MercedCERA RETIREMENT BOARD INVESTMENT MEETING AGENDA THURSDAY, MARCH 25, 2021 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, MercedCERA's building will be closed to the public during MercedCERA Board meetings. Members of the MercedCERA 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 MercedCERA staff at 209-726-2724.

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

CALL TO ORDER: 8:15 A.M.

- ROLL CALL
- APPROVAL OF MINUTES March 11, 2021

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 RECOMMEDED FUNDS, ROLL CALL VOTE REQUIRED.

(Govt. Code § 54956.81)

1. Discussion and possible action to adopt the recommendation regarding Funds/Managers – Cliffwater.

RETURN TO OPEN SESSION

Report on any action taken in closed session.

REGULAR CALENDAR

BOARD ACTION¹/DISCUSSION

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

- 1. Discussion and possible action on Quarterly performance and any managers and/or funds Cliffwater.
- 2. Discussion and possible action on February monthly performance and any managers and/or funds Meketa Group.
- 3. Appointment by the Board Chair to the Investment Subcommittee Chair.
- 4. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MercedCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:
 - SACRS Spring Conference, May 11-14, 2021 (virtual conference).
 - CALAPRS Trustee Roundtable, May 28, 2021 (virtual conference).
 - SACRS/UC Berkeley Public Pension Investment Management Program, July 18-21, 2021 (virtual conference).
 - SACRS Fall Conference, November 9-12, 2021 (in person/virtual conference TBD).

INFORMATION ONLY

MercedCERA has an Investment Subcommittee meeting immediately following this meeting on the phone line listed above.

MercedCERA UPCOMING BOARD MEETINGS:

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

- April 8, 2021
- April 22, 2021

ADJOURNMENT

All supporting documentation is available for public review in the office of the Merced County Employees' Retirement Association, 3199 M Street, Merced, California, 95348 during regular business hours, 8:00 a.m. – 5:00 p.m., Monday through Friday.

The Agenda is available online at <u>www.co.merced.ca.us/retirement</u>

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 in the office of the Merced County Employees' Retirement Association.

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 in writing addressed to Merced County Employees' Association, 3199 M Street, Merced, CA 95348 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.

¹ "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.

MercedCERA ADMINISTRATIVE RETIREMENT BOARD AGENDA MINUTES THURSDAY, MARCH 11, 2021 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, Al Peterson, Scott Johnston, Karen Adams, David Ness, Scott Silveira and Janey Cabral. **Counsel:** Jeff Grant. **Staff:** Kristen Santos, Martha Sanchez, Mark Harmen, Ninebra Maryoonani, Sheri Villagrana, Brenda Mojica, Michelle Lee and Alexis Curry. **Absent:** Kalisa Rochester.

APPROVAL OF MINUTES – February 25, 2021. The MercedCERA Board voted unanimously via roll call vote to approve the February 25, 2021 minutes as presented. Cabral/Peterson U/A (7-0)

PUBLIC COMMENT

No Comments.

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 RECOMMEDED FUNDS, ROLL CALL VOTE REQUIRED.

(Govt. Code § 54956.81)

1. Discussion and possible action to adopt the recommendation regarding one Fund/Manager – Cliffwater.

2. DISABILITY RETIREMENT APPLICATIONS: PERSONNEL EXCEPTION

(Govt. Code § § 54957, 31532; Cal Const. art. I, § 1)

- 1. Informal Hearing
 - a. Salgado, Jose

RETURN TO OPEN SESSION

Report on any action taken in closed session.

1. DISCUSSION AND POSSIBLE ACTION REGARDING INVESTMENTS IN RECOMMEDED FUNDS, ROLL CALL VOTE REQUIRED.

(Govt. Code § 54956.81)

1. Discussion and possible action to adopt the recommendation regarding one Fund/Manager – Cliffwater.

The MercedCERA Board voted unanimously via roll call vote to a commitment of up to \$10 Million to Caxton Associates LP Hedge Fund, subject to legal review of all fund documents.

Adams/Cabral U/A (7-0)

2. DISABILITY RETIREMENT APPLICATIONS: PERSONNEL EXCEPTION

(Govt. Code § § 54957, 31532; Cal Const. art. I, § 1)

- 1. Informal Hearing
 - a. Salgado, Jose

The MercedCERA Board voted unanimously via roll call vote to approve a service connected disability and deny a non-service connected disability for Jose Salgado. Johnston/Ness U/A (7-0)

No other action taken on Disability Update.

CONSENT CALENDAR

Consent matters are expected to be routine and may be acted upon, without discussion, as one unit. If an item is taken off the Consent Calendar for discussion, it will be heard as the last item(s) of the Board Action/Discussion as appropriate.

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.	Gonzalves, David	Plan & Comm	16 Yrs. Svc.	Eff: 02/15/2021
b.	Liu, Hefeng	Admin Services	21 Yrs. Svc.	Eff: 03/01/2021
c.	Dantzler, Furman	Child Support	30 Yrs. Svc.	Eff: 02/27/2021
d.	Egberuare, Brenda	Mental Health	4 Yrs. Svc.	Eff: 03/07/2021
e.	Crain, David	Animal Control	23 Yrs. Svc.	Eff: 02/27/2021
f.	Montgomery, Anne-	Marie		
		Library	2 Yrs. Svc	Eff: 02/27/2021
g.	Vinckel, Jane	Beh. Health	19 Yrs. Svc.	Eff: 02/04/2021
h.	Santiago, Annette	Sup Courts	30 Yrs. Svc.	Eff: 01/29/2021
				Eff: 02/13/2021
i.	Flores, Albert	District Attorney	21 Yrs. Svc.	Eff: 2/20/2021

YTD fiscal year 2020/2021 retirees: 60 YTD fiscal year 2019/2020 retirees: 104 YTD fiscal year 2018/2019 retirees: 103

REFUND OF SERVICE PURCHASE: None **DEATH BENEFIT:** None **MONTHLY BUDGET REPORT:** Submitted

The MercedCERA Board voted unanimously via roll call vote to approve the consent calendar.

Silveira/Johnston U/A (7-0)

BOARD ACTION¹/DISCUSSION

1. Discussion and possible action to adopt the Board of Retirement Policy for Felony Forfeiture and Resolution for MercedCERA (Government Code § 7522.72, subd. (b)(1)) - Staff.

¹ "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.

The MercedCERA Board voted unanimously via roll call vote to approve the Board of Retirement Policy for Felony Forfeiture and adopt the Felony Forfeiture Resolution. Silveira/Cabral U/A (7-0)

- Discussion and possible action to approve consent Portfolio Rebalancing Report which will appear in future agendas Staff.
 The MercedCERA Board voted unanimously via roll call vote to approve staff's recommendation to a consent portfolio rebalancing table on future agendas once the rebalancing transactions are completed.
 Cabral/Johnston U/A (7-0)
- 3. Discussion and possible action to adopt the Plan Administrator's proposed four to five-year staffing plan as recommended by the ad hoc staffing subcommittee Staff. The MercedCERA Board voted unanimously via roll call vote to authorize the Plan Administrator to work with Merced County Human Recourses in the creation of a Retirement Investment Officer I/II/III classification and approved the recruitment for 2 Staff Analyst I/II for FY 2021/2022. The Board also unanimously approved the future four to five-year staffing plan, which will be brought to the Board of Retirement for approval prior to the appropriate budget year for each staffing request. Silveira/Peterson U/A (7-0)
- 4. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MercedCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:
 - SACRS Spring Conference, May 11-14, 2021 (virtual conference).
 - CALAPRS Trustee Roundtable, May 28, 2021 (virtual conference).
 - SACRS/UC Berkeley Public Pension Investment Management Program, July 18-21, 2021 (virtual conference).
 - SACRS Fall Conference, November 9-12, 2021 (in person/virtual conference TBD).

No Action Taken.

INFORMATION ONLY

- Trustee Silveira: Asked when we would go back to in-person meetings? Plan Administrator stated she would get back to the trustees with further information.
- Plan Administrator: Advised that MercedCERA is going to stop using the acronym "CAFR", referencing the Annual Financial Report, due to it having negative connotation in other countries. Moving forward, the report will be referenced as the "Annual Report".
- Trustee Adams reminded everyone that property taxes are due.

ADJOURNMENT

The meeting adjourned at 10:02 AM

Respectfully submitted,

Ryan Paskin, Chair

Al Peterson, Secretary

Date

All supporting documentation is available for public review online at **www.co.merced.ca.us/retirement**

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Item 1



Alternative Investment Performance Merced County Employees' Retirement Association

March 25, 2021

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 2020 commitments:

- Summit Ventures V venture (VY 2020), \$6 mm
- Silver Point Sp Credit II corporate debt (VY 2019), \$8 mm
- Thoma Bravo Discover III tech buyout (VY 2020), \$8 mm
- Marlin Heritage Europe II European control buyout (VY 2020), €7 mm
- Taconic Mkt Dislocation II- distressed (VY 2020), \$8 mm
- Khosla VI & Seed D venture (VY 2021), \$8 mm
- GTCR XIII buyout (VY 2021), \$8 mm
- TCV XI venture (VY 2021), \$8 mm



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; 5.8% invested as of Dec 2020):

- 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 2017-2020 in their investment period
 - Continued rebound in 3Q valuations offsetting the 1Q20 markdowns and there were annual gains of \$8 million; contributions exceed distributions by \$9 million as the newer portfolios are being built
 - Portfolio is diversified by strategy but overall it is in a negative cash flow situation

Annual Summary										
(in thousands)										
	Total	Total	(A)	(B)	(C) Fair	(B+C) Total	(B+C-A)			
	Partnerships	Commitments	Contributions	Distributions	Value	Value	Gain/ Loss	Net IRR	Benchmark	
September 30, 2019	30	\$130,864	\$71,521	\$60,399	\$43 <i>,</i> 569	\$103,967	\$32,447	8.51%	11.32%	
September 30, 2020	36	\$179,269	\$87,792	\$67,499	\$60 <i>,</i> 629	\$128,128	\$40,336	9.05%	11.79%	
Annual Change	6	\$48,405	\$16,271	\$7,100	\$17,060	\$24,161	\$7,889			
			Annua	al Cash Flow						
		\$5 \$0 \$0 -\$5 -\$10 -\$15								
		2011	2012 2013 2014	2015 2016 2	017 2018 2	2019 2020				
Year										
		Buyout — Net Cash Flow	Direct Lending Distressed Debt	Fund of Funds Opportunistic Cr	edit Ventu	idary ire Capital				

