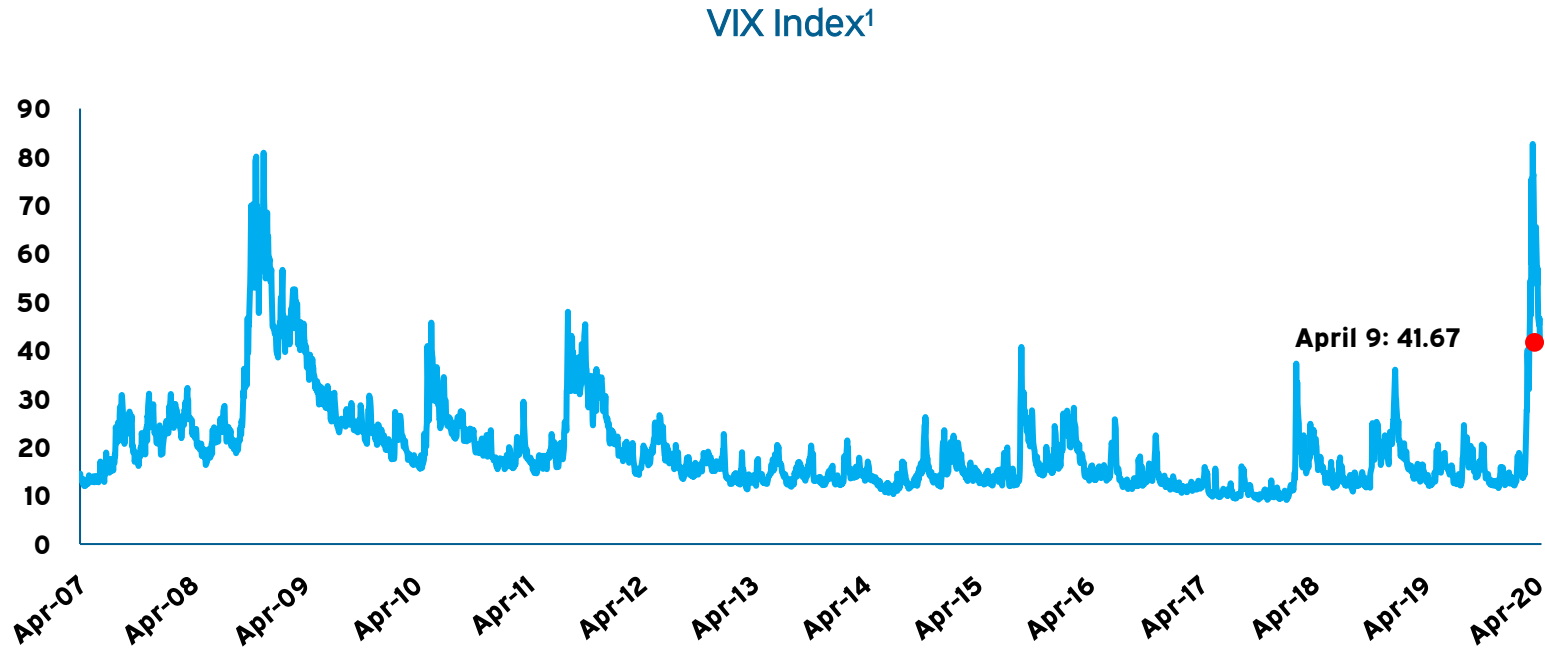
<sup>1</sup> Source: Bloomberg. Data is as of April 9, 2020.





- The energy sector saw some improvements recently based on an agreement by Saudi Arabia and Russia to cut supply, but it remains the sector with the largest declines given the fall in oil prices.
- Financials (-23.9%), industrials (-22.3%) and materials (-17.4%), experienced the next largest declines, while sectors like utilities, health care, and consumer staples experienced the smallest declines.

<sup>1</sup> Source: Bloomberg. Data is as of April 9, 2020.



- Given the recent fiscal and monetary support and corresponding improvement in investor risk sentiment, expectations of short-term volatility, as measured by the VIX index, declined from record levels but remain elevated.
- At the recent height, the VIX index reached 82.7, surpassing the pinnacle of volatility during the GFC, showing the magnitude of investor fear.
- As investors continue to process the impacts of COVID-19 and the effectiveness of the policy response, it is likely that volatility will remain high.

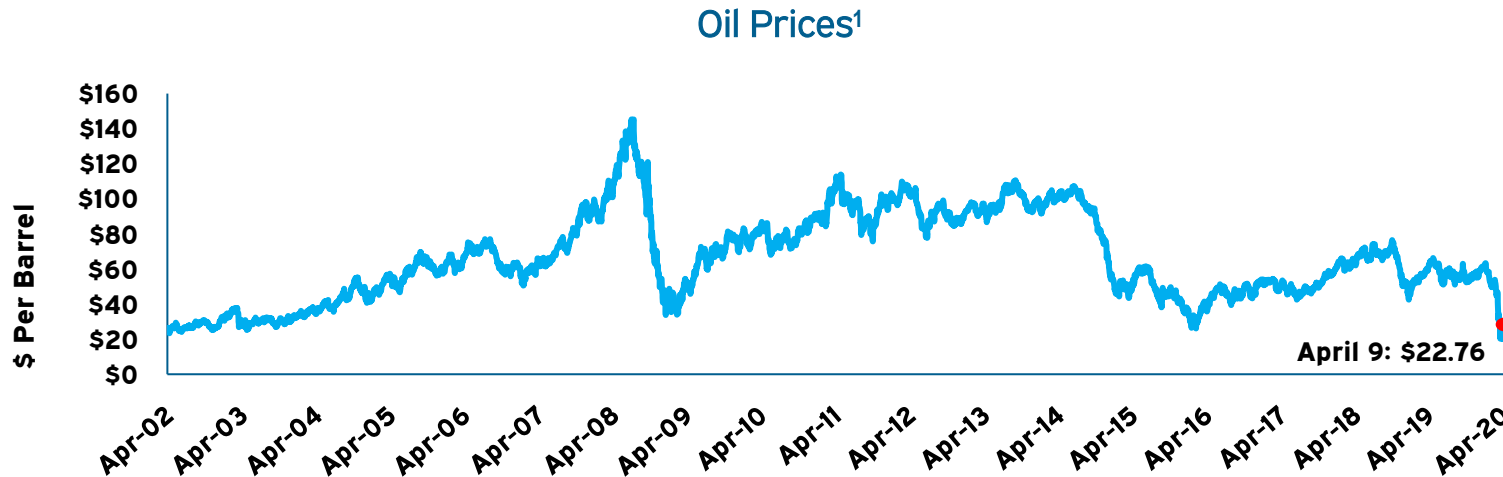
<sup>1</sup> Source: Chicago Board of Exchange. Data is as of April 9, 2020.

### Global Financial Crisis Comparison

	2007-2009 Global Financial Crisis	COVID 19-Crisis
<b>Primary Causes</b>	<p>Excess Risk Taking Due to:</p> <ul style="list-style-type: none"> <li>deregulation, un-constrained securitization, shadow banking system, fraud</li> </ul>	<p>Pandemic/Natural Disaster:</p> <ul style="list-style-type: none"> <li>Large scale global restrictions on businesses and individuals leading to immediate and significant deterioration in economic fundamentals</li> </ul>
<b>Fiscal Measures</b>	<ul style="list-style-type: none"> <li>American Recovery Reinvestment Act of 2009: \$787 billion</li> <li>Economic Stimulus Act of 2008: \$152 billion</li> </ul>	<ul style="list-style-type: none"> <li>CARES Act of 2020: \$2.3 trillion</li> <li>Families First Coronavirus Response Act: \$150 billion</li> <li>Coronavirus Preparedness &amp; Response Supplemental Appropriations Act 2020: \$8.3 billion</li> <li>National Emergency: \$50 billion</li> </ul>
	2007-2009 Global Financial Crisis	COVID 19-Crisis
<b>Monetary Measures</b>		
Lowering Fed Funds Rate	X	X
Quantitative Easing	X	X
Primary Dealer Repos	X	X
Central Bank Swap Lines	X	X
Commercial Paper Funding Facility	X	X
Primary Dealers Credit Facility	X	X
Money Market Lending Facility	X	X
Term Auction Facility	X	
TALF	X	X
TSLF	X	
FIMA Repo Facility		X
Primary & Secondary Corp. Debt		X
PPP Term Facility		X
Municipal Liquidity Facility		X
Main Street Loan Facility		X

### Global Financial Crisis Comparison (continued)

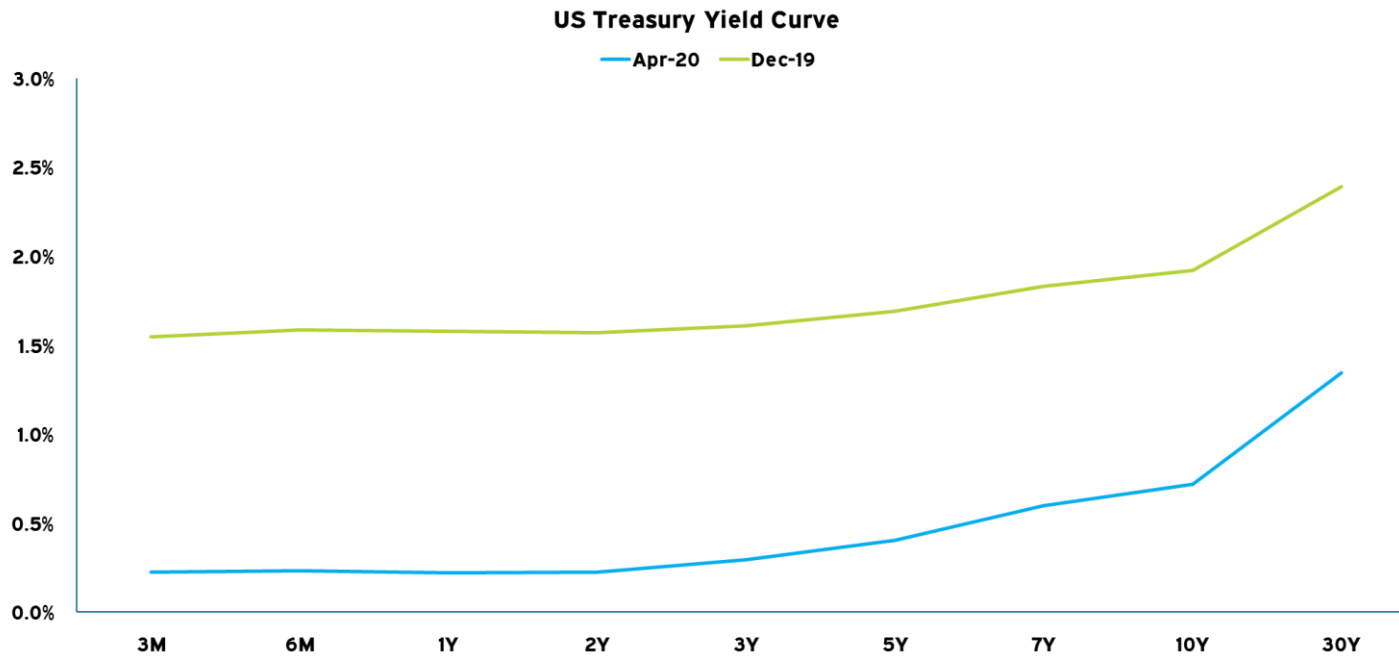
- The US fiscal COVID 19-Crisis response has been materially larger in dollar terms than the 2007-2009 Global Financial Crisis (GFC), and stimulus is more acutely focused on areas of the economy showing the greatest need.
- On the monetary side, areas targeted represent those most in need, but for the COVID 19-Crisis the policy response has been measured in weeks, not years, as in the GFC.
- The monetary stimulus, corporate debt (Primary & Secondary Corporate Debt) programs, and Main Street Loan Facility, are new and garnered much attention from market participants due to being considered outside of expectations.