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



MCERA Private Equity Performance – as of Sep 30, 2020

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		(A) Commit.	Unfund.	(B) Cumulat.		(C) Cumulat.	(D) Fair	(C+D) Total	(C+D-B)		IRR	
Partnership Name (\$000)	Strategy	Amount	Amount	Cont.	% Drawn	Dist.	Value	Value	Gain/ Loss	Net IRR	Bench.	τνρι
Vintage Year 2004												
Invesco Partnership Fund IV, L.P.	Fund of Funds	10,000	2,417	7,898	76%	16,195	40	16,235	8,337	11.75%	7.00%	2.06
Vintage Year 2004 Total		10,000	2,417	7,898	76%	16,195	40	16,235	8,337	11.75%	7.66%	2.06
Vintage Year 2005												
ASP 2005 Non-US Fund	Fund of Funds	1,500	74	1,426	95%	1,670	272	1,942	516	4.69%	4.10%	1.36
ASP 2005 US Fund	Fund of Funds	3,500	177	3,323	95%	4,588	645	5,234	1,910	6.98%	8.17%	1.57
Pantheon Ventures Euro Fund IV	Fund of Funds	1,173	50	1,283	96%	1,584	78	1,663	379	4.56%	4.10%	1.30
Pantheon Ventures USA Fund VI	Fund of Funds	3,750	206	3,544	95%	5,104	279	5,383	1,839	6.51%	8.17%	1.52
Vintage Year 2005 Total		9,923	507	9,576	95%	12,946	1,275	14,221	4,645	6.19%	7.91%	1.49
Vintage Year 2006												
Pantheon Global Secondary Fund III "B"	Secondary	10,000	540	9,460	95%	10,200	380	10,580	1,120	2.00%	N/A	1.12
Vintage Year 2006 Total		10,000	540	9,460	95%	10,200	380	10,580	1,120	2.00%	7.00%	1.12
Vintage Year 2007												
ASP 2007 Direct Fund	Fund of Funds	450	12	438	97%	863	212	1,076	637	12.18%	11.15%	2.45
ASP 2007 Non-US Fund	Fund of Funds	1,575	78	1,497	95%	1,734	675	2,409	912	7.96%	7.81%	1.61
ASP 2007 US Fund	Fund of Funds	2,475	115	2,360	95%	3,525	1,015	4,540	2,180	11.95%	11.15%	1.92
Vintage Year 2007 Total		4,500	205	4,295	95%	6,123	1,902	8,025	3,730	10.72%	8.89%	1.87
Vintage Year 2011												
ASP 2011 Direct Fund	Fund of Funds	500	37	463	93%	524	396	920	457	15.16%	18.27%	1.99
ASP 2011 Emerging Markets Fund	Fund of Funds	500	64	436	87%	222	679	901	465	14.21%	11.36%	2.07
ASP 2011 Non-US Developed Fund	Fund of Funds	1,500	322	1,178	79%	1,045	1,072	2,117	938	13.54%	11.36%	1.80
ASP 2011 US Fund	Fund of Funds	2,500	326	2,175	87%	1,987	2,300	4,286	2,112	15.60%	18.27%	1.97
Pantheon Asia Fund VI	Fund of Funds	1,000	95	906	91%	468	992	1,460	554	10.20%	11.36%	1.61
Pantheon Euro Fund VII	Fund of Funds	1,636	218	1,493	87%	1,185	1,297	2,482	990	11.01%	11.36%	1.66
Pantheon Ventures USA Fund IX	Fund of Funds	2,000	212	1,788	89%	1,582	2,034	3,616	1,828	15.30%	18.27%	2.02
Vintage Year 2011 Total		9,636	1,274	8,438	87%	7,012	8,769	15,781	7,343	13.81%	14.30%	1.87
Vintage Year 2013												
Invesco Partnership Fund VI, L.P.	Fund of Funds	5,000	1,548	3,958	69%	1,633	7,580	9,213	5,254	17.94%	19.55%	2.33
Vintage Year 2013 Total		5,000	1,548	3,958	69%	1,633	7,580	9,213	5,254	17.94%	13.08%	2.33
Vintage Year 2014												
Ocean Avenue Fund II	Fund of Funds	10,000	1,000	9,000	90%	5,347	10,058	15,405	6,405	14.88%	19.40%	1.71
Raven Asset-Based Opportunity Fund II	Opportunistic Credit	10,000	474	9,526	95%	6,159	2,621	8,780	-746	-2.52%	6.69%	0.92
Vintage Year 2014 Total		20,000	1,474	18,526	93%	11,506	12,679	24,185	5,659	7.54%	17.93%	1.31

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 ® median is used for the respective vintage year.



MCERA Private Equity Performance – as of Sep 30, 2020

		(A) Commit.	Unfund.	(B) Cumulat.		(C) Cumulat.	(D) Fair	(C+D) Total	(C+D-B)		IRR	
Partnership Name (\$000)	Strategy	Amount	Amount	Cont.	% Drawn	Dist.	Value	Value	Gain/ Loss	Net IRR	Bench.	TVPI
Vintage Year 2017												
GTCR XII	Buyout	5,000	2,045	,	59%	116	3,855	,	1,016	29.21%	17.67%	1.34
Vintage Year 2017 Total		5,000	2,045	2,955	59%	116	3,855	3,971	1,016	29.21%	16.72%	1.34
Vintage Year 2018												
Carrick Capital Partners III, L.P.	Buyout	5,000	3,190	1,810	36%	0	2,045	,	235	9.04%	6.97%	1.13
Cressey & Company Fund VI LP	Buyout	5,000	3,450	1,550	31%	0	1,987	1,987	437	N/M	N/M	1.28
Davidson Kempner Long-Term Distressed Opport	tuni Distressed Debt	5,000	785	4,300	84%	85	4,657	4,742	442	6.50%	N/A	1.10
Vintage Year 2018 Total		15,000	7,425	7,660	50%	85	8,689	8,774	1,114	9.86%	9.50%	1.15
Vintage Year 2019												
Accel-KKR Growth Capital Partners III	Buyout	5,000	3,726	1,274	25%	0	1,251	1,251	-23	N/M	N/M	0.98
Cortec Group Fund VII, L.P.	Buyout	10,000	7,335	4,206	27%	1,543	3,085	4,627	422	N/M	N/M	1.10
Genstar Capital Partners IX, L.P.	Buyout	7,000	4,467	2,670	36%	137	3,100	3,237	567	N/M	N/M	1.21
Summit Partners Growth Equity Fund X-A, L.P.	Buyout	8,000	7,291	709	9%	0	990	990	282	N/M	N/M	1.40
TCV X, L.P.	Venture Capital	5,000	2,196	2,805	56%	0	3,686	3,686	881	N/M	N/M	1.31
Vintage Year 2019 Total		35,000	25,014	11,663	29%	1,680	12,112	13,792	2,128	N/M	N/M	1.18
Vintage Year 2020												
Accel-KKR Capital Partners VI, LP	Buyout	8,000	8,000	0	0%	0	0	0	0	N/M	N/M	0.00
Marlin Heritage Europe II, L.P.	Buyout	8,210	8,210	0	0%	0	0	0	0	N/M	N/M	0.00
Thoma Bravo Discover Fund III, L.P.	Buyout	8,000	8,000	0	0%	0	0	0	0	N/M	N/M	0.00
Silver Point Specialty Credit Fund II, L.P.	Direct Lending	8,000	7,176	842	10%	3	948	951	109	N/M	N/M	1.13
Taconic Market Dislocation Fund III L.P.	Distressed Debt	8,000	6,560	1,440	18%	0	1,440	1,440	0	N/M	N/M	1.00
Spark Capital Growth Fund III, L.P.	Venture Capital	6,000	5,190	810	14%	0	731	731	-79	N/M	N/M	0.90
Spark Capital VI, L.P.	Venture Capital	3,000	2,730	270	9%	0	229	229	-41	N/M	N/M	0.85
Summit Partners Venture Capital Fund V-A, L.P.	Venture Capital	6,000	6,000	0	0%	0	0	0	0	N/M	N/M	0.00
Vintage Year 2020 Total	·	55,210	51,866	3,362	6%	3	3,349	3,352	-10	N/M	N/M	1.00
Total Portfolio:		179,269	94,316	87,792	47%	67,499	60,629	128,128	40,336	9.05%	11.79%	1.46
Portfolio Strategy Totals Buyout		61,000	47,503	15,174	22%	1,796	16,313	18,109	2,935	22.62%		
		8,000			10%	1,796	10,313			11.75%		
Direct Lending Distressed Debt		,	7,176			3 85			109			
Fund of Funds		13,000	7,345		43% 85%		6,097	,	442	6.30% 11.52%		
Non-US		40,175 17,094	6,051			41,348	24,559		30,960	8.02%		
			9,111		47%	7,908	5,065		4,754			
Opportunistic Credit		10,000	474		95%	6,159	2,621		-746	-2.52%		
Secondary		10,000	540		95%	10,200	380	,	1,120	2.00%		
Venture Capital		20,000	16,116	,	19%	0	4,646	· · ·	762	N/M		
Total Portfolio:		179,269	94,316	87,792	47%	67,499	60,629	128,128	40,336	9.05%	11.79%	

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 ® 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 \$5-\$10 million per inv
 - Average investment size of \$7 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 2020 commitments:

- Cerberus RE Debt commercial RE debt (VY 2020), \$7 mm
- Starwood Fund XII opportunistic RE (VY 2020), \$8 mm



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, 6.1% actual as of Dec 2020)

- MCERA invested in 1999 in a private core real estate fund; direct program began in 2014
- Contributions exceed distributions by \$2 million over the past year as overall RE activity has declined and valuations remain muted