- Oil markets came under pressure as the virus started to lower global growth expectations, but prices deteriorated further when Saudi Arabia initiated a price war due to Russia's decision to not participate in the proposed OPEC+ supply cuts.
- President Trump announced that he intends to build US oil reserves in an attempt to support the domestic industry and capitalize on lower oil prices.
- During the volatility and aggressive supplier actions, oil prices (as measured by West Texas Intermediate) traded below \$21 per barrel. This represented a decline of over 55% since February 19, to reach levels not seen since 2001.
- Recently, we saw a modest price rebound given the production cuts agreed to by OPEC+ and other countries including the US, but this quickly reversed as doubts remain on whether or not the cuts are enough to balance lost demand.

<sup>1</sup> Source: Bloomberg. Represents first available futures contract. Data is as of April 9, 2020.

**US Yield Curve Declines<sup>1</sup>**



- The US Treasury yield curve has declined materially since last year.
- Notable cuts in monetary policy rates lowered yields in shorter-dated maturities, while flight-to-quality flows, low inflation, and declining growth expectations have driven the changes in longer-dated maturities.

<sup>1</sup> Source: Bloomberg. Data is as of April 9, 2020.

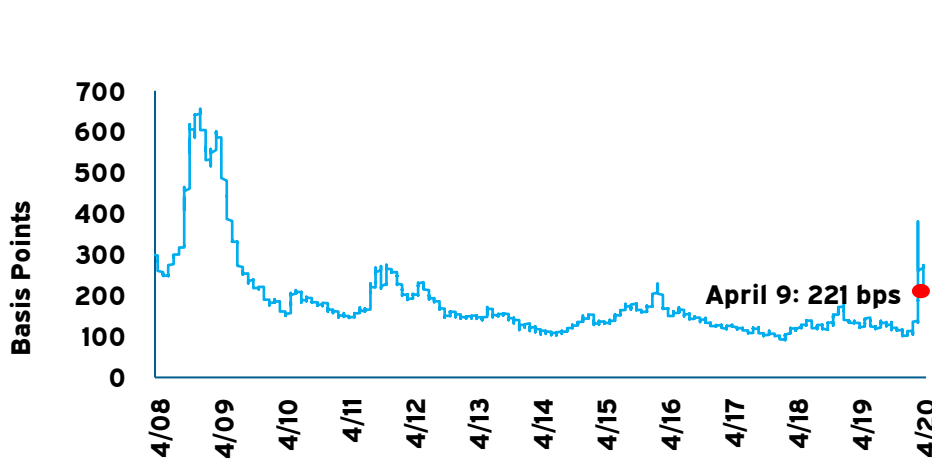


- Inflation breakeven rates declined sharply over the last two months, due to a combination of declines in inflation expectations and liquidity dynamics in TIPS during the height of rate volatility.
- Breakeven rates have not traded near these levels since the GFC, and when they did, the Federal Reserve responded with large-scale asset purchases; this is consistent with recent policy actions.
- Inflation expectation levels have come off of their recent lows as liquidity improved and given the potential longer term inflationary effects of the unprecedented US fiscal and monetary responses.

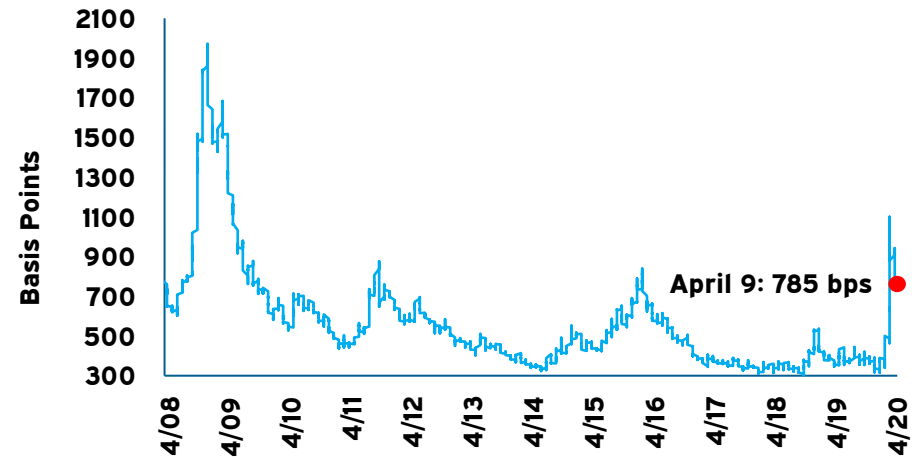
<sup>1</sup> Source: Bloomberg. Data is as of April 9, 2020.

### Credit Spreads (High Yield & Investment Grade)<sup>1</sup>

Investment Grade OAS



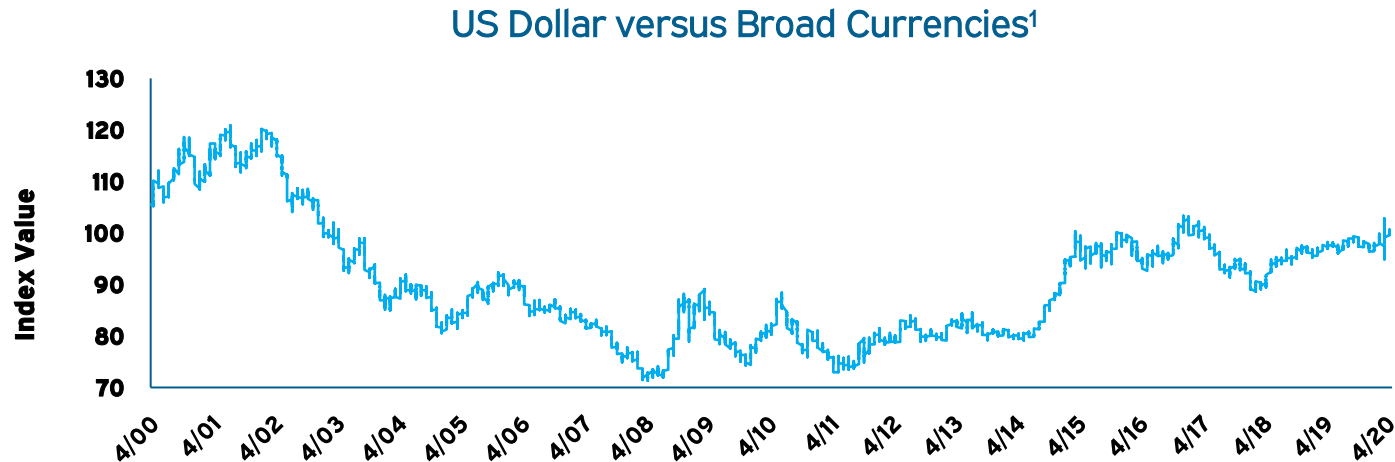
High Yield OAS



- Credit spreads (the spread between a comparable Treasury bond) for investment grade and high yield corporate debt expanded sharply as investors preferred perceived safe-haven bonds.
- Investment grade bonds held up much better than high yield bonds, which have a far greater risk of default in this environment. The Federal Reserve's recently announced corporate debt purchase program for investment grade, and certain high yield securities that were recently downgraded from investment grade, has been well received by investors.
- Corporate debt issuance has more than doubled since 2008, which magnifies the impact of deterioration in the corporate debt market. This is particularly true for the energy sector, which represents a large portion of the high yield bond market.

<sup>1</sup> Source: Federal Reserve Bank of St. Louis Economic Research. Data is as of April 9, 2020.



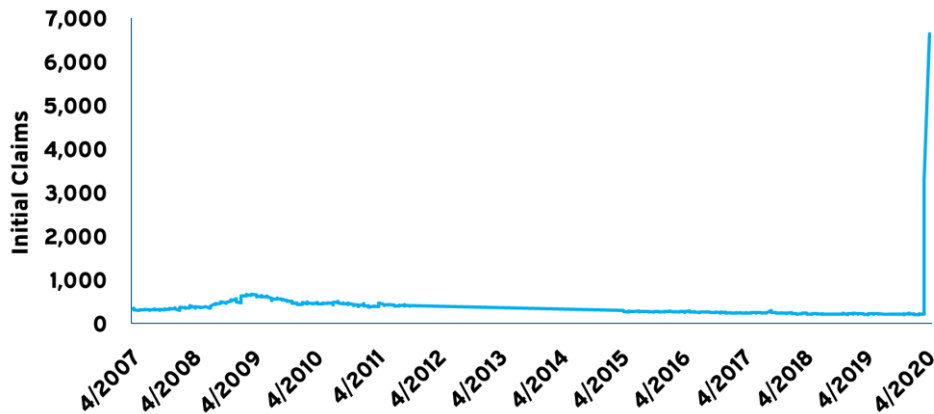


- When financial markets began aggressively reacting to COVID-19 developments, the US dollar came under selling pressure as investors sought safe-haven exposure in currencies like the Japanese yen.
- As the crisis grew into a pandemic, investors' preferences shifted to holding US dollars and highly liquid, short-term securities like US Treasury bills. This global demand for US dollars resulted in appreciation versus most major currencies.
- A relatively strong US dollar makes US goods more expensive for overseas consumers and causes commodity prices outside the US to rise, negatively impacting foreign countries, and particularly emerging markets.
- To help ease global demand for US dollars, the Federal Reserve, working with a number of global central banks, re-established the US dollar swap program, providing some recent relief to other currencies.

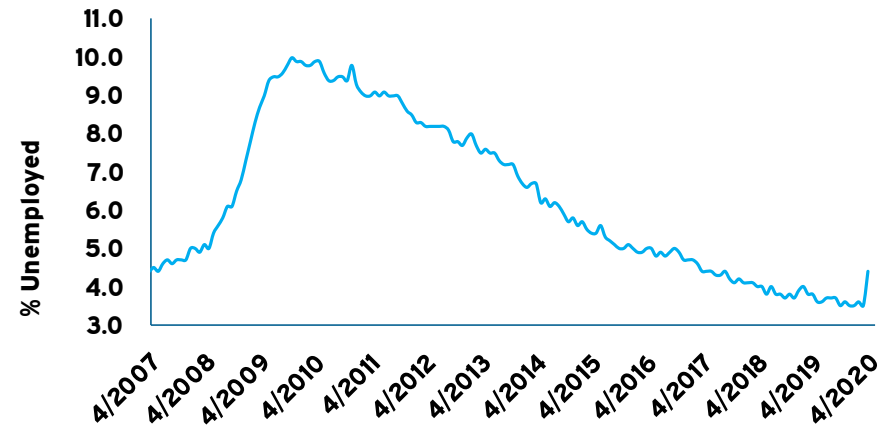
<sup>1</sup> Source: Bloomberg. Represents the DXY Index. Data is as of April 9, 2020.

### US Jobs Data

#### US Initial Jobless Claims<sup>1</sup>



#### US Unemployment Rate<sup>2</sup>



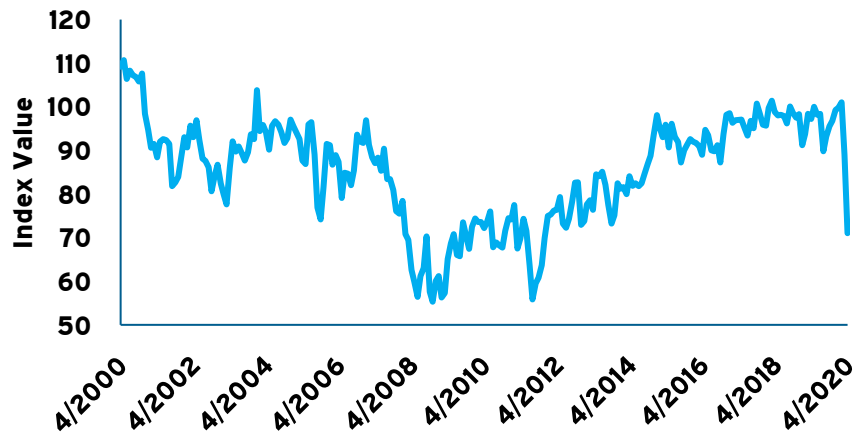
- Layoffs expanded dramatically, as businesses have been forced to close in an effort to stop the spread of the disease.
- Over the last three weeks, close to 17 million people filed claims for initial unemployment benefits, showing just how immediate and unprecedented the impact of the virus is.
- The last reading of unemployment ticked up from 3.5% to 4.4% with expectations to increase to double-digit levels.

<sup>1</sup> Source: Bloomberg. First reading of seasonally adjusted initial jobless claims. Data is as of April 9, 2020.

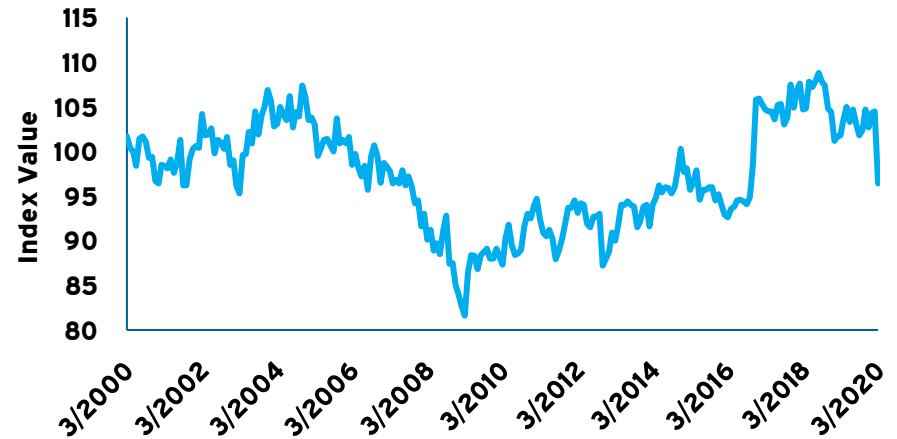
<sup>2</sup> Source: Bloomberg. U-3 US Employment Rate, total in labor force, seasonally adjusted. Data is as of March 31, 2020.

### Sentiment Indicators

University of Michigan Consumer Confidence<sup>1</sup>



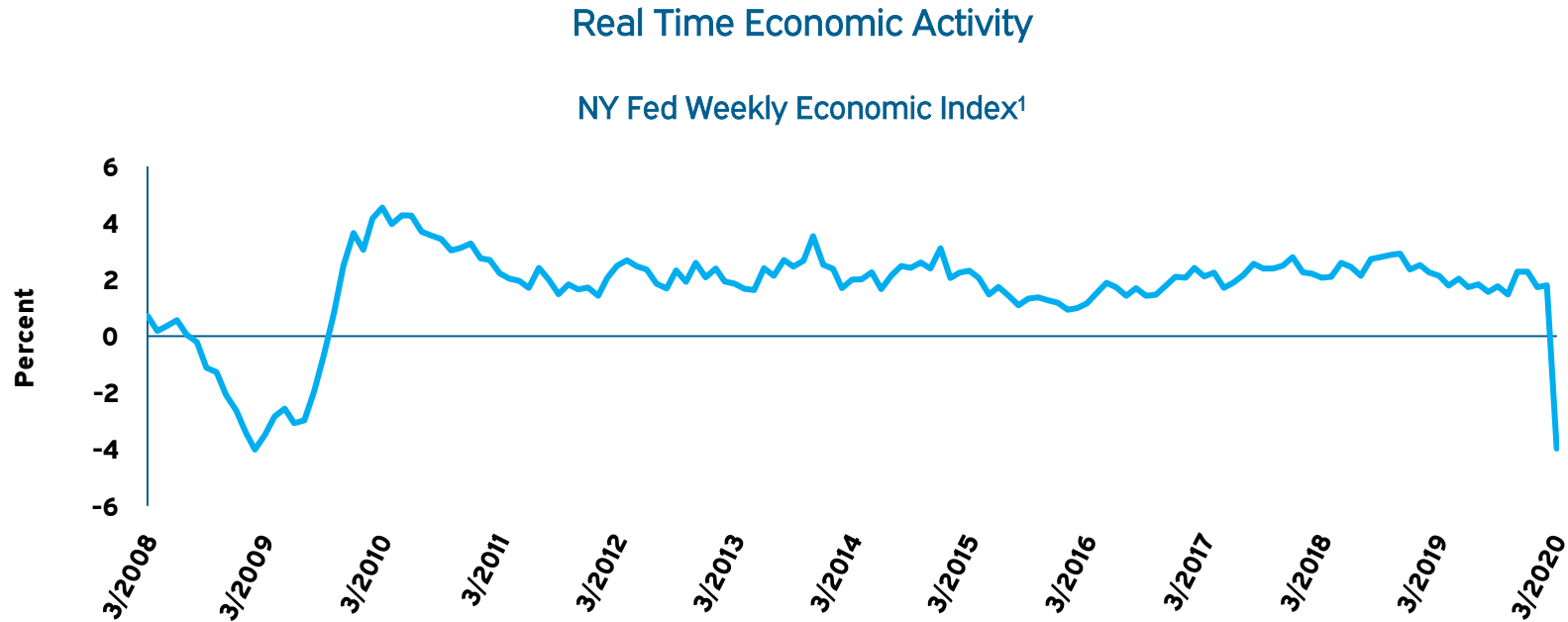
Small Business Confidence<sup>2</sup>



- A strong indicator of future economic activity are the attitudes of businesses and consumers today.
- Consumer spending comprises close to 70% of US GDP, making the attitudes of consumers an important driver of future economic growth. Additionally, small businesses comprise a majority of the economy making sentiment in that segment important too.
- As restrictions caused many businesses to close and employees to be laid off, sentiment indicators have seen corresponding declines with potentially more to come as the impact of the virus evolves.

<sup>1</sup> Source: Bloomberg. University of Michigan Consumer Sentiment Index. Data is as of April 9, 2020.

<sup>2</sup> Source: Bloomberg. NFIB Small Business Optimism Index. Data is as of March 31, 2020.

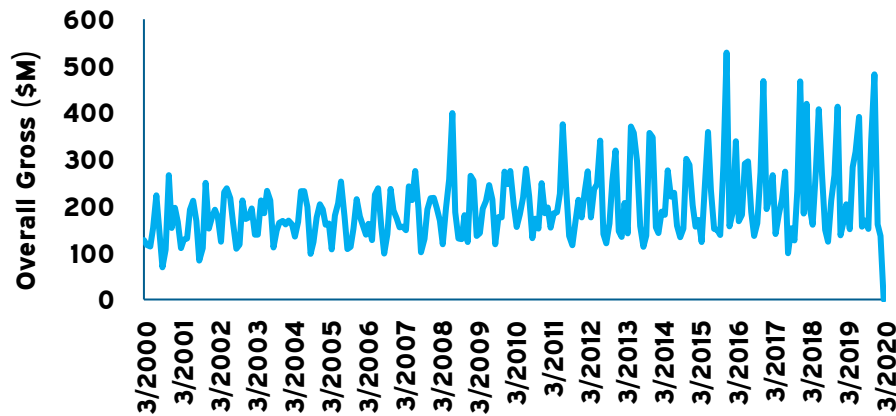


- Traditional economic indicators like GDP, unemployment, and inflation are often available monthly or quarterly and come at significant lags.
- In times of significant and immediate impacts to the economy it is important to consider more “real time” indicators.
- The New York Federal Reserve’s real time economic index recently experienced significant declines to close to Global Financial Crisis levels.

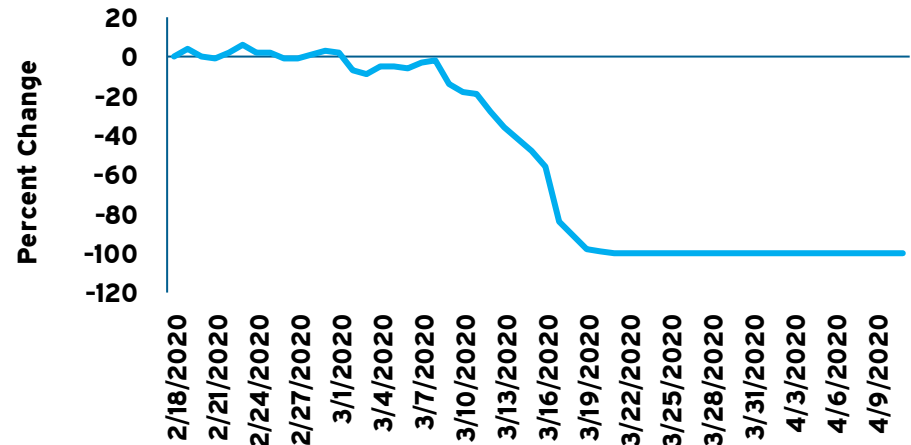
<sup>1</sup> Source: Bloomberg. Measures real economic activity at a weekly frequency. Series used in baseline index include a measure of same-store retail sales, an index of consumer sentiment, initial unemployment insurance (UI) claims, an index of temporary and contract employment, a measure of steel production, a measure of fuel sales, and a measure of electricity consumption. Data is as of March 31, 2020.

### US High Frequency Data

#### Box Office Sales<sup>1</sup>



#### Restaurant Traffic<sup>2</sup>



- Due to stay-at-home orders and forced business closures, many industries have seen revenues plummet, and in some cases, virtually vanish.
- As people are forced to stay at home, entertainment industries like restaurants and movies have been impacted dramatically.
- Going forward, improvements in these indicators could offer early signs of the virus' economic impacts declining.

<sup>1</sup> Source: Bloomberg. Represents overall domestic weekly overall box office gross. Data is as of March 31, 2020.