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

MCERA Real Estate Performance – as of Sep 30, 2020

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"
- Overall performance has met objectives, driven by the core RE fund; opportunistic fund performance is not _ meaningful

						(C)						
		(A) Commit.	Unfund.	(B) Cumulat.		Cumulat.	(D) Fair	(C+D) Total	(C+D-B)		IRR	
Partnership Name (\$000)	Strategy	Amount	Amount	Cont.	% Drawn	Dist.	Value	Value	Gain/ Loss	Net IRR	Bench.	TVPI
Vintage Year 1999												
UBS Trumbull Property Fund	Core RE	17,000	0	17,794	100%	26,732	36,335	63,066	45,273	8.50%	10.20%	3.54
Vintage Year 1999 Total		17,000	0	17,794	100%	26,732	36,335	63,066	45,273	8.50%	12.95%	3.54
Vintage Year 2014												
Greenfield Acquisition Partners VII, L.P.	Opportunistic RE	13,000	1,876	12,662	86%	10,341	9,043	19,384	6,722	12.05%	11.07%	1.53
Vintage Year 2014 Total		13,000	1,876	12,662	86%	10,341	9,043	19,384	6,722	12.05%	10.38%	1.53
Vintage Year 2016												
Patron Capital Fund V	Opportunistic RE	13,957	4,614	9,105	67%	3,312	6,742	10,054	949	5.60%	9.65%	1.11
Vintage Year 2016 Total		13,957	4,614	9,105	67%	3,312	6,742	10,054	949	5.60%	10.15%	1.11
Vintage Year 2017												
Carlyle Realty Partners VIII, L.P.	Opportunistic RE	5,000	3,442	1,791	31%	227	1,696	1,923	132	6.90%	6.35%	1.07
Vintage Year 2017 Total		5,000	3,442	1,791	31%	227	1,696	1,923	132	6.90%	7.98%	1.07
Vintage Year 2018												
Taconic CRE Dislocation Fund II	Debt RE	5,000	1,950	3,122	61%	0	3,548	3,548	426	N/M	N/M	1.14
AG Realty Value Fund X, L.P.	Opportunistic RE	5,000	3,513	1,487	30%	13	1,494	1,507	20	N/M	N/M	1.01
Vintage Year 2018 Total		10,000	5,463	4,609	45%	13	5,042	5,055	446	N/M	N/M	1.10
Vintage Year 2019												
Rockpoint Real Estate Fund VI, L.P.	Opportunistic RE	5,000	4,235	764	15%	0	736	736	-28	N/M	N/M	0.96
Carmel Partners Investment Fund VII, L.	P Value-Add RE	5,000	4,624	376	8%	0	234	234	-142	N/M	N/M	0.62
Vintage Year 2019 Total		10,000	8,859	1,140	11%	0	970	970	-170	N/M	N/M	0.85
Vintage Year 2020												
Cerberus Real Estate Debt Fund, L.P.	Debt RE	7,000	6,429	576	8%	0	717	717	141	N/M	N/M	1.24
Starwood Distressed Opportunity Fund	X Opportunistic RE	8,000	8,000	0	0%	0	0	0	0	N/M	N/M	0.00
Vintage Year 2020 Total		15,000	14,429	576	4%	0	717	717	141	N/M	N/M	1.24
Total Portfolio:		83,957	38,682	47,676	54%	40,625	60,544	101,169	53,493	8.63%	8.56%	2.12

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 \$15 million, range of \$10-\$25 million
- Target 2-4 investments, range of \$5-\$10 million per inv
 - Average investment size of \$7 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 2020 commitments (\$5 mm):

- iSquared III - global infrastructure (VY 2020)



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%.



Projected Real Asset Allocations

MCERA Real Assets Investment Structure & Portfolio Assessment

Real assets investment structure (5% target, 4.1% actual as of Dec 2020)

- 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
 - Distributions exceed contributions by \$5 mm as the infrastructure funds continue to return capital



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

MCERA Real Assets Performance – as of Sep 30, 2020

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 gains in infrastructure funds offset the losses in the energy funds; the VY 2017-19 funds are being built out

		(A) Commit.	Unfund.	(B) Cumulat.		(C) Cumulat.	(D) Fair	(C+D) Total	(C+D-B)		IRR	
Partnership Name (\$000)	Strategy	Amount	Amount	Cont.	% Drawn	Dist.	Value	Value	Gain/ Loss	Net IRR	Bench.	τνρι
Vintage Year 2014												
KKR Global Infrastructure II	Infrastructure	10,000	528	10,837	95%	8,572	7,815	16,387	5,550	15.59%	5.85%	1.51
Vintage Year 2014 Total		10,000	528	10,837	95%	8,572	7,815	16,387	5,550	15.59%		1.51
Vintage Year 2015												
GSO Energy Select Opportunities Fund	Energy	7,500	3,486	4,470	54%	1,715	3,108	4,823	354	2.97%	1.80%	1.08
North Haven Infrastructure Partners II LP	Infrastructure	10,000	1,333	11,245	87%	6,547	7,180	13,727	2,483	9.49%	8.11%	1.22
Taurus Mining Finance Fund	Mining	5,000	665	5,212	87%	3,397	2,454	5,851	640	7.53%	N/A	1.12
Vintage Year 2015 Total		22,500	5,484	20,926	76%	11,659	12,743	24,402	3,476	7.48%		1.17
Vintage Year 2016												
Taurus Mining Finance Annex Fund	Mining	5,000	1,118	4,488	78%	2,951	2,689	5,639	1,151	21.19%	N/A	1.26
Vintage Year 2016 Total		5,000	1,118	4,488	78%	2,951	2,689	5,639	1,151	21.19%		1.26
Vintage Year 2017												
EnCap Energy Capital Fund XI, L.P.	Energy	5,000	3,418	1,582	32%	0	915	915	-667	-31.95%	-4.39%	0.58
ISQ Global Infrastructure Fund II	Infrastructure	5,000	2,002	3,368	60%	371	3,506	3,877	509	13.26%	N/A	1.15
Vintage Year 2017 Total		10,000	5,420	4,950	46%	371	4,421	4,792	-158	-2.60%		0.97
Vintage Year 2018												
EnCap Flatrock Midstream IV, L.P.	Energy	3,000	1,953	1,125	35%	78	1,140	1,219	94	4.70%	-0.01%	1.08
Ardian Infrastructure Fund V	Infrastructure	5,149	4,490	659	13%	20	575	595	-64	N/M	N/M	N/A
KKR Global Infrastructure Investors III	Infrastructure	5,000	3,124	2,098	38%	130	2,007	2,136	39	1.91%	N/A	N/A
Vintage Year 2018 Total		13,149	9,567	3,881	27%	228	3,722	3,950	69	1.53%		1.02
Vintage Year 2019												
Global Energy & Power Infrastructure Fund I	II Energy	5,000	3,918	1,184	22%	224	1,051	1,274	90	N/M	N/M	1.08
Tailwater Energy Fund IV, LP	Energy	5,000	4,063	936	19%	0	617	617	-318	N/M	N/M	0.66
Vintage Year 2019 Total		10,000	7,981	2,120	20%	224	1,668	1,892	-228	N/M		0.89
Total Portfolio:		70,649	30,099	47,202	57%	24,005	33,057	57,062	9,860	9.99%	-3.30%	1.21
Portfolio Strategy Totals												
Energy		20,500	12,920	8,111	37%	1,794	5,780	7,574	-537	-3.35%		0.93
Infrastructure		25,000	4,986	24,180	80%	15,248	17,003	32,251	8,071	12.67%		1.33
Non-US		25,149	12,193		52%	6,963	10,274	17,237	2,326	11.98%		1.16
Total Portfolio:		70,649	30,099	47,202	57%	24,005	33,057	57,062	9,860	9.99%	-3.30%	1.21