<sup>2</sup> Source: Bloomberg. This data shows year-over-year seated diners at restaurants on the OpenTable network across all channels: online reservations, phone reservations, and walk-ins. Only states or cities with 50+ restaurants in the sample are included. All such restaurants on the OpenTable network in either period are included. Data is as of March 31, 2020. Index start date 2/19/20.

### Historic \$2T US Fiscal Stimulus

Destination	Amount (\$ Billion)
Individuals	\$560
Large Corporations	\$500
Small Business	\$377
State & Local Governments	\$340
Public Health	\$154
Student Loans	\$44
Safety Net	\$26

- Recently, a historic \$2 trillion fiscal package was approved in the US, representing close to 10% of GDP and including support across the economy.
- Individuals will receive a package of cash payments of up to \$1,200 per adult and \$500 per child, and extended and higher weekly unemployment benefits (+\$600/week).
- The package also includes a \$500 billion lending program for distressed industries, like airlines, and \$377 billion in loans to small businesses.
- Other parts of the package include allocations to state and local governments, support for public health, student loan relief, and a safety net.
- The next round of fiscal stimulus is already under discussion in the US and could include money for infrastructure, healthcare equipment, and expanded paid leave.

## Potential Economic Impacts

### Supply Chain Disruptions:

- Factories closing, increased cost of stagnant inventory, and disrupted supply agreements.
- Reduced travel, tourism, and separation policies including closed borders: Significant impact on service-based economies.

### Labor Force Impacts:

- Huge layoffs across both service and manufacturing economies.
- Increased strains as workforce productivity declines from increased societal responsibilities (e.g., home schooling of children) and decreased functionality working from home.
- Illnesses from the disease will also reduce the labor force temporarily.

### Declines in Business and Consumer Sentiment:

- Sentiment drives investment and consumption, which leads to increased recessionary pressures as sentiment slips.

### Wealth Effect:

- As financial markets decline and wealth deteriorates, consumer spending will be impacted.

### Looking Forward...

- There will definitely be economic impacts and a global recession.
  - How deep it will be and how long it will last depends on a number of factors (below) that are unknowable at this time.
- The length of the virus and country responses will be key considerations.
  - As of now, it is not clear the end is in sight; however, impacted countries are attempting to lay the groundwork to support a recovery.
- Central banks and governments are pledging support, but will it be enough?
  - Based on initial market reactions to announced policies, the answer is no, until the virus gets better contained.
- Expect heightened market volatility given the virus and previous high valuations.
  - This has been a consistent theme over the last few weeks, and volatility is likely to remain elevated for some time.
- It is important to continue to have a long-term focus.
  - History supports the argument that maintaining a long-term focus will ultimately prove beneficial for diversified portfolios.



Distribution of Annual S&P 500 Returns<sup>1</sup>  
(1926-2020)



- The 13.2% year-to-date decline (through 4/9) in the S&P 500 would be the thirteenth largest in modern history if it ended the year at this level.
- With around nine months remaining in 2020, and trillions of dollars in fiscal and monetary stimulus being deployed, we expect asset prices to experience notable volatility over the near term.

<sup>1</sup> Source: Bloomberg. Data is as of April 9, 2020.

### Prior Drawdowns and Recoveries from 1926-2020<sup>1</sup>

Period	Peak-to-Trough Decline of the S&P 500	Approximate Time to Recovery
Sept 1929 to June 1932	-85%	266 months
February 1937 to April 1942	-57%	48 months
May 1946 to February 1948	-25%	27 months
August 1956 to October 1957	-22%	11 months
December 1961 to June 1962	-28%	14 months
February 1966 to October 1966	-22%	7 months
November 1968 to May 1970	-36%	21 months
January 1973 to October 1974	-48%	69 months
September 1976 to March 1978	-19%	17 months
November 1980 to August 1982	-27%	3 months
August 1987 to December 1987	-32%	19 months
July 1990 to October 1990	-20%	4 months
July 1998 to August 1998	-19%	3 months
March 2000 to October 2002	-49%	56 months
October 2007 to March 2009	-57%	49 months
February 2020 to April 2020	-34%	TBD
<b>Average</b>	<b>-36%</b>	<b>41 months</b>
<b>Average ex. Great Depression</b>	<b>-33%</b>	<b>25 months</b>

- Markets are continuing to reprice amidst the uncertain impact of the virus on markets and the global economy, which means this drawdown is still being defined in the context of history.
- That said, financial markets have experienced material declines with some frequency, and while certain declines took a meaningful time to recover, in all cases they eventually did.
- The current decline is severe, and it is still too early to tell how long a full recovery might take.

<sup>1</sup> Source: Goldman Sachs. Recent peak to trough declines are through April 9, 2020.

### Implications for Clients

- Be prepared to rebalance and take advantage of the age-old wisdom “buy low, sell high”.
  - Before rebalancing, consider changes in liquidity needs given the potential for inflows to decline in some cases.
  - Also, consider the cost of rebalancing as investment liquidity declines.
- Diversification works. The latest decline was an example of a flight to quality.

### Performance YTD (through April 9, 2020)

S&P 500	ACWI (ex. US)	Aggregate Bond Index	Balanced Portfolio <sup>1</sup>
-13.2%	-20.5%	4.0%	-9.8%

- Meketa will continue to monitor the situation and communicate frequently.
  - The situation is fluid and the economic impact is uncertain at this stage.
- Please feel free to reach out with any questions.
  - We would be glad to assist with performance estimates, memorandums, or phone calls.

<sup>1</sup> Source: InvestorForce. Balanced Portfolio represents 60% MSCI ACWI and 40% Bloomberg Barclays Global Aggregate.

## **Executive Summary**

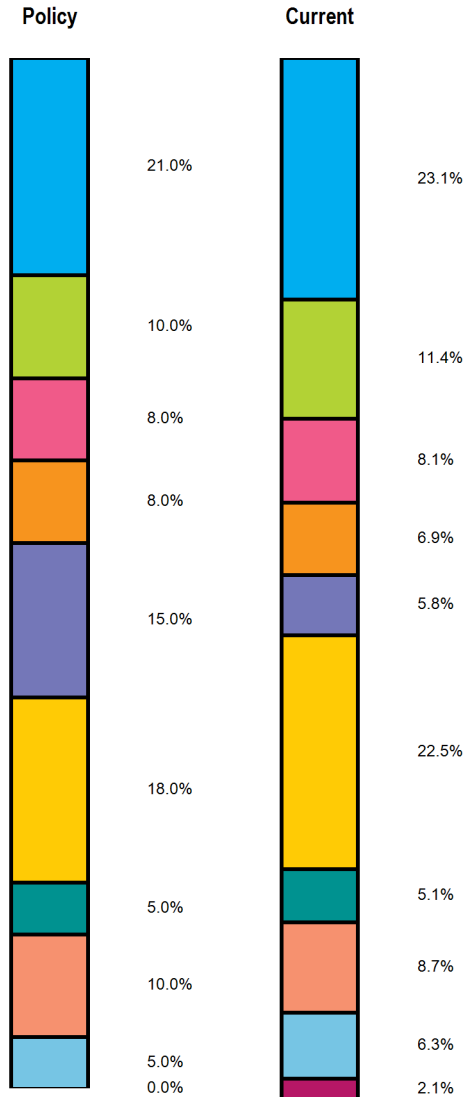
As of March 31, 2020, based on month-end data for public market investments and mostly unadjusted private markets valuations, the Fund's estimated value was approximately \$817 million, a significant decrease from the previous month.

- Meketa estimates that the fund returned -7.1% in March; QTD estimates are -4.8%. Again, it is important to note that private market investments, which represent approximately 19% of the portfolio, have been kept at their last reported valuations in this preliminary report.
- Global equities (US, Developed International, Emerging Markets) returned between -10% to -14% in March. In addition to economies shutting down to contain the spread of COVID-19 disease, global equities (and credit securities) also suffered from a collapse in energy prices driven by deteriorating global demand, as well as the price war between Saudi Arabia and Russia. This led to a massive sell-off in risky assets as investors fled to safe-haven assets.
- Returns for the US Equity segment were in-line with its benchmark. The Developed International segment returned -10.4%, to beat its index by +3.8%, with all four managers in this segment outperforming their benchmarks. The Emerging Market asset class returned -10.3% in March, outperforming the EM Index return of -15.4% by roughly 5.1% driven by Artisan Developing's strong positive relative contribution (-7.3%)
- Total fixed income returned -0.6% for the month, in line with the Bloomberg Barclays U.S. Aggregate return of -0.6%. Fixed Income contributed positively to relative performance as investors sold out of riskier asset classes and flocked to the relative safety of bonds. However, bond prices (and therefore yields) were very volatile during the period, as liquidity tightened even among treasury securities, forcing the Fed to inject significant liquidity to try to ease those markets.

### Rebalancing Recommendation

On April 9, the Board approved Meketa's recommendation to reduce a portion of MCERA's fixed income allocation due to price strength causing it to reach its upper target range of 23%. To offset this trade, Meketa recommended assets be re-allocated to equities as adverse price movements drove an underweight to this asset class. Further, it was recommended these transactions be done in two separate tranches over a 2-week period.