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 February 28, 2021

			_			Returns				_	Sharpe	Incep
Fund	Market Value	Actual %	Feb	QTD	YTD	1 Year	3 Year	5 Year	Incep	Std Dev	Ratio	Date
Market Neutral												
KLS Diversified Fund LP	8,665,813	8.8%	1.11%	3.73%	3.73%	-5.20%	-1.50%	-	-0.77%	11.16%	-0.16	Oct-17
Laurion Capital, Ltd.	12,852,853	13.0%	12.21%	9.91%	9.91%	37.08%	-	-	18.17%	11.55%	1.36	Jul-18
Market Neutral - HF Total	21,518,666	21.7%	7.46%	7.33%	7.33%	12.34%	6.51%	-	6.28%	7.37%	0.63	Oct-17
HFRI Relative Value (Total) Index	,,		2.32%	3.53%	3.53%	7.58%	4.38%	-	4.34%	6.65%	0.42	Oct-17
Credit/Distressed												
Silver Point Capital Fund, L.P.	14,993,639	15.1%	3.25%	6.53%	6.53%	18.54%	6.84%	-	7.24%	8.49%	0.66	Dec-17
Credit/Distressed - HF Total	14,993,639	15.1%	3.25%	6.53%	6.53%	18.54%	6.84%	-	7.24%	8.49%	0.66	Dec-17
HFRI ED: Distressed/Restructuring Index			2.18%	6.14%	6.14%	19.62%	6.05%	-	6.25%	9.18%	0.52	Dec-17
Event Driven												
Taconic Opportunity Fund L.P.	13,433,280	13.6%	2.38%	3.90%	3.90%	6.94%	-		4.83%	7.22%	0.49	Dec-18
Event Driven - HF Total	13,433,280	13.6%	2.38%	3.90%	3.90%	6.94%	-	-	4.83%	7.22%	0.49	Dec-18 Dec-18
HFRI Event-Driven (Total) Index	13,433,200	13.070	3.59%	5.94%	5.94%	19.21%	-		9.07%	11.75%	0.68	Dec-18 Dec-18
In the Event-Driven (Total) index			3.3370	5.5470	5.5470	13.21/0			5.0770	11.7 570	0.00	Dec-10
Equity Long/Short												
Archipelago Partners, L.P.	13,437,516	13.6%	4.88%	0.60%	0.60%	10.93%	5.30%	-	6.28%	8.92%	0.54	Sep-17
Marshall Wace Funds LP - MW Eureka (US) Fund	3,984,035	4.0%	4.68%	3.17%	3.17%	18.41%	8.51%	-	9.12%	6.75%	1.07	Dec-17
Marshall Wace Funds LP - MW Global Opportunities (US) Fu	10,111,101	10.2%	4.64%	-2.65%	-2.65%	-	-	-	12.35%	11.76%	-	Apr-20
Equity Long/Short - HF Total	27,532,652	27.8%	4.76%	-0.26%	-0.26%	10.81%	5.61%	-	6.53%	8.29%	0.60	Sep-17
HFRI Equity Hedge (Total) Index			4.85%	6.35%	6.35%	30.79%	9.46%	-	9.81%	11.41%	0.73	Sep-17
Global Macro-Discretionary												
Graham Absolute Return Trading Ltd.	7,963,556	8.0%	4.49%	4.27%	4.27%	8.68%	2.91%	-	3.81%	9.76%	0.26	Sep-17
Global Macro-Discretionary - HF Total	7,963,556	8.0%	4.49%	4.27%	4.27%	8.68%	2.91%	-	3.81%	9.76%	0.26	Sep-17
HFRI Macro (Total) Index			3.64%	3.81%	3.81%	10.64%	4.14%	-	3.67%	5.26%	0.40	Sep-17
Global Macro-Systematic												
HFRI Macro (Total) Index			3.64%	3.81%	3.81%	10.64%	4.14%	_	3.52%	5.28%	0.37	Nov-17
			3.04%	5.01/0	3.81/0	10.04%	4.1470	-	3.3270	5.20%	0.37	1100-17
Multi-Strategy												
Sculptor Domestic Partners II, L.P.	13,539,979	13.7%	4.75%	4.18%	4.18%	21.19%	11.20%	11.81%	8.72%	7.35%	1.02	Jul-14
Multi-Strategy - HF Total	13,539,979	13.7%	4.75%	4.18%	4.18%	21.19%	11.20%	11.81%	8.72%	7.35%	1.02	Jul-14
HFRI Relative Value (Total) Index			2.32%	3.53%	3.53%	7.58%	4.38%	5.77%	3.79%	5.11%	0.52	Jul-14
MCERA Hedge Fund Portfolio	98,981,772	100.0%	4.75%	3.87%	3.87%	10.89%	5.09%	6.83%	4.82%	5.78%	0.64	Jul-14
Pro travela												
Benchmarks										=		
HFRI Fund of Funds Composite Index			2.59%	1.59%	1.59%	14.05%	5.15%	5.70%	3.79%	5.42%	0.50	Jul-14
Market Indices												
Libor3Month			0.01%	0.03%	0.03%	0.37%	1.66%	1.44%	1.16%	0.25%	-	Jul-14
Bloomberg Barclays US Aggregate Bond Index			-1.44%	-2.15%	-2.15%	1.38%	5.32%	3.56%	3.36%	3.13%	0.71	Jul-14
Bloomberg Barclays US High Yield Bond Index			0.37%	0.70%	0.70%	9.38%	6.57%	8.97%	5.30%	7.46%	0.57	Jul-14
S&P 500 TR			2.76%	1.72%	1.72%	31.29%	14.14%	16.83%	12.72%	14.38%	0.83	Jul-14
MSCI AC World Index Free - Net			2.32%	1.85%	1.85%	30.25%	10.29%	14.24%	8.66%	14.28%	0.57	Jul-14
MSCI EAFE - Net			2.24%	1.15%	1.15%	22.46%	4.59%	9.73%	4.06%	14.75%	0.26	Jul-14
MSCI EMF (Emerging Markets Free) - Net			0.76%	3.85%	3.85%	36.05%	6.35%	15.24%	6.14%	17.29%	0.36	Jul-14



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Merced County Employees' Retirement Association

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- 3. Preliminary Performance Update as of February 28, 2021
- 4. 2021 Ongoing Strategic Investment Agenda
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Performance Highlights As of February 28, 2021

Merced County Employees' Retirement Association

Performance Highlights



Market Review and Performance Summary for February 2021

- In February, markets rose, as the vaccines roll-out continued supporting expectations of an economic recovery in the global economy. Rotation away from stocks that benefited from the stay at home environment, like the FAANGs, and into value and smaller company stocks persisted.
- Inflation expectations rose with reopening optimism and the yield curve steepened resulting in negative monthly returns for most fixed income indices, although high yield benefited from the value rotation.

As of February 28, 2021, total assets for the Merced CERA Portfolio are estimated at \$1.07 billion.

- Merced CERA reported an overall monthly return of +1.4%. Within the portfolio, most asset classes were positive or flat, with the exception of US Fixed Income. Hedge Funds led performance with +4.7%.
- US equities, Emerging Market equities and Real Estate were outside their policy ranges at month-end. Meketa recommended rebalancing trades at the February meeting that happened early in March.

Capital Markets Outlook & Risk Metrics As of February 28, 2021



Capital Markets Outlook

Takeaways

- The advent of ambitious global vaccination campaigns has begun to shift market focus to repricing of cyclical stocks, commodities, and real assets that may benefit from an expansion of economic activity.
- Value outperformed growth, and small/midcap stocks generally outperformed large and mega cap stocks. The market rotation resulted in a volatile end of February, with VIX approaching 28% by month end.
- The rotation to value and cyclical stocks hurt the performance of MSCI China index, which declined -1.0%. The negative performance of China was a drag on the MSCI Emerging Market Index, which posted a modest 0.8% return.
- With the expectation of a return to normalcy, fixed income markets generally experienced negative returns as the yield curve steepened rapidly to reprice higher inflation expectations. Only high yield, leveraged loans, and short-term TIPS posted modest, positive returns.
- Commodity-related indices posted strong returns in February. The S&P MLP index returned 7.7%, the Bloomberg Commodity Index gained 6.5%, and the S&P Global Natural Resources index posited a positive return of 9.0%. Oil prices returned to pre-COVID levels, with WTI priced at \$61.50 a barrel.
- The US vaccination efforts combined with the prospects of new fiscal stimulus have upgraded US GDP expectations, while some COVID related setbacks in Europe have muted growth expectations there for 2021.



Capital Markets Outlook

Takeaways

- According to the World Health Organization, global COVID cases have been falling since January. While the efficacy of many of the vaccines is promising, governments are closely monitoring new COVID variants as these may prove less susceptible to currently available vaccines.
- While the markets appear as though they are looking past COVID, the next several months are projected to be challenging as widespread distribution of the vaccine will not be immediate. Returning to pre-COVID levels of economic activity is not expected to occur until mid-2021 at the earliest.
- As the US government enters a new administration, investors will be examining its actions as it relates to monetary and fiscal policy, with a particular focus on economic stimulus, taxation, and broad infrastructure spending.



Capital Markets Outlook & Risk Metrics

Risk Overview/Dashboard (1) (As of February 28, 2021)¹



• Dashboard (1) summarizes the current state of the different valuation metrics per asset class relative to their own history.

¹ With the exception of Private Equity Valuation, that is YTD as of December 31, 2020.



Capital Markets Outlook & Risk Metrics

Risk Overview/Dashboard (2) (As of February 28, 2021)



• Dashboard (2) shows how the current level of each indicator compares to its respective history.









Market Sentiment Indicator (Last Three Years) (As of February 28, 2021)





• This chart details one valuation metric for US equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group.





Small Cap P/E vs. Large Cap P/E¹

• This chart compares the relative attractiveness of small cap US equities vs. large cap US equities on a valuation basis. A higher (lower) figure indicates that large cap (small cap) is more attractive.

¹ Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings.



Capital Markets Outlook & Risk Metrics



• This chart compares the relative attractiveness of US growth equities vs. US value equities on a valuation basis. A higher (lower) figure indicates that value (growth) is more attractive.

¹ Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.





Developed International Equity Cyclically Adjusted P/E¹ (As of February 28, 2021)

This chart details one valuation metric for developed international equities. A higher (lower) figure • indicates more expensive (cheaper) valuation relative to history.

¹ Developed International Equity (MSCI EAFE Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.





• This chart details one valuation metric for emerging markets equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.



Private Equity Multiples¹ (As of February 28, 2021)²



• This chart details one valuation metric for the private equity market. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

¹ Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.

² Annual Data, as of December 31, 2020




• This chart details one valuation metric for the private core real estate market. A higher (lower) figure indicates cheaper (more expensive) valuation.

¹ Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction based indices from Real Capital Analytics and Meketa Investment Group.





• This chart details one valuation metric for the public REITs market. A higher (lower) figure indicates cheaper (more expensive) valuation.

¹ REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity index.





Credit Spreads¹ (As of February 28, 2021)

• This chart details one valuation metric for the US credit markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

¹ Credit Spreads – Source: Barclays Capital. High Yield is proxied by the Barclays High Yield index and Investment Grade Corporates are proxied by the Barclays US Corporate Investment Grade index. Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year US Treasury yield.





• This chart details one valuation metric for the EM debt markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

¹ EM Spreads – Source: Bloomberg. Option Adjusted Spread (OAS) for the Bloomberg Barclays EM USD Aggregate Index.



Equity Volatility¹ (As of February 28, 2021)



• This chart details historical implied equity market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

¹ Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.





• This chart details historical implied fixed income market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

¹ Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.





• Systemic Risk is a measure of 'System-wide' risk, which indicates herding type behavior.

¹ Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.





• This chart details the historical difference in yields between ten-year and two-year US Treasury bonds/notes. A higher (lower) figure indicates a steeper (flatter) yield curve slope.

¹ Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.



Capital Markets Outlook & Risk Metrics





• This chart details the difference between nominal and inflation-adjusted US Treasury bonds. A higher (lower) figure indicates higher (lower) inflation expectations.