**Performance Update**  
As of March 31, 2020

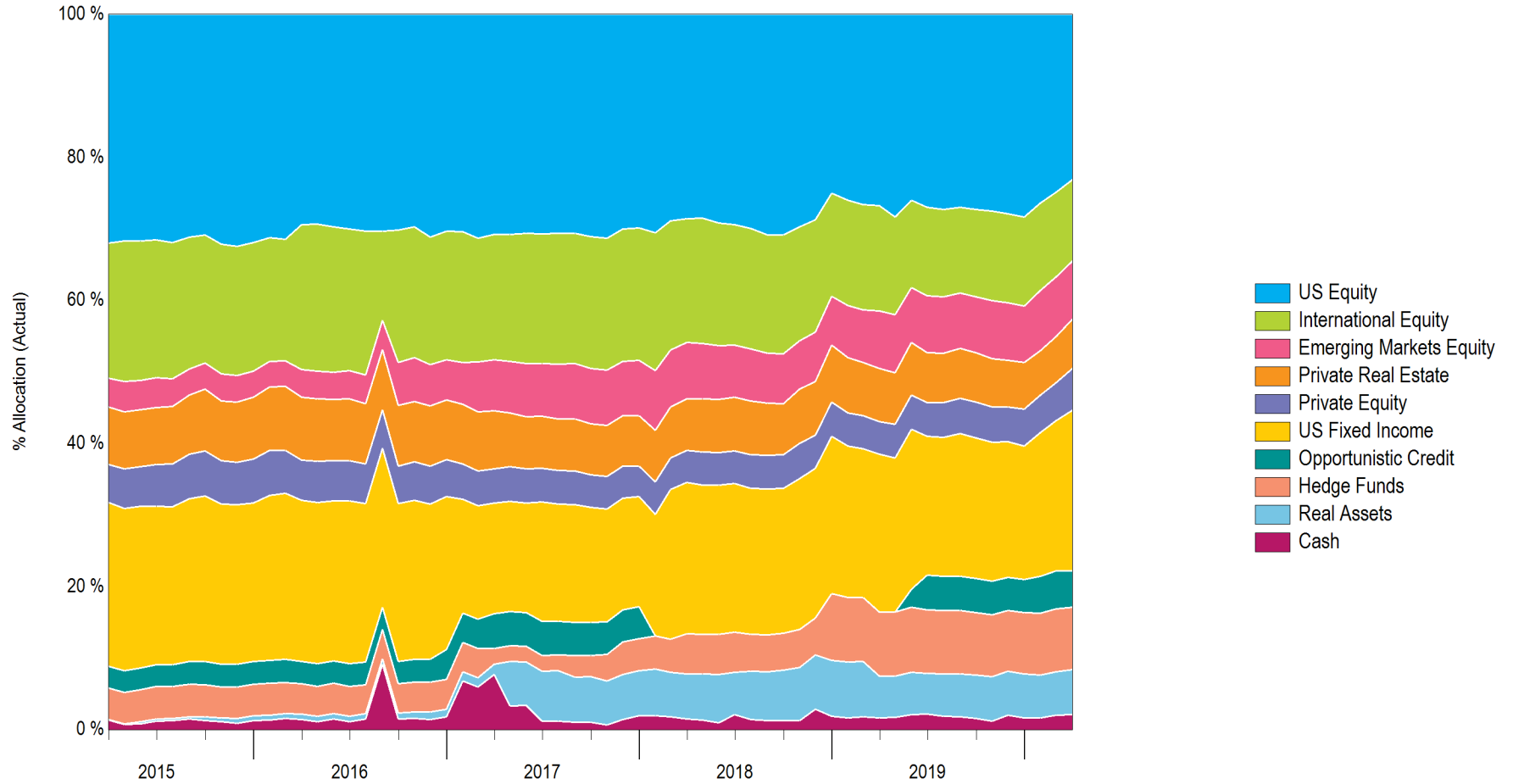


Allocation vs. Targets and Policy		Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
US Equity	\$188,928,705	23.1%	21.0%	2.1%	15.0% - 26.0%	Yes	
International Equity	\$93,335,969	11.4%	10.0%	1.4%	5.0% - 15.0%	Yes	
Emerging Markets Equity	\$66,307,342	8.1%	8.0%	0.1%	4.0% - 12.0%	Yes	
Private Real Estate	\$56,471,886	6.9%	8.0%	-1.1%	6.0% - 10.0%	Yes	
Private Equity	\$47,359,767	5.8%	15.0%	-9.2%	5.0% - 20.0%	Yes	
US Fixed Income	\$183,603,552	22.5%	18.0%	4.5%	13.0% - 23.0%	Yes	
Opportunistic Credit	\$41,589,771	5.1%	5.0%	0.1%	3.0% - 7.0%	Yes	
Hedge Funds	\$71,152,150	8.7%	10.0%	-1.3%	5.0% - 15.0%	Yes	
Real Assets	\$51,527,082	6.3%	5.0%	1.3%	3.0% - 7.0%	Yes	
Cash	\$17,415,914	2.1%	0.0%	2.1%	0.0% - 5.0%	Yes	
<b>Total</b>	<b>\$817,692,138</b>	<b>100.0%</b>	<b>100.0%</b>				

Cash range displayed for illustrative purposes only.



Asset Allocation History  
5 Years Ending March 31, 2020



Asset Class Performance Summary											
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund (Net)*</b>	<b>817,692,138</b>	<b>100.0</b>	-7.1	-9.8	-4.8	-1.8	4.1	4.3	6.7	7.5	Dec-94
<b>Total Fund (Gross)*</b>			-7.1	-9.7	-4.6	-1.6	4.4	4.6	7.1	7.7	
<i>Policy Index</i>			-5.6	-8.5	-3.5	-0.5	4.6	4.9	7.4	5.7	Dec-94
<b>Total Fund w/o Alternatives (Net)</b>	<b>573,765,338</b>	<b>70.2</b>	-8.7	-12.1	-5.6	-2.3	4.0	4.2	--	--	Dec-94
<b>Total Fund w/o Alternatives (Gross)</b>			-8.7	-12.1	-5.4	-2.0	4.2	4.5	--	--	
<i>Policy Index w/o AI</i>			-10.1	-15.1	-9.4	-6.5	2.4	3.3	--	--	Dec-94
<b>US Equity (Net)</b>	<b>188,928,705</b>	<b>23.1</b>	-13.7	-20.7	-12.1	-8.1	4.4	6.4	10.4	9.2	Dec-94
<b>US Equity (Gross)</b>			-13.7	-20.6	-12.0	-7.9	4.6	6.7	10.6	9.2	
<i>Custom Blended US Equity Benchmark</i>			-13.8	-20.9	-13.0	-9.7	3.4	5.4	9.9	9.0	Dec-94
<b>International Equity (Net)</b>	<b>159,643,311</b>	<b>19.5</b>	-10.4	-15.9	-7.9	-5.3	2.1	1.6	3.9	4.6	Dec-98
<b>International Equity (Gross)</b>			-10.3	-15.8	-7.7	-5.0	2.5	2.1	4.5	4.8	
<i>International Equity Custom</i>			-14.2	-23.1	-17.5	-15.4	-1.4	0.0	2.7	3.2	Dec-98
<b>Developed International Equity (Net)</b>	<b>93,335,969</b>	<b>11.4</b>	-10.4	-17.2	-10.8	-7.5	0.9	0.6	3.9	2.1	Jan-08
<b>Developed International Equity (Gross)</b>			-10.4	-17.2	-10.6	-7.3	1.0	0.9	4.4	2.5	
<i>Custom Blended Developed International Equity Benchmark</i>			-14.5	-24.1	-18.8	-15.8	-2.4	-0.9	2.5	0.5	Jan-08
<b>Emerging Markets Equity (Net)</b>	<b>66,307,342</b>	<b>8.1</b>	-10.3	-13.9	-3.8	-2.4	4.2	4.6	--	2.6	Apr-12
<b>Emerging Markets Equity (Gross)</b>			-10.3	-13.9	-3.4	-1.8	5.1	5.5	--	3.6	
<i>Custom Blended Emerging Markets Benchmark</i>			-15.4	-23.6	-18.0	-17.4	-1.3	0.0	1.0	0.4	Apr-12
<b>US Fixed Income (Net)</b>	<b>183,603,552</b>	<b>22.5</b>	-0.6	2.8	5.0	7.7	4.4	3.6	4.3	5.4	Dec-94
<b>US Fixed Income (Gross)</b>			-0.6	2.8	5.1	7.8	4.6	3.7	4.7	5.5	
<i>BBqBarc US Aggregate TR</i>			-0.6	3.1	5.4	8.3	4.8	3.8	4.1	5.7	Dec-94
<b>Opportunistic Credit (Net)</b>	<b>41,589,771</b>	<b>5.1</b>	-10.6	-10.6	-8.3	--	--	--	--	-6.8	May-19
<b>Opportunistic Credit (Gross)</b>			-10.6	-10.6	-8.3	--	--	--	--	-6.8	
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans</i>			-6.3	-5.0	-2.3	0.2	--	--	--	-0.5	May-19

Private Markets market values are adjusted from the most recent valuations. Funds showing a zero QTD return do not have updated valuations at the time of this report, and are adjusted from 9/30/2019.

The current US Fixed Income benchmark is the Barclays US Agg. Please refer to the benchmark history for the composition of the US Fixed Income benchmark in earlier periods.

Cambridge Associates Infrastructure data is unavailable at the time of this report and will be updated for the final report.

Private Markets benchmarks are preliminary at the time of this report.

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Private Real Estate (Net)</b>	<b>56,471,886</b>	<b>6.9</b>	<b>0.0</b>	<b>0.0</b>	<b>-3.6</b>	<b>-3.6</b>	<b>4.0</b>	<b>5.4</b>	<b>--</b>	<b>--</b>	<b>Mar-99</b>
<b>Private Real Estate (Gross)</b>			<b>0.0</b>	<b>0.0</b>	<b>-3.6</b>	<b>-3.6</b>	<b>4.0</b>	<b>5.9</b>	<b>8.9</b>	<b>8.1</b>	
<i>Custom Blended Real Estate Benchmark</i>			1.5	1.5	3.9	4.7	6.1	7.6	10.5	7.3	Mar-99
<i>CPI + 5% (Seasonally Adjusted)</i>			0.0	1.0	4.8	6.6	7.0	6.9	--	--	Mar-99
<b>Private Equity (Net)</b>	<b>47,359,767</b>	<b>5.8</b>	<b>1.2</b>	<b>1.2</b>	<b>4.1</b>	<b>7.3</b>	<b>12.8</b>	<b>9.5</b>	<b>9.9</b>	<b>7.9</b>	<b>Jun-05</b>
<b>Private Equity (Gross)</b>			<b>1.2</b>	<b>1.2</b>	<b>4.1</b>	<b>7.3</b>	<b>12.8</b>	<b>9.5</b>	<b>10.2</b>	<b>8.1</b>	
<i>Custom Blended Private Equity Benchmark</i>			6.1	6.1	12.8	18.2	17.7	14.3	--	--	Jun-05
<i>Russell 3000 +3% 1-Quarter Lag</i>			3.1	9.9	17.4	34.9	18.0	14.6	16.8	12.6	Jun-05
<b>Hedge Fund (Net)</b>	<b>71,152,150</b>	<b>8.7</b>	<b>-8.5</b>	<b>-8.6</b>	<b>-7.5</b>	<b>-5.4</b>	<b>2.0</b>	<b>1.1</b>	<b>--</b>	<b>2.1</b>	<b>Jun-14</b>
<b>Hedge Fund (Gross)</b>			<b>-8.5</b>	<b>-8.5</b>	<b>-7.1</b>	<b>-4.9</b>	<b>2.2</b>	<b>1.3</b>	<b>--</b>	<b>2.2</b>	
<i>Custom Blended Hedge Fund Benchmark</i>			-6.2	-7.3	-5.4	-3.9	0.6	1.0	--	1.5	Jun-14
<b>Real Assets (Net)</b>	<b>51,527,082</b>	<b>6.3</b>	<b>-3.8</b>	<b>-6.3</b>	<b>-2.2</b>	<b>1.7</b>	<b>5.2</b>	<b>6.1</b>	<b>--</b>	<b>--</b>	<b>Mar-99</b>
<b>Real Assets (Gross)</b>			<b>-3.8</b>	<b>-6.3</b>	<b>-2.2</b>	<b>1.8</b>	<b>5.2</b>	<b>6.6</b>	<b>--</b>	<b>--</b>	
<i>Custom Blended Real Assets Benchmark</i>			-1.4	-1.4	2.9	6.4	9.4	8.7	--	--	Mar-99
<i>CPI + 5% (Seasonally Adjusted)</i>			0.0	1.0	4.8	6.6	7.0	6.9	--	--	Mar-99
<b>Private Infrastructure (Net)</b>	<b>23,846,295</b>	<b>2.9</b>	<b>-0.1</b>	<b>-0.1</b>	<b>5.1</b>	<b>11.2</b>	<b>12.4</b>	<b>6.2</b>	<b>--</b>	<b>7.4</b>	<b>Dec-14</b>
<b>Private Infrastructure (Gross)</b>			<b>-0.1</b>	<b>-0.1</b>	<b>5.1</b>	<b>11.2</b>	<b>12.4</b>	<b>6.2</b>	<b>--</b>	<b>7.4</b>	
<i>S&amp;P Global Infrastructure Net TR USD</i>			-23.0	-29.3	-25.6	-21.9	-4.2	-1.3	3.3	-1.4	Dec-14
<b>Private Natural Resources (Net)</b>	<b>13,740,707</b>	<b>1.7</b>	<b>-0.8</b>	<b>-0.8</b>	<b>4.5</b>	<b>9.4</b>	<b>8.9</b>	<b>--</b>	<b>--</b>	<b>15.5</b>	<b>Sep-15</b>
<b>Private Natural Resources (Gross)</b>			<b>-0.8</b>	<b>-0.8</b>	<b>4.5</b>	<b>9.4</b>	<b>8.9</b>	<b>--</b>	<b>--</b>	<b>15.5</b>	
<i>S&amp;P Global Natural Resources Index TR USD</i>			-18.1	-32.9	-30.9	-30.0	-6.4	-2.7	-2.2	2.6	Sep-15
<b>Cash (Net)</b>	<b>17,415,914</b>	<b>2.1</b>	<b>0.1</b>	<b>0.4</b>	<b>1.2</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
<b>Cash (Gross)</b>			<b>0.1</b>	<b>0.4</b>	<b>1.2</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	

\*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Real Assets includes State Street Real Asset NL Fund.