¹ Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

Total Return Given Changes in Interest Rates (bps)¹ (As of February 28, 2021)



		Total Return for Given Changes in Interest Rates (bps)									
	-100	-50	0	50	100	150	200	250	300	Duration	YTW
Barclays US Short Treasury (Cash)	0.3%	0.2%	0.1%	-0.1%	-0.2%	-0.3%	-0.5%	-0.6%	-0.7%	0.27	0.07%
Barclays US Treasury 1-3 Yr.	1.9%	1.1%	0.3%	-0.6%	-1.4%	-2.3%	-3.3%	-4.3%	-5.3%	1.65	0.28%
Barclays US Treasury Intermediate	4.4%	2.3%	0.3%	-1.6%	-3.5%	-5.4%	-7.2%	-8.9%	-10.6%	3.98	0.32%
Barclays US Treasury Long	23.0%	11.7%	1.5%	-7.5%	-15.5%	-22.3%	-27.9%	-32.4%	-35.8%	19.24	1.51%

¹ Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Source: Bloomberg, and Meketa Investment Group.





Long-Term Outlook – 20-Year Annualized Expected Returns¹

• This chart details Meketa's long-term forward-looking expectations for total returns across asset classes.

¹ Source: Meketa Investment Group's 2021 Annual Asset Study.



Appendix

Data Sources and Explanations¹

- US Equity Cyclically Adjusted P/E on S&P 500 Index Source: Robert Shiller and Yale University.
- Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings.
- Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.
- Developed International Equity (MSCI EAFE) Cyclically Adjusted P/E Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.
- Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.
- Private Equity Multiples Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.
- Core Real Estate Spread vs. Ten-Year Treasury Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction based indices from Real Capital Analytics and Meketa Investment Group.

¹ All Data as of February 28, 2021 unless otherwise noted.



Appendix

Data Sources and Explanations¹

- REITs Dividend Yield Spread vs. Ten-Year Treasury Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity index.
- Credit Spreads Source: Barclays Capital. High Yield is proxied by the Barclays High Yield index and Investment Grade Corporates are proxied by the Barclays US Corporate Investment Grade index.
- Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year Treasury Yield.
- EM Debt Spreads Source: Bloomberg, and Meketa Investment Group. Option Adjusted Spread (OAS) for the Bloomberg Barclays EM USD Aggregate Index.
- Equity Volatility Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.
- Fixed Income Volatility Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.
- Systemic Risk and Volatile Market Days Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.
- Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.

¹ All Data as of February 28, 2021 unless otherwise noted.



Appendix

Data Sources and Explanations¹

- Yield Curve Slope (Ten Minus Two) Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.
- Ten-Year Breakeven Inflation Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

¹ All Data as of February 28, 2021 unless otherwise noted.



Meketa Market Sentiment Indicator

Explanation, Construction and Q&A



Meketa has created the MIG Market Sentiment Indicator (MIG-MSI) to <u>complement</u> our valuation-focused Risk Metrics. This measure of sentiment is meant to capture significant and persistent shifts in long-lived market trends of economic growth risk, either towards a risk-seeking trend or a risk-aversion trend.

This appendix explores:

- What is the Meketa Market Sentiment Indicator?
- How do I read the indicator graph?
- How is the Meketa Market Sentiment Indicator constructed?
- What do changes in the indicator mean?



Meketa has created a market sentiment indicator for monthly publication (the MIG-MSI – see below) to complement Meketa's Risk Metrics.

Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market corrections take place. The MIG-MSI helps to address this early-warning bias by measuring whether the markets are beginning to acknowledge key Risk Metrics trends, and / or indicating non-valuation based concerns. Once the MIG-MSI indicates that the market sentiment has shifted, it is our belief that investors should consider significant action, particularly if confirmed by the Risk Metrics. Importantly, Meketa believes the Risk Metrics and MIG-MSI should always be used in conjunction with one another and never in isolation. The questions and answers below highlight and discuss the basic underpinnings of the Meketa MIG-MSI:

What is the Meketa Market Sentiment Indicator (MIG-MSI)?

• The MIG-MSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The MIG-MSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).



How do I read the Meketa Market Sentiment Indicator graph?

- Simply put, the MIG-MSI is a color-coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MIG-MSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive in the graph is the level of the MIG-MSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.
- Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.





How is the Meketa Market Sentiment Indicator (MIG-MSI) Constructed?

- The MIG-MSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:
- Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
- Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration US Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight).
- Both measures are converted to Z-scores and then combined to get an "apples to apples" comparison without the need of re-scaling.
- The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure.¹ The color reading on the graph is determined as follows:
- If both stock return momentum and bond spread momentum are positive = GREEN (positive)
- If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
- If both stock return momentum and bond spread momentum are negative = RED (negative)

¹ Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.

[&]quot;Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010. http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf



What does the Meketa Market Sentiment Indicator (MIG-MSI) mean? Why might it be useful?

There is strong evidence that time series momentum is significant and persistent. In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12-month period. The MIG-MSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.



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Preliminary Performance Update as of February 28, 2021

MEKETA

Merced County Employees' Retirement Association

Total Fund | As of February 28, 2021

Policy		Current			Allocation vs	. Targets and	d Policy			
		Guirein			Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
				US Equity	\$297,133,252	27.8%	21.0%	6.8%	15.0% - 26.0%	No
	21.0%			International Equity	\$129,917,884	12.2%	10.0%	2.2%	5.0% - 15.0%	Yes
			27.8%	Emerging Markets Equity	\$134,894,331	12.6%	8.0%	4.6%	4.0% - 12.0%	No
				Real Estate	\$63,659,052	6.0%	8.0%	-2.0%	6.0% - 10.0%	No
				Private Equity	\$62,785,869	5.9%	15.0%	-9.1%	5.0% - 20.0%	Yes
				US Fixed Income	\$164,024,003	15.4%	18.0%	-2.6%	13.0% - 23.0%	Yes
	10.0%			Opportunistic Credit	\$65,887,904	6.2%	5.0%	1.2%	3.0% - 7.0%	Yes
				Hedge Funds	\$98,981,772	9.3%	10.0%	-0.7%	5.0% - 15.0%	Yes
	8.0%		12.2%	Real Assets	\$42,329,542	4.0%	5.0%	-1.0%	3.0% - 7.0%	Yes
				Cash	\$7,513,648	0.7%	0.0%	0.7%	0.0% - 5.0%	Yes
	8.0%			Total	\$1,067,127,257	100.0%	100.0%			
	15.0%		12.6% 6.0% 5.9%							
	18.0%		15.4%							
	5.0%		6.2%							
	10.0%		9.3%							
	5.0% 0.0%		4.0% 0.7%							

Cash range displayed for illustrative purposes only.







Total Fund | As of February 28, 2021

	nmary										
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)*	1,067,127,257	100.0	1.4	1.4	17.4	21.9	9.6	11.4	8.2	8.4	Dec-94
Total Fund (Gross)*			1.5	1.4	17.7	22.4	9.9	11.7	8.6	8.5	
Policy Index			1.0	0.8	16.6	18.2	8.8	11.0	8.9	6.4	Dec-94
Total Fund w/o Alternatives (Net)	791,857,374	74.2	1.3	1.3	20.4	27.5	11.4	13.1	9.4		Dec-94
Total Fund w/o Alternatives (Gross)			1.3	1.3	20.7	28.0	11.7	13.5	9.1		
Policy Index w/o Al			1.5	1.6	20.4	23.6	9.5	11.9			Dec-94
US Equity (Net)	297,133,252	27.8	2.7	1.9	25.6	31.1	14.0	17.3	13.2	10.6	Dec-94
US Equity (Gross)			2.7	1.9	25.7	31.4	14.2	17.6	13.4	10.7	
Russell 3000			3.1	2.7	28.6	35.3	14.6	17.3	13.2	10.6	Dec-94
International Equity (Net)	264,812,215	24.8	1.6	2.7	33.2	48.6	13.6	16.4	7.5	6.8	Dec-98
International Equity (Gross)			1.7	2.8	34.0	49.8	14.2	17.0	8.2	7.1	
International Equity Custom			1.6	2.4	29.1	29.0	6.1	12.3	5.7	5.0	Dec-98
Developed International Equity (Net)	129,917,884	12.2	1.4	1.1	19.4	24.5	6.3	11.3	5.6	4.5	Jan-08
Developed International Equity (Gross)			1.4	1.2	20.0	25.4	6.7	11.6	6.1	5.0	
Custom Blended Developed International Equity Benchmark			2.5	1.6	25.4	24.8	5.2	10.1	5.2	3.4	Jan-08
Emerging Markets Equity (Net)	134,894,331	12.6	1.8	4.2	49.8	82.4	22.9	25.4	-	10.9	Apr-12
Emerging Markets Equity (Gross)			1.9	4.4	50.8	84.2	23.9	26.5		11.9	
Custom Blended Emerging Markets Benchmark			0.8	3.9	36.2	36.0	6.6	15.6	4.7	5.9	Apr-12
US Fixed Income (Net)	164,024,003	15.4	-1.5	-2.2	-0.9	1.6	4.7	4.2	3.9	5.3	Dec-94
US Fixed Income (Gross)			-1.5	-2.2	-0.9	1.8	4.9	4.3	4.2	5.4	
BBgBarc US Aggregate TR			-1.4	-2.2	-0.9	1.4	5.0	4.4	3.8	5.6	Dec-94
Opportunistic Credit (Net)	65,887,904	6.2	1.0	2.1	11.6	8.4				6.9	May-19
Opportunistic Credit (Gross)			1.0	2.1	11.9	8.8				7.1	
50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans			-0.5	-0.4	5.0	4.7				5.9	May-19

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. Data prior to March 2018 provided by prior consultant.