#### Trailing Net Performance

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Total Fund(Net)*</b>	<b>817,692,138</b>	<b>100.0</b>	<b>--</b>	<b>-7.1</b>	<b>-9.8</b>	<b>-4.8</b>	<b>-1.8</b>	<b>4.1</b>	<b>4.3</b>	<b>6.7</b>	<b>7.5</b>	<b>Dec-94</b>
<i>Policy Index</i>				-5.6	-8.5	-3.5	-0.5	4.6	4.9	7.4	5.7	Dec-94
<b>Total Fund w/o Alternatives(Net)</b>	<b>573,765,338</b>	<b>70.2</b>	<b>70.2</b>	<b>-8.7</b>	<b>-12.1</b>	<b>-5.6</b>	<b>-2.3</b>	<b>4.0</b>	<b>4.2</b>	<b>--</b>	<b>--</b>	<b>Dec-94</b>
<i>Policy Index w/o AI</i>				-10.1	-15.1	-9.4	-6.5	2.4	3.3	--	--	Dec-94
<b>US Equity(Net)</b>	<b>188,928,705</b>	<b>23.1</b>	<b>32.9</b>	<b>-13.7</b>	<b>-20.7</b>	<b>-12.1</b>	<b>-8.1</b>	<b>4.4</b>	<b>6.4</b>	<b>10.4</b>	<b>9.2</b>	<b>Dec-94</b>
<i>Custom Blended US Equity Benchmark</i>				-13.8	-20.9	-13.0	-9.7	3.4	5.4	9.9	9.0	Dec-94
Mellon Dynamic US Equity(Net)	85,319,867	10.4	45.2	-11.8	-17.2	-7.0	-1.6	8.5	9.4	--	14.2	Dec-12
<i>S&amp;P 500</i>				-12.4	-19.6	-10.8	-7.0	5.1	6.7	10.5	10.8	Dec-12
Mellon Large Cap(Net)	80,036,383	9.8	42.4	-13.2	-20.2	-11.8	-8.0	4.6	--	--	7.7	Mar-16
<i>Russell 1000</i>				-13.2	-20.2	-11.8	-8.0	4.6	6.2	10.4	7.7	Mar-16
PanAgora(Net)	12,044,521	1.5	6.4	-21.0	-31.4	-26.0	-24.3	-5.3	-0.8	--	3.0	Sep-13
<i>Russell 2000</i>				-21.7	-30.6	-25.5	-24.0	-4.6	-0.2	6.9	2.5	Sep-13
DFA Small Cap(Net)	11,527,934	1.4	6.1	-21.9	-32.4	-28.1	-26.6	-7.0	-1.1	--	0.1	Jun-14
<i>Russell 2000</i>				-21.7	-30.6	-25.5	-24.0	-4.6	-0.2	6.9	0.8	Jun-14
<b>International Equity(Net)</b>	<b>159,643,311</b>	<b>19.5</b>	<b>27.8</b>	<b>-10.4</b>	<b>-15.9</b>	<b>-7.9</b>	<b>-5.3</b>	<b>2.1</b>	<b>1.6</b>	<b>3.9</b>	<b>4.6</b>	<b>Dec-98</b>
<i>International Equity Custom</i>				-14.2	-23.1	-17.5	-15.4	-1.4	0.0	2.7	3.2	Dec-98
<b>Developed International Equity(Net)</b>	<b>93,335,969</b>	<b>11.4</b>	<b>58.5</b>	<b>-10.4</b>	<b>-17.2</b>	<b>-10.8</b>	<b>-7.5</b>	<b>0.9</b>	<b>0.6</b>	<b>3.9</b>	<b>2.1</b>	<b>Jan-08</b>
<i>Custom Blended Developed International Equity Benchmark</i>				-14.5	-24.1	-18.8	-15.8	-2.4	-0.9	2.5	0.5	Jan-08
GQG International Equity(Net)	38,758,065	4.7	41.5	-8.8	-13.9	--	--	--	--	--	-13.9	Dec-19
<i>MSCI ACWI ex USA</i>				-14.5	-23.4	-18.0	-15.6	-2.0	-0.6	2.1	-20.0	Dec-19
First Eagle International Value Fund(Net)	37,547,470	4.6	40.2	-9.2	-16.6	--	--	--	--	--	-16.6	Dec-19
<i>MSCI EAFE</i>				-13.3	-22.8	-17.4	-14.4	-1.8	-0.6	2.7	-20.3	Dec-19
<i>MSCI World ex USA</i>				-14.1	-23.3	-18.0	-14.9	-2.1	-0.8	2.4	-20.8	Dec-19

Historical returns for the US Equity Composite prior to January 2012 and for the International Equity Composite prior to December 2010 are gross only. Developed International Equity and Emerging Markets Equity composites were only reported as one composite prior to March 2018.

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Driehaus International Small Cap Growth(Net)	8,807,234	1.1	9.4	-16.2	-24.5	-15.3	--	--	--	--	-13.4	May-19
<i>MSCI ACWI ex US Small Cap Growth NR USD</i>				-16.6	-26.0	-18.8	-17.3	-2.6	0.5	3.6	-19.5	May-19
Acadian ACWI ex U.S. Small Cap Equity(Net)	8,223,200	1.0	8.8	-16.8	-25.8	-19.0	--	--	--	--	-19.2	May-19
<i>MSCI ACWI ex US Small Cap</i>				-19.3	-29.0	-22.1	-21.2	-4.9	-0.8	2.8	-22.9	May-19
<b>Emerging Markets Equity(Net)</b>	<b>66,307,342</b>	<b>8.1</b>	<b>41.5</b>	<b>-10.3</b>	<b>-13.9</b>	<b>-3.8</b>	<b>-2.4</b>	<b>4.2</b>	<b>4.6</b>	<b>--</b>	<b>2.6</b>	<b>Apr-12</b>
<i>Custom Blended Emerging Markets Benchmark</i>				-15.4	-23.6	-18.0	-17.4	-1.3	0.0	1.0	0.4	Apr-12
Artisan Developing World TR(Net)	50,857,963	6.2	76.7	-7.3	-8.2	--	--	--	--	--	-8.2	Dec-19
<i>MSCI Emerging Markets</i>				-15.4	-23.6	-18.2	-17.7	-1.6	-0.4	0.7	-17.9	Dec-19
RWC(Net)	15,449,379	1.9	23.3	-19.2	-28.5	--	--	--	--	--	-28.5	Dec-19
<i>MSCI Emerging Markets</i>				-15.4	-23.6	-18.2	-17.7	-1.6	-0.4	0.7	-17.9	Dec-19
<b>US Fixed Income(Net)</b>	<b>183,603,552</b>	<b>22.5</b>	<b>32.0</b>	<b>-0.6</b>	<b>2.8</b>	<b>5.0</b>	<b>7.7</b>	<b>4.4</b>	<b>3.6</b>	<b>4.3</b>	<b>5.4</b>	<b>Dec-94</b>
<i>BBgBarc US Aggregate TR</i>				-0.6	3.1	5.4	8.3	4.8	3.8	4.1	5.7	Dec-94
Vanguard Total Bond Market Index Fund(Net)	91,127,443	11.1	49.6	-0.6	3.3	5.8	--	--	--	--	9.0	May-19
<i>BBgBarc US Aggregate TR</i>				-0.6	3.1	5.7	8.9	4.8	3.4	3.9	8.9	May-19
Barrow Hanley(Net)	66,948,422	8.2	36.5	-1.2	2.5	5.2	8.4	4.6	3.3	3.8	3.8	Mar-10
<i>BBgBarc US Aggregate TR</i>				-0.6	3.1	5.7	8.9	4.8	3.4	3.9	3.9	Mar-10
Vanguard Short-Term Treasury Index Fund(Net)	25,527,688	3.1	13.9	1.3	2.7	3.8	5.3	--	--	--	3.9	Feb-18
<i>BBgBarc US Govt 1-3 Yr TR</i>				1.3	2.7	3.9	5.4	2.7	1.8	1.4	4.0	Feb-18
<i>BBgBarc US Govt 1-5 Yr TR</i>				1.6	3.8	4.9	6.8	3.3	2.2	2.0	4.9	Feb-18

The current US Fixed Income benchmark is the Barclays US Agg. Please refer to the benchmark history for the composition of the US Fixed Income benchmark in earlier periods. Historical returns for the US Fixed Income Composite prior to December 2010 and for Barrow Hanley prior to June 2010 are gross only.

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Opportunistic Credit(Net)</b>	<b>41,589,771</b>	<b>5.1</b>	<b>7.2</b>	<b>-10.6</b>	<b>-10.6</b>	<b>-8.3</b>	--	--	--	--	<b>-6.8</b>	<b>May-19</b>
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans</i>				-6.3	-5.0	-2.3	0.2	--	--	--	-0.5	May-19
PIMCO Income Fund(Net)	23,311,251	2.9	56.1	-8.0	-7.7	-5.4	--	--	--	--	-4.0	Apr-19
<i>BBgBarc US Aggregate TR</i>				-0.6	3.1	5.7	8.9	4.8	3.4	3.9	8.9	Apr-19
GoldenTree Multi-Sector Credit(Net)	18,278,519	2.2	43.9	-13.8	-14.2	-11.8	--	--	--	--	-10.7	Jun-19
<i>50% BBgBarc US High Yield TR/50% Credit Suisse Leveraged Loans</i>				-12.0	-12.9	-10.1	-8.2	0.0	2.0	4.5	-8.9	Jun-19
<b>Private Real Estate(Net)</b>	<b>56,471,886</b>	<b>6.9</b>	<b>6.9</b>	<b>0.0</b>	<b>0.0</b>	<b>-3.6</b>	<b>-3.6</b>	<b>4.0</b>	<b>5.4</b>	--	--	<b>Mar-99</b>
<i>Custom Blended Real Estate Benchmark</i>				1.5	1.5	3.9	4.7	6.1	7.6	10.5	7.3	Mar-99
<i>CPI + 5% (Seasonally Adjusted)</i>				0.0	1.0	4.8	6.6	7.0	6.9	--	--	Mar-99
UBS Trumbull Property(Net)	37,979,309	4.6	67.3	0.0	0.0	-3.0	-2.6	2.5	4.6	8.0	6.8	Mar-99
Greenfield Gap VII(Net)	8,655,272	1.1	15.3	0.0	0.0	10.8	11.1	12.4	13.5	--	12.8	Dec-14
Patron Capital V(Net)	4,673,462	0.6	8.3	0.0	0.0	-27.0	-29.4	9.0	--	--	3.1	Jan-16
Taconic CRE Dislocation Fund II(Net)	2,838,129	0.3	5.0	0.0	0.0	8.8	9.5	--	--	--	6.1	Nov-18
Carlyle Realty VIII(Net)	1,102,242	0.1	2.0	0.0	0.0	5.4	3.9	--	--	--	-23.9	Dec-17
AG Realty Value Fund X, L.P.(Net)	967,383	0.1	1.7	0.0	0.0	-17.9	--	--	--	--	-17.9	Jun-19
Carmel Partners Investment Fund VII(Net)	256,089	0.0	0.5	0.0	0.0	-32.9	-46.6	--	--	--	-46.6	Apr-19

GoldenTree Multi-Sector Credit market value based on manager estimate.

Private Markets market values are adjusted from the most recent valuations. Funds showing a zero QTD return do not have updated valuations at the time of this report, and are adjusted from 9/30/2019.

Cambridge Associates Infrastructure data is unavailable at the time of this report and will be updated for the final report.

Private Markets benchmarks are preliminary at the time of this report.

Data prior to March 2018 provided by prior consultant.

Private Real Estate results prior to 1/1/2019 were included in the Real Assets composite. All results for the Private Real Estate composite that include the period prior to 1/1/2019 will reflect only the latest lineup of managers that Meketa received information for, therefore it may not reflect the entire Private Real Estate composite at that given time.

## Total Fund | As of March 31, 2020

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Private Equity(Net)</b>	<b>47,359,767</b>	<b>5.8</b>	<b>5.8</b>	<b>1.2</b>	<b>1.2</b>	<b>4.1</b>	<b>7.3</b>	<b>12.8</b>	<b>9.5</b>	<b>9.9</b>	<b>7.9</b>	<b>Jun-05</b>
<i>Custom Blended Private Equity Benchmark</i>				6.1	6.1	12.8	18.2	17.7	14.3	--	--	Jun-05
<i>Russell 3000 +3% 1-Quarter Lag</i>				3.1	9.9	17.4	34.9	18.0	14.6	16.8	12.6	Jun-05
Ocean Avenue II(Net)	8,693,761	1.1	18.4	0.0	0.0	4.4	6.9	24.4	14.7	--	11.5	Jun-14
Adams Street(Net)	6,834,714	0.8	14.4	0.0	0.0	-1.5	4.7	10.8	9.9	11.9	6.7	Sep-05
Invesco VI(Net)	6,586,534	0.8	13.9	0.0	0.0	7.1	9.9	12.6	14.3	--	11.6	Jun-13
Davidson Kempner Long-Term Distressed Opportunities Fund IV(Net)	4,494,388	0.5	9.5	5.1	5.1	6.9	7.9	--	--	--	11.8	Apr-18
Pantheon II(Net)	3,637,276	0.4	7.7	0.0	0.0	0.8	5.2	12.6	11.2	--	11.0	Dec-11
Raven Asset Fund II(Net)	3,471,659	0.4	7.3	0.0	0.0	3.9	5.2	8.6	1.4	--	-0.1	Aug-14
Cortec Group Fund VII(Net)	2,261,838	0.3	4.8	-1.0	-1.0	--	--	--	--	--	-1.0	Dec-19
GTCR Fund XII(Net)	2,249,800	0.3	4.8	7.1	7.1	38.2	47.7	--	--	--	-0.1	Jun-18
TCV X(Net)	1,714,532	0.2	3.6	0.0	0.0	-9.5	-9.5	--	--	--	-9.5	Apr-19
Genstar Capital Partners IX(Net)	1,670,114	0.2	3.5	5.8	5.8	--	--	--	--	--	5.4	Jul-19
Carrick Capital Partners III(Net)	1,346,634	0.2	2.8	0.0	0.0	20.2	16.3	--	--	--	1.8	Aug-18
Cressey & Company Fund VI(Net)	1,341,155	0.2	2.8	11.3	11.3	15.7	9.8	--	--	--	-1.9	Jan-19
Pantheon Secondary(Net)	822,421	0.1	1.7	0.0	0.0	-0.7	4.7	7.5	3.9	3.5	3.8	Jun-07
Accel-KKR Growth Capital Partners III(Net)	815,418	0.1	1.7	0.0	0.0	-16.1	--	--	--	--	-16.1	Jul-19
Pantheon I(Net)	706,328	0.1	1.5	0.0	0.0	-10.7	-8.9	1.6	1.6	5.6	2.6	Dec-05
Spark Capital Growth Fund III(Net)	270,000	0.0	0.6									

Adams Street includes Adams Street 2005, Adams Street 2007, and Adams Street 2011.

Pantheon I includes Pantheon US Fund VI and Pantheon Europe Fund IV.

Pantheon II includes Pantheon US Fund IX, Pantheon Asia Fund VI, and Pantheon Europe Fund VII.

Pantheon Secondary includes Pantheon GLO SEC III B.

Total Fund | As of March 31, 2020

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Summit Partners Growth Equity Fund X-A(Net)	260,000	0.0	0.5									
Spark Capital VI(Net)	120,000	0.0	0.3									
Invesco IV(Net)	63,195	0.0	0.1									
<b>Hedge Fund(Net)</b>	<b>71,152,150</b>	<b>8.7</b>	<b>8.7</b>	<b>-8.5</b>	<b>-8.6</b>	<b>-7.5</b>	<b>-5.4</b>	<b>2.0</b>	<b>1.1</b>	<b>--</b>	<b>2.1</b>	<b>Jun-14</b>
<i>Custom Blended Hedge Fund Benchmark</i>				-6.2	-7.3	-5.4	-3.9	0.6	1.0	--	1.5	Jun-14
Silver Point Capital(Net)	11,440,266	1.4	16.1	-9.6	-7.2	-7.6	-5.7	--	--	--	-1.9	Nov-17
Wellington-Archipelago(Net)	11,246,077	1.4	15.8	-7.1	-9.9	-6.3	-4.6	--	--	--	1.0	Aug-17
Sculptor (OZ) Domestic II(Net)	10,131,954	1.2	14.2	-9.2	-7.2	-4.5	-0.8	4.6	3.7	--	4.6	Jun-14
Taconic Opportunity Fund(Net)	9,482,544	1.2	13.3	-8.8	-9.1	-8.2	-6.6	--	--	--	-3.9	Dec-18
KLS Diversified(Net)	7,588,783	0.9	10.7	-17.0	-16.5	-17.7	-16.8	--	--	--	-6.5	Oct-17
Graham Absolute Return(Net)	6,455,257	0.8	9.1	-12.0	-15.3	-15.1	-11.3	--	--	--	-3.4	Aug-17
Laurion Capital(Net)	6,174,732	0.8	8.7	8.3	15.7	14.1	19.0	--	--	--	14.1	Aug-18
Winton(Net)	5,436,028	0.7	7.6	-7.4	-12.9	-10.8	-11.1	--	--	--	-3.9	Oct-17
Marshall Wace Eureka(Net)	3,196,509	0.4	4.5	-5.0	-6.0	-1.9	-0.6	--	--	--	1.7	Nov-17
<b>Real Assets(Net)</b>	<b>51,527,082</b>	<b>6.3</b>	<b>6.3</b>	<b>-3.8</b>	<b>-6.3</b>	<b>-2.2</b>	<b>1.7</b>	<b>5.2</b>	<b>6.1</b>	<b>--</b>	<b>--</b>	<b>Mar-99</b>
<i>Custom Blended Real Assets Benchmark</i>				-1.4	-1.4	2.9	6.4	9.4	8.7	--	--	Mar-99
<i>CPI + 5% (Seasonally Adjusted)</i>				0.0	1.0	4.8	6.6	7.0	6.9	--	--	Mar-99
SSgA(Net)	13,940,080	1.7	27.1	-12.0	-19.3	-17.1	-16.1	--	--	--	-3.2	Apr-17
<i>Real Asset NL Custom Blended Index</i>				-12.9	-20.2	-17.9	-16.7	-3.2	--	--	-3.3	Apr-17

Historical returns for Invesco IV prior to April 2012 are gross only.



	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
<b>Private Infrastructure(Net)</b>	<b>23,846,295</b>	<b>2.9</b>	<b>46.3</b>	<b>-0.1</b>	<b>-0.1</b>	<b>5.1</b>	<b>11.2</b>	<b>12.4</b>	<b>6.2</b>	<b>--</b>	<b>7.4</b>	<b>Dec-14</b>
<i>S&amp;P Global Infrastructure Net TR USD</i>				-23.0	-29.3	-25.6	-21.9	-4.2	-1.3	3.3	-1.4	Dec-14
KKR Global II(Net)	10,642,797	1.3	44.6	0.0	0.0	4.3	9.2	11.2	8.7	--	9.8	Dec-14
North Haven Infrastructure II(Net)	7,298,418	0.9	30.6	0.0	0.0	5.5	13.6	15.2	--	--	7.6	May-15
ISQ Global Infrastructure Fund II(Net)	3,196,864	0.4	13.4	0.0	0.0	6.4	11.5	--	--	--	-11.8	Jul-18
KKR Global Infrastructure Investors III(Net)	1,767,951	0.2	7.4	0.0	0.0	0.4	-4.6	--	--	--	-12.2	Jan-19
Ardian Infrastructure Fund V(Net)	940,265	0.1	3.9	-3.3	-3.3	--	--	--	--	--	-3.3	Oct-19
<b>Private Natural Resources(Net)</b>	<b>13,740,707</b>	<b>1.7</b>	<b>26.7</b>	<b>-0.8</b>	<b>-0.8</b>	<b>4.5</b>	<b>9.4</b>	<b>8.9</b>	<b>--</b>	<b>--</b>	<b>15.5</b>	<b>Sep-15</b>
<i>S&amp;P Global Natural Resources Index TR USD</i>				-18.1	-32.9	-30.9	-30.0	-6.4	-2.7	-2.2	2.6	Sep-15
GSO Energy Opportunities(Net)	3,879,738	0.5	28.2	0.0	0.0	0.1	4.5	7.2	--	--	13.8	Nov-15
Taurus Mining(Net)	3,051,632	0.4	22.2	0.0	0.0	7.1	11.5	10.3	--	--	16.6	Sep-15
Taurus Mining Annex(Net)	2,568,955	0.3	18.7	0.0	0.0	12.4	16.6	19.0	--	--	26.5	Jan-17
EnCap XI(Net)	1,176,003	0.1	8.6	-8.8	-8.8	-15.0	-15.6	--	--	--	-28.3	Jul-17
EnCap IV(Net)	1,167,466	0.1	8.5	0.0	0.0	8.2	23.7	--	--	--	1.5	Feb-18
BlackRock Global Energy and Power Infrastructure Fund III LP(Net)	976,114	0.1	7.1	0.0	0.0	--	--	--	--	--	--	Jul-19
Tailwater Energy Fund IV, LP(Net)	920,799	0.1	6.7	0.0	0.0	--	--	--	--	--	0.0	Oct-19
<b>Cash(Net)</b>	<b>17,415,914</b>	<b>2.1</b>	<b>2.1</b>	<b>0.1</b>	<b>0.4</b>	<b>1.2</b>	<b>1.5</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	
Cash(Net)	15,958,404	2.0	91.6	0.1	0.5	1.6	2.1	1.5	1.1	--	--	Sep-03
Treasury Cash(Net)	1,457,510	0.2	8.4									