Total Fund | As of February 28, 2021

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Real Estate (Net)	63,659,052	6.0	0.3	0.3	0.6	2.7	2.2	4.6	6.8		Mar-99
Real Estate (Gross)			0.3	0.3	0.6	2.7	2.2	4.8	7.5	7.9	
Custom Blended Real Estate Benchmark			NA	NA	-0.3	2.2	4.6	5.7	9.1	7.0	Mar-99
CPI + 5% (Seasonally Adjusted)			0.8	1.4	5.8	6.7	6.9	7.2	6.8		Mar-99
Private Real Estate (Net)	58,338,898	5.5	NA	NA	-0.1	1.9	1.9	4.5	6.7		Mar-99
Private Real Estate (Gross)			NA	NA	-0.1	1.9	1.9	4.6	7.4	7.8	
Custom Blended Real Estate Benchmark			NA	NA	-0.3	2.2	4.6	5.7	9.1	7.0	Mar-99
Private Equity (Net)	62,785,869	5.9	NA	NA	16.6	13.6	10.8	10.6	10.3	8.3	Jun-05
Private Equity (Gross)			NA	NA	16.6	13.7	10.8	10.6	10.6	8.4	
Custom Blended Private Equity Benchmark			NA	NA	23.1	22.7	17.5	16.5			Jun-05
Russell 3000 +3% 1-Quarter Lag			12.4	10.3	49.0	22.6	16.6	17.3	17.4	13.1	Jun-05
Hedge Fund (Net)	98,981,772	9.3	4.7	3.8	13.7	10.1	4.6	6.6		4.7	Jun-14
Hedge Fund (Gross)			4.7	3.9	14.3	11.1	5.2	7.0		4.9	
Custom Blended Hedge Fund Benchmark			3.1	2.2	15.2	14.8	5.4	6.1		4.4	Jun-14
Real Assets (Net)	42,329,542	4.0	1.0	1.2	9.6	8.2	7.2	7.4	8.1		Mar-99
Real Assets (Gross)			1.0	1.2	9.7	8.4	7.3	7.6	8.7		
Custom Blended Real Assets Benchmark			NA	NA	6.7	-8.7	3.9	7.3			Mar-99
CPI + 5% (Seasonally Adjusted)			0.8	1.4	5.8	6.7	6.9	7.2	6.8		Mar-99
Private Infrastructure (Net)	20,990,488	2.0	NA	NA	3.5	14.3	10.5	11.0		8.6	Dec-14
Private Infrastructure (Gross)			NA	NA	3.5	14.4	10.6	11.0		8.6	
S&P Global Infrastructure Net TR USD			0.7	-1.5	14.7	0.4	3.3	6.6	4.7	3.1	Dec-14
Private Natural Resources (Net)	11,069,620	1.0	NA	NA	10.0	-9.4	3.2	12.2		10.9	Sep-15
Private Natural Resources (Gross)			NA	NA	10.0	-9.4	3.2	12.2		10.9	
S&P Global Natural Resources Index TR USD			9.0	9.4	36.2	34.4	4.2	13.0	1.0	11.9	Sep-15
Cash (Net)	7,513,648	0.7	0.0	0.0	0.2	0.4	0.9				
Cash (Gross)			0.0	0.0	0.2	0.4	0.9				

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

Private Markets values are cash flow adjusted from 9/30/2020 NAVs unless otherwise noted.

Real Assets includes State Street Real Asset NL Fund.



Total Fund | As of February 28, 2021

		Trailing	Net Per	formand	ce							
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund(Net)*	1,067,127,257	100.0		1.4	1.4	17.4	21.9	9.6	11.4	8.2	8.4	Dec-94
Policy Index				1.0	0.8	16.6	18.2	8.8	11.0	8.9	6.4	Dec-94
Total Fund w/o Alternatives(Net)	791,857,374	74.2	74.2	1.3	1.3	20.4	27.5	11.4	13.1	9.4		Dec-94
Policy Index w/o Al				1.5	1.6	20.4	23.6	9.5	11.9	-		Dec-94
US Equity(Net)	297,133,252	27.8	37.5	2.7	1.9	25.6	31.1	14.0	17.3	13.2	10.6	Dec-94
Russell 3000				3.1	2.7	28.6	35.3	14.6	17.3	13.2	10.6	Dec-94
Mellon Dynamic US Equity(Net)	137,477,597	12.9	46.3	2.3	0.6	21.4	27.9	15.0	18.7		17.8	Dec-12
S&P 500				2.8	1.7	24.3	31.3	14.1	16.8	13.4	15.1	Dec-12
Mellon Large Cap(Net)	123,813,591	11.6	41.7	2.9	2.0	26.9	34.2	15.0			16.1	Mar-16
Russell 1000				2.9	2.1	27.0	34.3	15.0	17.4	13.6	16.1	Mar-16
Champlain Small Cap(Net)	35,842,065	3.4	12.1	3.7	6.3						32.0	Nov-20
Russell 2000				6.2	11.6	53.8	51.0	14.9	17.9	11.9	43.6	Nov-20
International Equity(Net)	264,812,215	24.8	33.4	1.6	2.7	33.2	48.6	13.6	16.4	7.5	6.8	Dec-98
International Equity Custom				1.6	2.4	29.1	29.0	6.1	12.3	5.7	5.0	Dec-98
Developed International Equity(Net)	129,917,884	12.2	49.1	1.4	1.1	19.4	24.5	6.3	11.3	5.6	4.5	Jan-08
Custom Blended Developed International Equity Benchmark				2.5	1.6	25.4	24.8	5.2	10.1	5.2	3.4	Jan-08
GQG International Equity(Net)	53,099,226	5.0	40.9	2.2	1.8	16.7	24.9				14.1	Dec-19
MSCI ACWI ex USA				2.0	2.2	27.1	26.2	5.4	11.2	4.8	14.1	Dec-19
First Eagle International Value Fund(Net)	47,658,279	4.5	36.7	-0.7	-1.3	13.7	15.3				4.7	Dec-19
MSCI EAFE				2.2	1.2	23.0	22.5	4.6	9.7	5.0	10.0	Dec-19
MSCI World ex USA				2.5	1.5	23.3	22.1	4.8	9.8	4.7	10.0	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.



Total Fund | As of February 28, 2021

	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)	15,559,079	1.5	12.0	2.9	2.3	38.8	46.9				25.6	May-19
MSCI ACWI ex US Small Cap Growth NR USD				2.3	2.4	34.5	42.8	8.3	13.3	7.2	19.1	May-19
Acadian ACWI ex U.S. Small Cap Equity(Net)	13,601,301	1.3	10.5	4.1	5.4	34.0	37.6				17.2	May-19
MSCI ACWI ex US Small Cap				3.6	3.4	35.5	34.3	5.5	11.8	6.2	14.6	May-19
Emerging Markets Equity(Net)	134,894,331	12.6	50.9	1.8	4.2	49.8	82.4	22.9	25.4		10.9	Apr-12
Custom Blended Emerging Markets Benchmark				0.8	3.9	36.2	36.0	6.6	15.6	4.7	5.9	Apr-12
Artisan Developing World TR(Net)	104,283,069	9.8	77.3	0.9	3.9	48.1	90.1				65.9	Dec-19
MSCI Emerging Markets				0.8	3.9	36.2	36.0	6.4	15.2	4.4	24.9	Dec-19
RWC(Net)	30,611,262	2.9	22.7	5.0	5.5	55.9	60.2				32.2	Dec-19
MSCI Emerging Markets				0.8	3.9	36.2	36.0	6.4	15.2	4.4	24.9	Dec-19
US Fixed Income(Net)	164,024,003	15.4	20.7	-1.5	-2.2	-0.9	1.6	4.7	4.2	3.9	5.3	Dec-94
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.0	4.4	3.8	5.6	Dec-94
Vanguard Total Bond Market Index Fund(Net)	77,388,288	7.3	47.2	-1.5	-2.3	-1.0	1.4				5.9	May-19
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	5.9	May-19
Barrow Hanley(Net)	76,034,782	7.1	46.4	-1.7	-2.5	-0.8	2.3	5.7	3.8	3.5	3.8	Mar-10
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	3.7	Mar-10
Vanguard Short-Term Treasury Index $Fund(Net)$	10,600,933	1.0	6.5	-0.1	0.0	0.1	1.6	2.8			2.8	Feb-18
BBgBarc US Govt 1-3 Yr TR				-0.1	0.0	0.1	1.7	2.9	1.8	1.3	2.9	Feb-18
BBgBarc US Govt 1-5 Yr TR				-0.3	-0.4	-0.2	1.8	3.5	2.0	1.7	3.5	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.



Total Fund | As of February 28, 2021

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit(Net)	65,887,904	6.2	8.3	1.0	2.1	11.6	8.4				6.9	May-19
50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans				-0.5	-0.4	5.0	4.7			-	5.9	May-19
PIMCO Income Fund(Net)	25,436,997	2.4	38.6	-0.4	-0.1	7.5	5.4				5.3	Apr-19
BBgBarc US Aggregate TR				-1.4	-2.2	-0.9	1.4	5.3	3.6	3.6	5.9	Apr-19
GoldenTree Multi-Sector Credit(Net)	23,141,299	2.2	35.1	1.1	2.1	13.5	9.1				7.3	Jun-19
50% BBgBarc US High Yield TR/50% Credit Suisse Leveraged Loans				0.5	1.3	11.1	7.5	5.4	7.4	5.5	6.3	Jun-19
Sculptor Credit Opportunities Domestic Partners, LP(Net)	17,309,608	1.6	26.3	3.1	5.3	15.4				-	15.4	Jul-20
50% BBgBarc US High Yield TR/50% Credit Suisse Leveraged Loans				0.5	1.3	11.1	7.5	5.4	7.4	5.5	11.1	Jul-20
Real Estate(Net)	63,659,052	6.0	6.0	0.3	0.3	0.6	2.7	2.2	4.6	6.8		Mar-99
Custom Blended Real Estate Benchmark				NA	0.0	-0.3	2.2	4.6	5.7	9.1	7.0	Mar-99
CPI + 5% (Seasonally Adjusted)				0.8	1.4	5.8	6.7	6.9	7.2	6.8		Mar-99
Vanguard REIT Index(Net)	5,320,154	0.5	8.4	3.3	3.4						9.9	Aug-20
Spliced Vanguard REIT Benchmark				3.4	3.4	14.5	5.0	10.6	7.3	8.3	10.0	Aug-20
Private Real Estate(Net)	58,338,898	5.5	91.6	NA	NA	-0.1	1.9	1.9	4.5	6.7		Mar-99
Custom Blended Real Estate Benchmark				NA	NA	-0.3	2.2	4.6	5.7	9.1	7.0	Mar-99
UBS Trumbull Property(Net)	35,029,523	3.3	60.0	NA	NA	-3.0	-3.0	0.3	2.3	6.3	6.4	Mar-99
Patron Capital V(Net)	6,731,076	0.6	11.5	NA	NA	11.2	24.5	-0.1	7.2	- 1	7.0	Jan-16

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

Sculptor Credit Opportunities Domestic Partners market value based on manager estimate.