\*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

**Benchmark History**  
As of March 31, 2020

Total Fund		
1/1/2020	Present	21% Custom Blended US Equity Benchmark / 10% Custom Blended Developed International Equity Benchmark / 8% Custom Blended Emerging Markets Benchmark / 18% BBgBarc US Aggregate TR / 10% Custom Blended Hedge Fund Benchmark / 15% Custom Blended Private Equity Benchmark / 5% Custom Blended Real Assets Benchmark / 8% Custom Blended Real Estate Benchmark / 5% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans
7/1/2019	12/31/2019	21% US Equity Custom / 18% International Equity Custom / 18% US Fixed Custom / 10% Custom Blended Hedge Fund Benchmark / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net) / 5% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans
1/1/2019	6/30/2019	21% US Equity Custom / 18% International Equity Custom / 23% US Fixed Custom / 10% Custom Blended Hedge Fund Benchmark / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net)
1/1/2017	12/31/2018	27% US Equity Custom / 23% International Equity Custom / 22% US Fixed Custom / 5% Custom Blended Hedge Fund Benchmark / 9% Thomson Reuters Cambridge Private Equity Index / 14% Real Asset Custom
7/1/2014	12/31/2016	22.7% Russell 1000 / 5.7% Russell 2000 / 23.6% International Equity Custom / 28.5% US Fixed Custom / 4.5% Custom Blended Hedge Fund Benchmark / 8% NCREIF ODCE (net) / 7% Cambridge Assoc. U.S. Private Equity Legacy Index
Total Fund w/o Alternatives		
1/1/2017	Present	37.5% US Equity Custom / 31.94% International Equity Custom / 30.56% US Fixed Custom
7/1/2014	12/31/2016	28.2% Russell 1000 / 7.1% Russell 2000 / 29.3% International Equity Custom / 35.4% US Fixed Custom
US Equity		
1/1/2020	Present	Russell 3000
12/31/1994	12/31/2019	80% R1000 / 20% R2000
International Equity		
1/1/2019	Present	56% MSCI EAFE Gross / 44% MSCI Emerging Markets Gross
1/1/2017	12/31/2018	69.56% MSCI EAFE Gross / 30.44% MSCI Emerging Markets Gross
7/1/2013	12/31/2016	MSCI ACWI ex USA Gross
Developed International Equity		
1/1/2020	Present	80% MSCI EAFE / 20% MSCI ACWI ex US Small Cap
1/31/2008	12/31/2019	MSCI EAFE
Emerging Markets Equity		
1/1/2020	Present	MSCI Emerging Markets
4/30/2012	12/31/2019	MSCI Emerging Markets Gross
US Fixed Income		
1/1/2020	Present	BBgBarc US Aggregate TR
3/1/2018	12/31/2019	77.27% BBgBarc US Aggregate TR / 22.73% BBgBarc US Govt 1-5 Yr TR
1/1/2017	2/28/2018	77.27% BBgBarc US Aggregate TR / 22.73% Credit Suisse Leveraged Loans
8/1/2014	12/31/2016	71.93% BBgBarc US Aggregate TR / 17.54% ICE BofAML US High Yield TR / 10.53% Credit Suisse Leveraged Loans
12/31/1994	7/31/2014	US Fixed Custom

Opportunistic Credit		
5/1/2019	Present	50% BBgBarc US Aggregate TR / 25% BBgBarc US High Yield TR / 25% Credit Suisse Leveraged Loans
Private Real Estate		
1/1/2020	Present	NCREIF ODCE (lagged one quarter)
3/31/1999	12/31/2019	NCREIF ODCE (net)
Private Equity		
1/1/2020	Present	50% Cambridge Associates Global Private Equity Index / 50% Cambridge Venture Capital (1 Quarter Lagged)
6/30/2005	12/31/2019	Thomson Reuters Cambridge Private Equity Index
Hedge Fund		
7/1/2017	Present	100% HFRI Fund of Funds Composite Index
1/1/2015	6/30/2017	50% HFRI Fund of Funds Composite Index / 50% HFRI RV: Multi-Strategy Index
Real Assets		
1/1/2020	Present	50% Cambridge Infrastructure (1 Quarter Lagged) / 50% Cambridge Energy Upstream & Royalties & Private Energy
3/31/1999	12/31/2019	Real Asset Custom
Private Infrastructure		
12/31/2014	Present	S&P Global Infrastructure Net TR USD
Private Natural Resources		
SSgA		
4/30/2017	Present	25% Bloomberg Roll Select Commodities Index TR USD / 25% S&P Global LargeMidCap Commodity and Resources NR USD / 10% S&P Global Infrastructure TR USD / 15% DJ US Select REIT TR USD / 25% BBgBarc US TIPS TR

Annual Investment Expense Analysis				
As Of March 31, 2020				
Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
<b>Total Fund w/o Alternatives</b>		<b>\$573,765,338</b>		
<b>US Equity</b>		<b>\$188,928,705</b>		
Mellon Dynamic US Equity	0.30% of Assets	\$85,319,867	\$255,960	0.30%
Mellon Large Cap	0.04% of First 100.0 Mil, 0.02% Thereafter	\$80,036,383	\$32,015	0.04%
DFA Small Cap	0.33% of Assets	\$11,527,934	\$38,042	0.33%
PanAgora	0.80% of Assets	\$12,044,521	\$96,356	0.80%
<b>International Equity</b>		<b>\$159,643,311</b>		
<b>Developed International Equity</b>		<b>\$93,335,969</b>		
Acadian ACWI ex U.S. Small Cap Equity	0.99% of Assets	\$8,223,200	\$81,410	0.99%
Driehaus International Small Cap Growth	0.90% of Assets	\$8,807,234	\$79,265	0.90%
GQG International Equity	0.50% of Assets	\$38,758,065	\$193,790	0.50%
First Eagle International Value Fund	0.79% of Assets	\$37,547,470	\$296,625	0.79%
<b>Emerging Markets Equity</b>		<b>\$66,307,342</b>		
Artisan Developing World TR	1.05% of Assets	\$50,857,963	\$534,009	1.05%
RWC	0.87% of Assets	\$15,449,379	\$134,410	0.87%
<b>US Fixed Income</b>		<b>\$183,603,552</b>		
Barrow Hanley	0.30% of First 50.0 Mil, 0.20% of Next 100.0 Mil, 0.15% Thereafter	\$66,948,422	\$183,897	0.27%
Vanguard Short-Term Treasury Index Fund	0.05% of Assets	\$25,527,688	\$12,764	0.05%
Vanguard Total Bond Market Index Fund	0.04% of Assets	\$91,127,443	\$31,895	0.04%
<b>Opportunistic Credit</b>		<b>\$41,589,771</b>		
PIMCO Income Fund	0.50% of Assets	\$23,311,251	\$116,556	0.50%
GoldenTree Multi-Sector Credit	0.75% of Assets	\$18,278,519	\$137,089	0.75%

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
<b>Private Real Estate</b>		<b>\$56,471,886</b>		
Greenfield Gap VII		\$8,655,272		
Patron Capital V		\$4,673,462		
UBS Trumbull Property		\$37,979,309		
Carlyle Realty VIII		\$1,102,242		
Taconic CRE Dislocation Fund II		\$2,838,129		
Carmel Partners Investment Fund VII		\$256,089		
AG Realty Value Fund X, L.P.		\$967,383		
Invesco IV		\$63,195		
Invesco VI		\$6,586,534		
Ocean Avenue II		\$8,693,761		
Pantheon I		\$706,328		
Pantheon II		\$3,637,276		
Pantheon Secondary		\$822,421		
Raven Asset Fund II		\$3,471,659		
Davidson Kempner Long-Term Distressed Opportunities Fund IV		\$4,494,388		
GTCR Fund XII		\$2,249,800		
Carrick Capital Partners III		\$1,346,634		
Cressey & Company Fund VI		\$1,341,155		
TCV X		\$1,714,532		
Accel-KKR Growth Capital Partners III		\$815,418		
Genstar Capital Partners IX		\$1,670,114		
Cortec Group Fund VII		\$2,261,838		
Spark Capital Growth Fund III		\$270,000		
Spark Capital VI		\$120,000		
Summit Partners Growth Equity Fund X-A		\$260,000		

**Total Fund | As of March 31, 2020**

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
<b>Hedge Fund</b>		<b>\$71,152,150</b>		
Sculptor (OZ) Domestic II	Performance-based 1.50 and 20.00	\$10,131,954	\$151,979	1.50%
Graham Absolute Return	Performance-based 1.75 and 20.00	\$6,455,257	\$112,967	1.75%
Wellington-Archipelago	Performance-based 1.00 and 20.00	\$11,246,077	\$112,461	1.00%
KLS Diversified	Performance-based 2.00 and 20.00	\$7,588,783	\$151,776	2.00%
Winton	Performance-based 0.90 and 20.00	\$5,436,028	\$48,924	0.90%
Marshall Wace Eureka	Performance-based 2.00 and 20.00	\$3,196,509	\$63,930	2.00%
Silver Point Capital	Performance-based 1.50 and 20.00	\$11,440,266	\$171,604	1.50%
Laurion Capital		\$6,174,732		
Taconic Opportunity Fund		\$9,482,544		
<b>Real Assets</b>		<b>\$51,527,082</b>		
SSgA	0.30% of First 50.0 Mil, 0.27% of Next 50.0 Mil, 0.25% Thereafter	\$13,940,080	\$41,820	0.30%
<b>Private Infrastructure</b>		<b>\$23,846,295</b>		
KKR Global II		\$10,642,797		
North Haven Infrastructure II		\$7,298,418		
ISQ Global Infrastructure Fund II		\$3,196,864		
KKR Global Infrastructure Investors III		\$1,767,951		
Ardian Infrastructure Fund V		\$940,265		
<b>Private Natural Resources</b>		<b>\$13,740,707</b>		
EnCap XI		\$1,176,003		
EnCap IV		\$1,167,466		
GSO Energy Opportunities		\$3,879,738		
Taurus Mining		\$3,051,632		
Taurus Mining Annex		\$2,568,955		
BlackRock Global Energy and Power Infrastructure Fund III LP		\$976,114		
Tailwater Energy Fund IV, LP		\$920,799		
<b>Cash</b>		<b>\$17,415,914</b>		
Cash		\$15,958,404		
Treasury Cash		\$1,457,510		

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SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

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