Private Markets values are cash flow adjusted from 9/30/2020 NAVs.

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 February 28, 2021

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Greenfield Gap VII(Net)	5,478,611	0.5	9.4	NA	NA	2.5	4.8	8.6	10.7		11.6	Dec-14
Taconic CRE Dislocation Fund II(Net)	4,598,011	0.4	7.9	NA	NA	2.2	8.3				7.2	Nov-18
AG Realty Value Fund X, L.P.(Net)	1,922,028	0.2	3.3	NA	NA	6.0	6.2				-7.5	Jun-19
Carlyle Realty VIII(Net)	1,782,013	0.2	3.1	NA	NA	-4.4	18.5	-4.3			-13.1	Dec-17
Cerberus Real Estate Debt Fund, L.P.(Net)	1,773,582	0.2	3.0	NA	NA	16.7					16.7	Jul-20
Rockpoint Real Estate Fund VI, L.P.(Net)	736,386	0.1	1.3	NA	NA	-2.8	-5.8				-5.8	May-20
Carmel Partners Investment Fund VII(Net)	287,667	0.0	0.5	NA	NA	-15.2	-30.5				-40.4	Apr-19
Private Equity(Net)	62,785,869	5.9	5.9	NA	NA	16.6	13.6	10.8	10.6	10.3	8.3	Jun-05
Custom Blended Private Equity Benchmark				NA	NA	23.1	22.7	17.5	16.5			Jun-05
Russell 3000 +3% 1-Quarter Lag				12.4	10.3	49.0	22.6	16.6	17.3	17.4	13.1	Jun-05
Invesco VI(Net)	6,853,465	0.6	10.9	NA	NA	30.6	24.8	14.8	13.9		13.4	Jun-13
Adams Street(Net)	6,291,593	0.6	10.0	NA	NA	30.7	22.5	12.4	12.4	13.7	7.7	Sep-05
Ocean Avenue II(Net)	5,158,439	0.5	8.2	NA	NA	8.5	14.9	17.7	17.4		12.2	Jun-14
Davidson Kempner Long-Term Distressed Opportunities Fund IV(Net)	4,906,517	0.5	7.8	NA	NA	14.2	5.1				8.0	Apr-18
Summit Partners Growth Equity Fund X-A(Net)	4,634,691	0.4	7.4	NA	NA	10.5	9.0				9.0	Mar-20
TCV X(Net)	4,052,582	0.4	6.5	NA	NA	38.6	36.8				11.8	Apr-19
Pantheon II(Net)	3,765,094	0.4	6.0	NA	NA	27.5	24.1	14.8	14.3	-	12.4	Dec-11
GTCR Fund XII(Net)	3,455,664	0.3	5.5	NA	NA	36.5	38.1				9.6	Jun-18

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 February 28, 2021

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Cortec Group Fund VII(Net)	3,162,379	0.3	5.0	NA	NA	20.7	15.7				12.4	Dec-19
Genstar Capital Partners IX(Net)	3,152,074	0.3	5.0	NA	NA	25.9	25.4				15.1	Jul-19
Cressey & Company Fund VI(Net)	2,862,473	0.3	4.6	NA	NA	22.9	35.2				8.2	Jan-19
Raven Asset Fund II(Net)	2,620,858	0.2	4.2	NA	NA	-17.6	-24.5	-4.7	-4.1		-4.3	Aug-14
Carrick Capital Partners III(Net)	2,579,771	0.2	4.1	NA	NA	9.4	5.9				3.4	Aug-18
Silver Point Specialty Credit Fund II, L.P.(Net)	2,372,918	0.2	3.8	NA	NA	7.7					7.7	Jul-20
Accel-KKR Growth Capital Partners III(Net)	1,677,416	0.2	2.7	NA	NA	4.4	4.0				-7.9	Jul-19
Spark Capital Growth Fund III(Net)	1,391,129	0.1	2.2	NA	NA	-9.4	-9.4				-9.4	Mar-20
Marlin Heritage Europe II, L.P.(Net)	1,199,693	0.1	1.9	NA	NA						0.0	Oct-20
Taconic Market Dislocation Fund III L.P.(Net)	1,185,472	0.1	1.9	NA	NA	0.0					0.0	Jul-20
Spark Capital VI(Net)	604,409	0.1	1.0	NA	NA	-12.2	-12.2				-12.2	Mar-20
Pantheon Secondary(Net)	280,373	0.0	0.4	NA	NA	15.4	-8.3	2.0	2.1	2.4	2.9	Jun-07
Accel-KKR Capital Partners VI(Net)	189,576	0.0	0.3									
Pantheon I(Net)	177,482	0.0	0.3	NA	NA	0.2	-27.6	-11.5	-4.7	1.4	0.3	Dec-05
Khosla Ventures VII(Net)	138,000	0.0	0.2									
Khosla Ventures Seed E(Net)	42,000	0.0	0.1									
TCV XI(Net)	27,200	0.0	0.0									
Invesco IV(Net)	4,602	0.0	0.0	NA	NA	-19.6	-42.3	7.9	12.1	12.0	10.0	Jun-05

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
Hedge Fund(Net)	98,981,772	9.3	9.3	4.7	3.8	13.7	10.1	4.6	6.6		4.7	Jun-14
Custom Blended Hedge Fund Benchmark				3.1	2.2	15.2	14.8	5.4	6.1		4.4	Jun-14
Silver Point Capital(Net)	14,993,639	1.4	15.1	3.2	6.5	22.6	18.5	6.8			7.2	Nov-17
Sculptor (OZ) Domestic II(Net)	13,539,979	1.3	13.7	4.7	4.1	16.0	19.2	10.3	11.3		8.3	Jun-14
Wellington-Archipelago(Net)	13,437,516	1.3	13.6	4.9	0.5	8.8	9.6	5.1			5.6	Aug-17
Taconic Opportunity Fund(Net)	13,433,280	1.3	13.6	2.4	3.9	12.0	7.0			-	5.2	Dec-18
Laurion Capital(Net)	12,852,853	1.2	13.0	12.2	9.9	18.1	36.9			-	19.2	Aug-18
Marshall Wace Global Opportunities(Net)	10,111,101	0.9	10.2	4.6	-2.6	11.0					12.3	May-20
KLS Diversified(Net)	8,665,813	0.8	8.8	1.1	3.7	12.3	-5.2	-1.5			-0.9	Oct-17
Graham Absolute Return(Net)	7,963,556	0.7	8.0	4.3	3.9	13.9	6.3	1.8			2.9	Aug-17
Marshall Wace Eureka(Net)	3,984,035	0.4	4.0	4.7	3.0	16.3	15.9	6.9			7.6	Nov-17
Real Assets(Net)	42,329,542	4.0	4.0	1.0	1.2	9.6	8.2	7.2	7.4	8.1		Mar-99
Custom Blended Real Assets Benchmark				NA	NA	6.7	-8.7	3.9	7.3			Mar-99
CPI + 5% (Seasonally Adjusted)				0.8	1.4	5.8	6.7	6.9	7.2	6.8		Mar-99
SSgA(Net)	10,269,434	1.0	24.3	4.3	5.0	21.2	17.6	5.2			5.3	Apr-17
Real Asset NL Custom Blended Index				4.4	5.2	21.7	17.2	5.4			5.3	Apr-17
Private Infrastructure(Net)	20,990,488	2.0	49.6	NA	NA	3.5	14.3	10.5	11.0		8.6	Dec-14
S&P Global Infrastructure Net TR USD				0.7	-1.5	14.7	0.4	3.3	6.6	4.7	3.1	Dec-14
KKR Global II(Net)	7,250,222	0.7	34.5	NA	NA	10.5	38.6	17.8	14.5	-	14.2	Dec-14
North Haven Infrastructure II(Net)	7,180,485	0.7	34.2	NA	NA	-1.3	2.3	7.2	10.3	-	6.7	May-15



Total Fund | As of February 28, 2021

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
ISQ Global Infrastructure Fund II(Net)	3,556,295	0.3	16.9	NA	NA	6.4	10.1				-4.5	Jul-18
KKR Global Infrastructure Investors $III(Net)$	2,332,443	0.2	11.1	NA	NA	7.5	2.6				-6.1	Jan-19
Ardian Infrastructure Fund V(Net)	671,043	0.1	3.2	NA	NA	-34.7	-40.5				-32.2	Oct-19
Private Natural Resources(Net)	11,069,620	1.0	26.2	NA	NA	10.0	-9.4	3.2	12.2		10.9	Sep-15
S&P Global Natural Resources Index TR USD				9.0	9.4	36.2	34.4	4.2	13.0	1.0	11.9	Sep-15
GSO Energy Opportunities(Net)	2,771,065	0.3	25.0	NA	NA	26.9	-17.1	-3.0	8.1		7.4	Nov-15
Taurus Mining(Net)	1,580,154	0.1	14.3	NA	NA	-0.6	-12.2	5.1	12.3		10.9	Sep-15
Taurus Mining Annex(Net)	1,567,697	0.1	14.2	NA	NA	7.6	17.7	20.8			24.9	Jan-17
BlackRock Global Energy and Power Infrastructure Fund III LP(Net)	1,392,617	0.1	12.6	NA	NA	34.1	16.9				22.3	Jul-19
Tailwater Energy Fund IV, LP(Net)	1,392,426	0.1	12.6	NA	NA	5.2	-34.5				-25.8	Oct-19
EnCap IV(Net)	1,252,944	0.1	11.3	NA	NA	3.8	-4.7	-0.6			-0.6	Feb-18
EnCap XI(Net)	1,112,717	0.1	10.1	NA	NA	-6.5	-35.9	-21.8			-29.3	Jul-17
Cash(Net)	7,513,648	0.7	0.7	0.0	0.0	0.2	0.4	0.9				
Cash(Net)	6,060,853	0.6	80.7	0.0	0.0	0.2	0.4	1.3	1.1	-4.4		Sep-03
Treasury Cash(Net)	1,452,795	0.1	19.3							_		

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



		Benchmark History
		As of February 28, 2021
Total Fund		
1/1/2020	Present	21% Russell 3000 / 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 Alte	ernatives	
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 Eq	quity	
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 In	nternational Equity	
1/1/2020	Present	80% MSCI EAFE / 20% MSCI ACWI ex US Small Cap
1/31/2008	12/31/2019	MSCI EAFE
Emerging Ma	arkets Equity	
1/1/2020	Present	MSCI Emerging Markets
4/30/2012	12/31/2019	MSCI Emerging Markets Gross
US Fixed Inco		
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 BofA US High Yield TR / 10.53% Credit Suisse Leveraged Loans
12/31/1994	7/31/2014	US Fixed Custom



Opportunisti	c Credit	
5/1/2019	Present	50% BBgBarc US Aggregate TR / 25% BBgBarc US High Yield TR / 25% Credit Suisse Leveraged Loans
Real Estate		
1/1/2020	Present	NCREIF ODCE (lagged one quarter)
3/31/1999	12/31/2019	NCREIF ODCE (net)
Vanguard REIT Index	< compared by the second s	
8/31/2020	Present	MSCI US IMI Real Estate 25-50 GR USD
Private Real Est	tate	
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 Glob Priv Eq Qtr Lag / 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 Infrastr	ucture	
12/31/2014	Present	S&P Global Infrastructure Net TR USD
Private Natural	Resources	
9/30/2015	Present	S&P Global Natural Resources Index TR USD
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				
Name	As Of February 28, 2 Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Total Fund w/o Alternatives		\$791,857,374		
US Equity		\$297,133,252		
Mellon Dynamic US Equity	0.30% of Assets	\$137,477,597	\$412,433	0.30%
Mellon Large Cap	0.04% of First 100.0 Mil, 0.02% Thereafter	\$123,813,591	\$44,763	0.04%
Champlain Small Cap	1.00% of Assets	\$35,842,065	\$358,421	1.00%
International Equity		\$264,812,215		
Developed International Equity		\$129,917,884		
Acadian ACWI ex U.S. Small Cap Equity	0.99% of Assets	\$13,601,301	\$134,653	0.99%
Driehaus International Small Cap Growth	0.90% of Assets	\$15,559,079	\$140,032	0.90%
GQG International Equity	0.50% of Assets	\$53,099,226	\$265,496	0.50%
First Eagle International Value Fund	0.79% of Assets	\$47,658,279	\$376,500	0.79%
Emerging Markets Equity		\$134,894,331		
Artisan Developing World TR	1.05% of Assets	\$104,283,069	\$1,094,972	1.05%
RWC	0.87% of Assets	\$30,611,262	\$266,318	0.87%
US Fixed Income		\$164,024,003		
Barrow Hanley	0.30% of First 50.0 Mil, 0.20% of Next 100.0 Mil, 0.15% Thereafter	\$76,034,782	\$202,070	0.27%
Vanguard Short-Term Treasury Index Fund	0.05% of Assets	\$10,600,933	\$5,300	0.05%
Vanguard Total Bond Market Index Fund	0.04% of Assets	\$77,388,288	\$27,086	0.04%
Opportunistic Credit		\$65,887,904		
PIMCO Income Fund	0.50% of Assets	\$25,436,997	\$127,185	0.50%
GoldenTree Multi-Sector Credit	0.70% of Assets	\$23,141,299	\$161,989	0.70%
Sculptor Credit Opportunities Domestic Partners, LP	Performance-based 1.00 and 20.00	\$17,309,608	\$173,096	1.00%



Name Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Real Estate	\$63,659,052		
Vanguard REIT Index 0.10% of Assets	\$5,320,154	\$5,320	0.10%
Private Real Estate	\$58,338,898		
Greenfield Gap VII	\$5,478,611		
Patron Capital V	\$6,731,076		
UBS Trumbull Property	\$35,029,523		
Carlyle Realty VIII	\$1,782,013		
Taconic CRE Dislocation Fund II	\$4,598,011		
Carmel Partners Investment Fund VII	\$287,667		
AG Realty Value Fund X, L.P.	\$1,922,028		
Rockpoint Real Estate Fund VI, L.P.	\$736,386		
Cerberus Real Estate Debt Fund, L.P.	\$1,773,582		
Invesco IV	\$4,602		
Invesco VI	\$6,853,465		
Ocean Avenue II	\$5,158,439		
Pantheon I	\$177,482		
Pantheon II	\$3,765,094		
Pantheon Secondary	\$280,373		
Raven Asset Fund II	\$2,620,858		
Davidson Kempner Long-Term Distressed Opportunities Fund IV	\$4,906,517		
GTCR Fund XII	\$3,455,664		
Carrick Capital Partners III	\$2,579,771		
Cressey & Company Fund VI	\$2,862,473		
TCV X	\$4,052,582		
Accel-KKR Growth Capital Partners III	\$1,677,416		
Genstar Capital Partners IX	\$3,152,074		



Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Cortec Group Fund VII		\$3,162,379		
Spark Capital Growth Fund III		\$1,391,129		
Spark Capital VI		\$604,409		
Summit Partners Growth Equity Fund X-A		\$4,634,691		
Taconic Market Dislocation Fund III L.P.		\$1,185,472		
Silver Point Specialty Credit Fund II, L.P.		\$2,372,918		
Marlin Heritage Europe II, L.P.		\$1,199,693		
Khosla Ventures VII		\$138,000		
Accel-KKR Capital Partners VI		\$189,576		
Khosla Ventures Seed E		\$42,000		
TCV XI		\$27,200		
Hedge Fund		\$98,981,772		
Sculptor (OZ) Domestic II	Performance-based 1.50 and 20.00	\$13,539,979	\$331,657	2.45%
Graham Absolute Return	Performance-based 1.75 and 20.00	\$7,963,556	\$210,875	2.65%
Wellington-Archipelago	Performance-based 1.00 and 20.00	\$13,437,516	\$265,515	1.98%
KLS Diversified	Performance-based 2.00 and 20.00	\$8,665,813	\$192,554	2.22%
Marshall Wace Eureka	Performance-based 2.00 and 20.00	\$3,984,035	\$116,987	2.94%
Silver Point Capital	Performance-based 1.50 and 20.00	\$14,993,639	\$322,363	2.15%
Laurion Capital		\$12,852,853		
Taconic Opportunity Fund		\$13,433,280		
Marshall Wace Global Opportunities		\$10,111,101		
Real Assets		\$42,329,542		
SSgA	0.30% of First 50.0 Mil, 0.27% of Next 50.0 Mil, 0.25% Thereafter	\$10,269,434	\$30,808	0.30%
Private Infrastructure		\$20,990,488		
KKR Global II		\$7,250,222		
North Haven Infrastructure II		\$7,180,485		



Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
ISQ Global Infrastructure Fund II		\$3,556,295		
KKR Global Infrastructure Investors III		\$2,332,443		
Ardian Infrastructure Fund V		\$671,043		
Private Natural Resources		\$11,069,620		
EnCap XI		\$1,112,717		
EnCap IV		\$1,252,944		
GSO Energy Opportunities		\$2,771,065		
Taurus Mining		\$1,580,154		
Taurus Mining Annex		\$1,567,697		
BlackRock Global Energy and Power Infrastructure Fund III LP		\$1,392,617		
Tailwater Energy Fund IV, LP		\$1,392,426		
Cash		\$7,513,648		
Cash		\$6,060,853		
Treasury Cash		\$1,452,795		

2021 Ongoing Strategic Investment Agenda



2021 Ongoing Strategic Investment Agenda

On an ongoing (monthly) basis, Meketa develops a list of projects that we expect to work closely with Merced CERA to complete throughout the calendar year (see table below). In an attempt to coordinate the scheduling of these tasks, this memo details a Preliminary Investment Project Agenda by calendaring and prioritizing the expected tasks and deliverables that would be required to fulfill the Agenda.

Meketa welcomes any suggestions and/or modifications to the proposed timeline.

Meeting Date	Task
March 2021	February preliminary performance reportCliffwater Quarterly Performance reporting
April 2021	 Educational Topic: How Meketa formulates its Capital Market Assumptions Educational Topic: Cryptocurrency March preliminary performance report Quarterly Market Update
May 2021	 Quarterly Performance Report (1Q 2021) April preliminary performance report Educational Topic: The Role of the Fed: Pre and Post Pandemic, Role of the Department of US Treasury
June 2021	 May preliminary performance report Educational Topic: Thinking Outside the Box: Where to Invest in a low interest rate environment

2021 Preliminary Investment Project Agenda



2021 Ongoing Strategic Investment Agenda

Expected Completion Date	Task
July 2021	 June preliminary performance report Quarterly Market Update Educational Topic: Putting it all together: Understanding Asset class roles within the Fund
August 2021	 Quarterly Performance Report (2Q 2021) July preliminary performance report Educational Topic: Analysis of Merced CERA's use of Hedged Assets and Alternatives (Meketa/ Cliffwater)
September 2021	 August preliminary performance report Educational Topic: Asset Allocation Review (last amended 2018) Alternatives Fee Reporting (Cliffwater)
October 2021	 September preliminary performance report Quarterly Market Update Educational Topic: Asset Allocation Approval (Action Item)
November 2021	 Quarterly Performance Report (3Q 2021) October preliminary performance report Educational Topic: Year in Review
December 2021*	 Quarterly reporting (Cliffwater) *Delayed monthly reporting in December due to timing

Bold are priority strategic items.

This agenda includes only major strategic items.

Meketa also expects to work with the Staff and Board to complete more routine tasks and projects, as expected.

MM, PN, SK, pq

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Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. Portfolio Return- [Risk Free Rate+Beta*(market return-Risk Free Rate)].

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.



Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about is future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.



Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a "basis book." For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

5% (discount)1% pro rata, plus5 (yrs. to maturity)5.26% (current yield)

= 6.26% (yield to maturity)

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999. The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.